

SOLVING THE UK'S SKILLS SHORTAGE

HOW A NATIONAL SKILLING WAGE WOULD FUTURE-PROOF OUR ECONOMY

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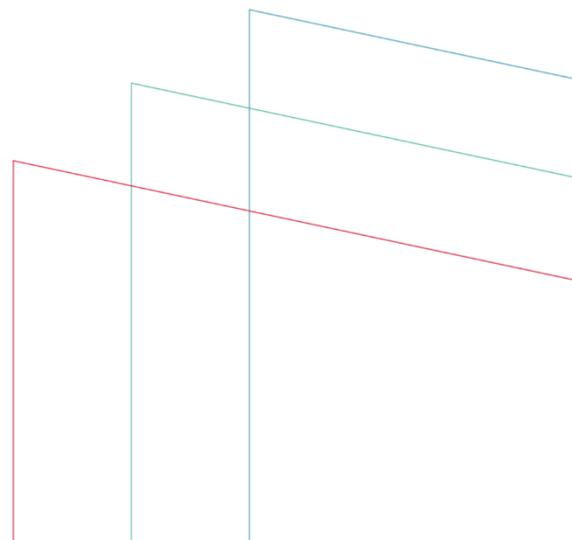
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EXECUTIVE SUMMARY

The UK is facing a skills shortage and a productivity problem. A key driver of this stagnation has been the decline in both state and private sector investment in skills. Alongside austerity-era cuts to state spending on adult education, total employer investment in skills declined 19% per employee, in real terms, between 2011 and 2022, with sharper declines in larger businesses (-35%), primary (-44%), and public (-38%) service sectors, as well as the north east (-27%) and south west of England (-32%). While the support available to workers wishing to upskill has rolled back, the wider economic context has made participation harder. The high cost of living, matched by the proliferation of low-security work, means few workers can embrace the risk presented by mid-career upskilling. An under-equipped workforce leaves businesses heavily reliant on migration to fill surging rates of skills-shortage vacancies.

Facing significant international competition in emerging green industries and an urgent need to decarbonise the economy, we identify two key areas in which the UK lags behind its international competitors in supporting large-scale upskilling. The first, in providing adequate support to workers with the subsistence costs of upskilling and an upskilling offer sufficient to persuade workers with financial and caring responsibilities to engage. The second, in providing incentives which de-risk skills investment for businesses against the backdrop of high-frequency job switching.

The government is at a key stage in designing the next generation of upskilling support: the Lifelong Learning Entitlement. A process is underway to reform the student finance system into something more akin to a personal/individual learning account. In this working paper, we propose, and seek feedback on, the introduction of a new overarching principle of the government's upskilling offer. The proposed framework is based on a simple commitment to a National Skilling Wage (NSW). Important both for the message it sends, and its potential to boost productivity, the NSW would provide workers and businesses with the financial stability, and confidence, to commit to (re)training. We propose a role for the NSW in supporting both those in and out-of-work, upskilling via two core reforms to the government's support for upskilling:

1. **Switching state support from corporation tax relief to a payroll tax credit at the National Skilling Wage.** Current corporation tax relief on training investment should be scrapped. Its design, which is untargeted, profit-contingent, and opaque, and favours large businesses training already highly skilled workers, does not serve the needs of present skills challenges. Instead, we propose a new, flat-rate payment at the NSW to all employers for every hour a worker spends on an approved training course. This payment would take the form of a tax credit, similar to the concept of a human capital tax credit proposed by others, but made via payroll taxes instead of corporation tax. This credit would increase the level of state support for upskilling, allow targeting of additional incentives at key skills-shortage courses, increase the incentive for businesses to upskill lower-paid workers, and expand support to all employers irrespective of their profitability (including charities and other non-profit-motivated organisations).
2. **Reforming student finance into an Personal Learning Account which pays the National Skilling Wage.** Student finance is due significant reform as the new Lifelong Learning Entitlement is designed and rolled out. In its current design, the student maintenance loan will not prove to be an adequate incentive to attract mid-career workers and workers with financial and caring responsibilities to undertake independent upskilling during a cost-of-living crisis. A Personal Learning Account model, providing a simple drawdown facility throughout a learner's career should expand uptake, but critically, the account should pay the NSW, equivalent to at least the real living wage, on an hourly basis for every hour of total qualification time studied on an approved qualification.

A key priority of our proposed policies is to de-risk skills investment for both the business and the individual. This should include individuals who are unemployed and/or in receipt of means-tested benefits. The NSW should also benefit this group, but further work is required to understand how these reforms would interact with the benefits system.

Alongside our proposed reforms we consider issues of state costs and revenue raising. We first consider the potential for the government to apply an additional

charge to employers' national insurance on the trained worker in the months following completion of their training course. This charge, illustratively representing 50% of the total hourly tax credit, could mean businesses partially repay the state support received. We also consider revenue-raising options such as widening the uses of the apprenticeship levy funds, replacing corporation tax relief on skills investment, and clawing back the productivity gains which will result from boosted skills investment via corporation tax.

1. INTRODUCTION

Britain has a skills shortage and a productivity problem. Between 2017 and 2022 the number of skills-shortage vacancies was estimated to have more than doubled from 226,500 to 531,200.¹ Since the pandemic, shifting migration patterns and a rise in the number of people out of work for health reasons have seen staff shortages become a broader issue, with reports from businesses suggesting skills shortages, amplified by the changing nature of work since the pandemic are worsening an already challenging situation.² There is some evidence to suggest that employers have been seeking to fill their persistent vacancies through migration. Between 2019 and 2022, the number of work visas approved more than doubled from 99,000 to 254,000 as non-EU migrants were brought in to replace the workers lost following the finalisation of the Brexit deal.³

This backdrop interacts with more than a decade of government decisions, such as real-term cuts to adult education budgets and punitive reforms to social security. These have weakened the social structures which prepare the domestic workforce for high-quality and high-productivity work.⁴ The role played by the private sector has also rolled back as employer investment in training has fallen to historic lows.⁵ In 2019, overall rates of adult participation in learning also reached a historic low.⁶ The subsequent impacts of the pandemic and the Brexit deal have acted as disruptors, apparently restoring participation rates¹; nevertheless, skills shortages remain acute.

The UK's skills context represents a major concern when viewed against the expected future demand for skills in the workforce. The green transition is already changing the labour market, through jobs growth in renewable energy industries, electric vehicles, and other emerging green industries. But, if we are to achieve the pace of decarbonisation required to meet our international climate obligations and avert catastrophe, the pace of change will need to scale up significantly.⁷ Previous NEF research has suggested that the average worker in the UK needs around nine weeks of education and training to reach the level necessary for a typical green job, but this is subject to significant regional variation. The average worker in the North East is estimated to require almost 14 weeks of training to reach the level required for a green job.⁷

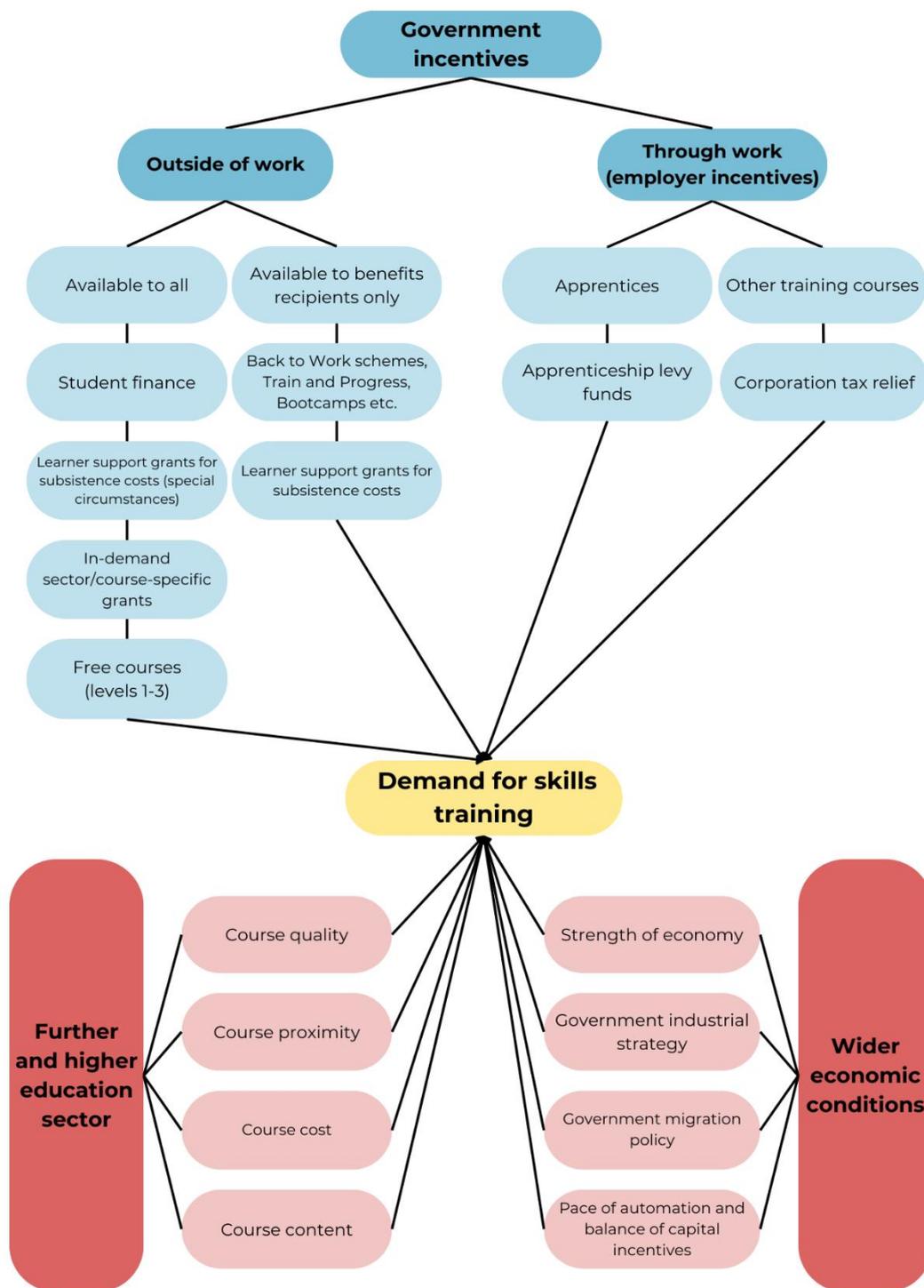
Future areas of significant green-skills-demand growth will likely include building retrofit, particularly insulation and electrification, sustainable infrastructure construction, nature restoration and regenerative farming, public transport operation, zero carbon fuels and energy storage, to name but a few. Skills needs to deliver decarbonisation are just one component of the UK's skills challenge, with significant unmet, and growing, demand in other sectors. The impact of the UK's ageing population on health and social care staffing demands, and the impact of continued digitalisation and automation on IT literacy requirements are placing additional strain on critically under-resourced national infrastructure for upskilling. Previous NEF research has set out the deficits in the architecture of the government's current upskilling offer, highlighting particularly the deficit in skills generation at the intermediate level, and among mid-career workers, and the inequities in access to certain industries between social and demographic groups.⁷ Support structures, including protections on jobs, skills, and income, and access to information and defined skills pathways are also missing when it comes to delivering a just transition for workers affected by the greening of industry, and ensuring workers are equipped to move with and between industries as decarbonisation progresses.⁸

Government action is required. Indeed, concerted government action on skills will be an essential precursor to many of the wider ambitions of UK political parties vying to win the next general election. Skills shortages can be addressed across three domains: (i) migration, (ii) training of young people and other new entrants to the labour market, and (iii) retraining/upskilling the existing labour force (or lifelong learning). All three routes have a role to play in addressing the societal challenges we face. The retraining/upskilling of the existing workforce (iii) grows in importance the faster the pace of skills-demand growth. The focus of this paper is on the routes available to workers pursuing upskilling and retraining throughout their lives (Figure 1).

A range of key issues affect workers' choices to pursue these routes. Important issues include the quality, quantity, and distribution of skills provision through colleges and universities (Figure 1 – lower left side) and the level of demand for skills in the economy (Figure 1 – lower right side). However, the focus of this paper is on the government incentives available to individuals, directly or indirectly via

their employer, to support and encourage pursuing different skills pathways (Figure 1 – top).

Figure 1: Conceptual map of the skills system from an individual's perspective



2. ECONOMIC BARRIERS TO UPSKILLING AT-SCALE

2.1 OBSTACLES TO PERSONAL INVESTMENT IN EDUCATION AND TRAINING

The obstacles to individual access to, and investment in, education and training are diverse and complex. Most are not reviewed here but were considered in NEF's 2023 report.⁹ Here, we briefly present some of the available data specifically on the economic/financial barriers to personal upskilling.

As far back as 2016, EU data identified the UK as a nation with particularly acute unmet training demand compared to its European counterparts. Eurostat data suggested the UK sat behind only Portugal in western Europe for the proportion of the population who did not participate in education and training –but wanted to – (ie unmet demand) at 16.9% of the adult population (around 9 million people).

Table 1: Comparison of major European nations by participation in education and training in 2016

Country	People who did not participate but wanted to participate (%)	People wanting to participate by reason for not participating: cost (%)
United Kingdom	16.9	50.7
Belgium	13.1	18.9
France	11.4	26.2
Germany	5.6	32.9
Ireland	13.5	28.2
Netherlands	9.1	42.9 (2011 data)
Portugal	21.1	38.9
Spain	9.8	43.3

Source: Eurostat

More recent data reinforces this finding. There are around 54 million adults in the UK (aged 17 and over). Data from the Adult Participation in Learning Survey 2023¹⁰ shows that around 51% (equivalent to 28 million adults) have not engaged in learning in the past three years. Of this group, however, just 29% (9 million) state that they do not want to learn. Around half (15 million) of the non-learning

population cite some form of dispositional barrier, often a lack of confidence. But an estimated 28% of non-learners (8 million people) cite costs/money/can't afford it as a barrier to learning, and 46% (13 million) cite any form of situational barrier (including issues such as caring responsibilities which can also be linked to cost). Situational barriers, primarily related to cost, remain a significant obstacle to training even for those who are working, with over half of all full-time (61%) and part-time (58%) workers citing a situational barrier to education and training, rising to 63% among people who are unemployed and seeking work (as opposed to those economically inactive).¹¹

The UK is, again, a European outlier when it comes to the scale of the financial barrier to training. Within the group of adults with unmet education and training demand, the UK sees the highest proportion of respondents of any western European nation citing “cost” as the reason for not participating, at 50.7% of those with unmet demand (Table 1: Comparison of major European nations by participation in education and training Table 1). More recent research from The Prince's Trust highlights the problem among young people; a quarter of people aged 16–25 stated that they could not afford to get the qualifications needed for the job they want, rising to a third among those from poorer backgrounds.¹² If the UK is to meet the upskilling challenge it faces and build the workforce capacity required, cost barriers to upskilling need to be lifted. This imperative to understand and address the financial and economic barriers to upskilling has grown as the UK has slipped further into a cost-of-living crisis.

2.2 OBSTACLES TO BUSINESS INVESTMENT IN HUMAN CAPITAL

2.2.1 Trends in business investment in skills

Between 2011 and 2022, total employer investment in training declined by £4.5bn in real terms, or 9%.¹³ On a per-employee basis, the decline was sharpened, at around 19%. NEF analysis of the Employer Skills Survey 2022 (Figures 2–5), shows how this decline breaks down across business sizes, sectors, regions, and nations. The real-terms decline in investment in skills has been widespread, with a few exceptions.

The steepest decline in investment (-35% on a per-employee basis) has been seen among the largest businesses (100+ employees), despite such businesses beginning from an already low base of investment. Average spend per employee fell from £1,740 to £1,135 in the large business category, compared to a fall from £2,533 to £2,355 (-7%) among businesses with 5–24 employees (Figure 2). Construction and Financial Services were the only two sectors to see a real-terms increase in investment (Figure 3), while deep declines played out in public (-38%) and primary (-44%) sectors, arts (-32%), education (-30%), and hospitality (-32%). The East Midlands stands out as the only region to have seen a real-terms increase (+25%), a feature we cannot presently explain (Figure 4). The steepest proportionate declines were seen in the south-west (-32%), north-east (-27%), and Yorkshire and the Humber (-27%) between 2011 and 2022. Wales performs the best among the nations, seeing a decline of only 4%; England, Scotland, and Northern Ireland all saw similar declines of around 20% (Figure 5).

The outlook for business investment in skills looks poor. The CBI's Education and Skills Survey suggested a decline in the number of firms reporting plans to expand investment in skills moving into 2023.¹⁴ Given the significant levels of unmet demand for worker upskilling, stagnant UK labour productivity, and the labour shortages prevalent in the workforce, it is important to understand why UK firms have pulled back from investing in skills.

Figures 2-5: After inflation, business spending on skills declined significantly between 2011 and 2022 across almost every indicator. Falls were particularly sharp in spending by larger businesses, public and primary service sector businesses, and regions such as the south-west and north-east.

Figure 2:

Investment in training per employee in 2011 and 2022 in 2022 prices, grouped by firm size by number of employees

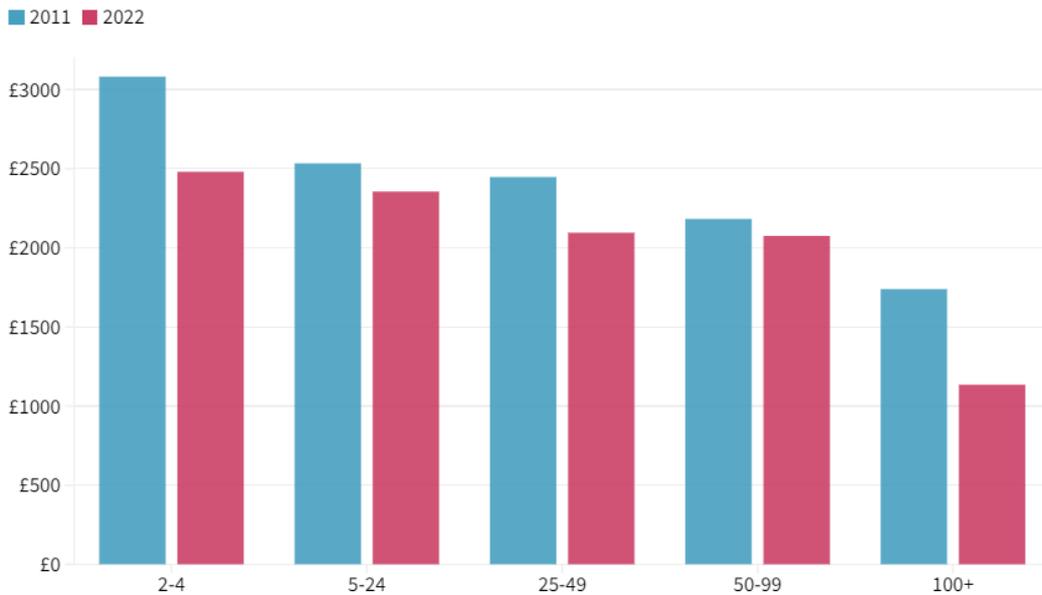


Figure 3:

Investment in training per employee in 2011 and 2022 in 2022 prices, grouped by sector

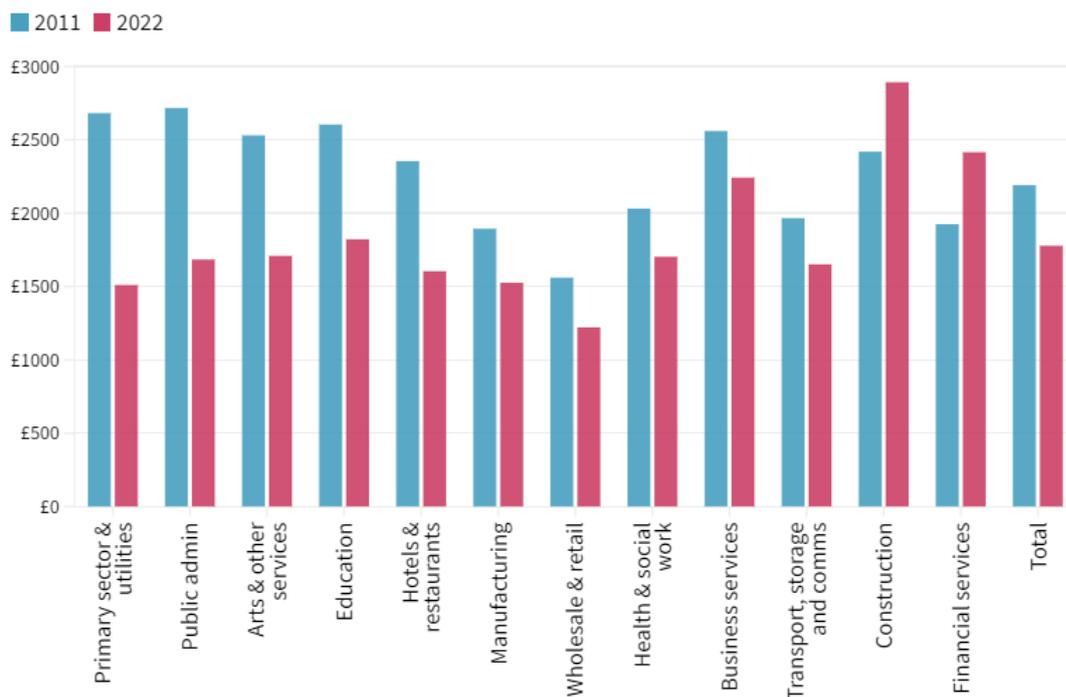


Figure 4:

Investment in training per employee in 2011 and 2022 in 2022 prices, grouped by region

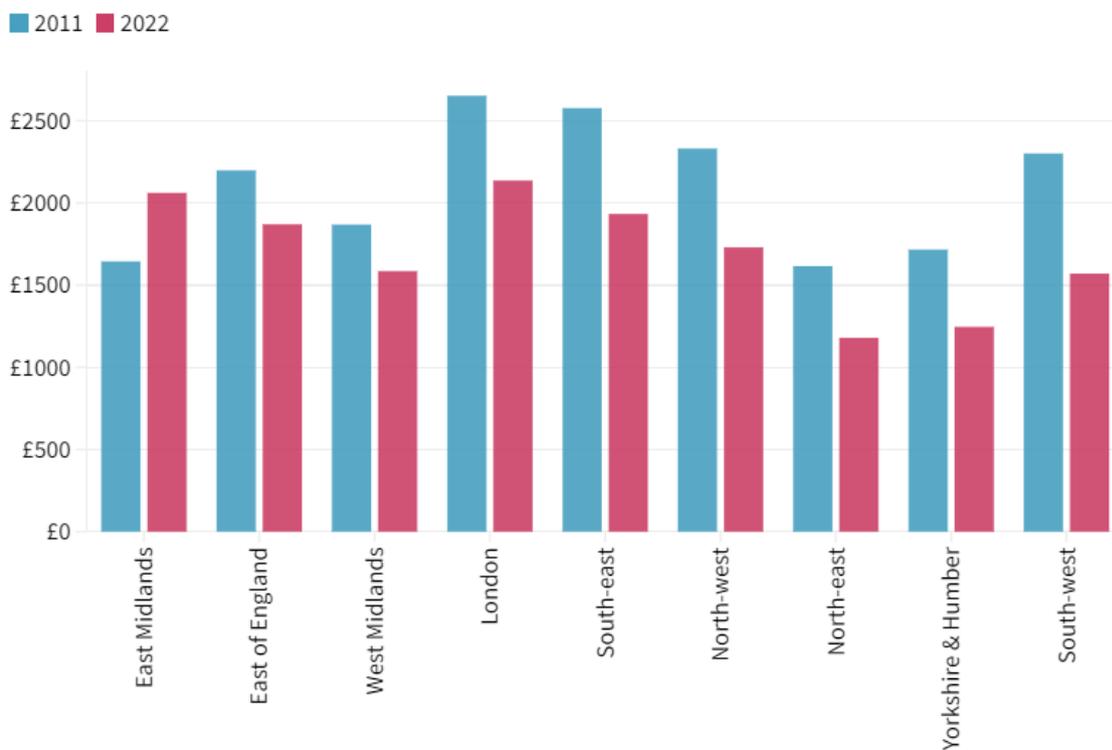
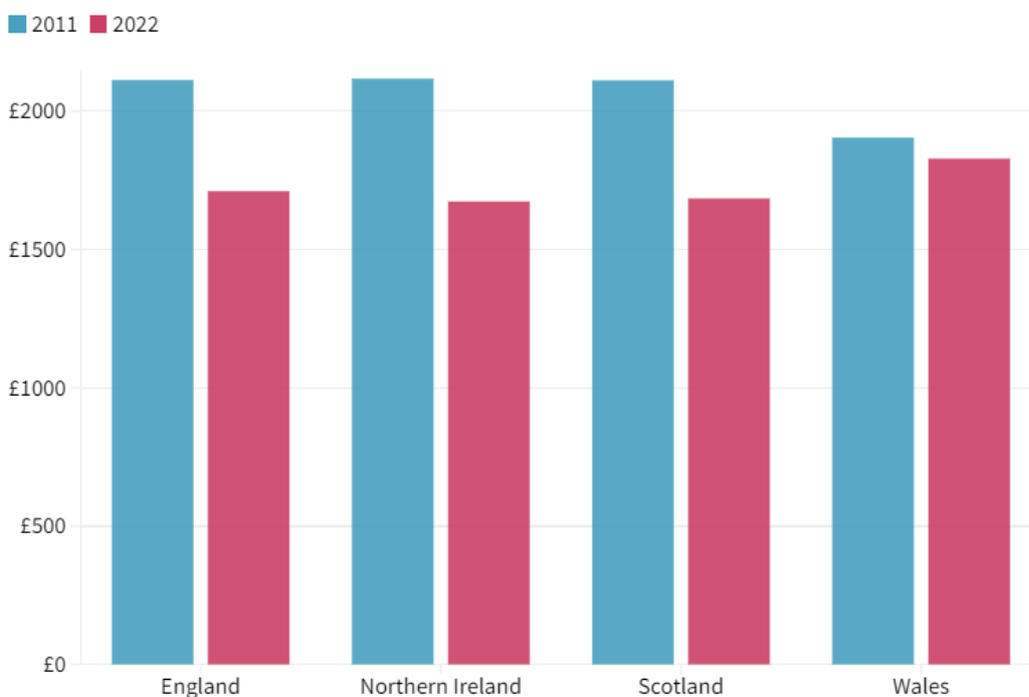


Figure 5:

Investment in training per employee in 2011 and 2022 in 2022 prices, grouped by nation



Source for figs 2-5: NEF analysis of the Employer Skills Survey 2022

2.2.2 Obstacles to business investment in skills

In the economic literature, the issue of firm investment in skills is often framed as an investment in human capital and equivalised to other forms of capital investment and research and development (R&D). A key barrier to firm investment in human capital (skills), and where this form of investment differs from R&D and other physical capital, is the risk to the firm that their upskilled worker will leave soon after completing their training, thereby wasting the firm's investment, ie worker mobility.¹⁵ The connection between higher worker mobility and reduced firm investment in capital, particularly human capital, is relatively well established, evidenced particularly in contexts in which labour mobility is restricted by business policies like non-compete contract clauses.¹⁶

Over the past decade, there has been a growing incentive for workers to change jobs. According to the Office for National Statistics (ONS) between 2012 and 2021 the average worker who remained in their job saw their average hourly pay rise by 2.6% per year while workers who changed jobs saw an average increase of 7.5% per year.¹⁷ Many workers change jobs; in any given year, between 1-in-3 and 1-in-4 workers will leave a company (with significant variation between sectors).¹⁸ At this rate of attrition, only those training courses with the very highest, and quickest return on investment are likely to be seen as viable by employers. The recent rise in both the returns available to workers for changing jobs, and the rate of job changes, might go some way to explaining the recent declines in employer investment in skills. In some cases, firms and/or government policies place restrictions on worker mobility for some time after completion of their subsidised upskilling. Such restrictions are not common in the UK, however, and can be problematic both from the perspective of workers' liberty and the health of the labour market.

In addition to specific investment obstacles relating to worker mobility, skills investment has likely suffered from the wider malaise holding back business investment in the UK. Low confidence in the UK economy and particularly the impact of leaving the EU has seen the UK delivering the lowest rates of business investment in the G7 over the period 2016-2022.¹⁹ The government has targeted incentives at reinvigorating business investment through its 'full expensing' tax relief policy made permanent in the autumn 2023 budget. However, this policy

provides tax relief for physical rather than human capital and only to organisations paying corporation tax.

There are a range of options for how governments might alleviate the business risks associated with skills investment. These are discussed later in this report. However, perhaps the simplest solution is to deliver upskilling independently of business, ie through the public sector education system. This can still be seen as part funded by business via taxes such as corporation tax. But conducting training entirely independently of business can be criticised for producing skills which are detached from, or fail to serve, the rapidly developing needs of modern businesses, including in emerging green industries. In any case, public sector investment in adult and further education has also fallen rapidly in real terms since the 2007/08 financial crisis.²⁰

2.3 GOVERNMENT SUPPORT FOR TRAINING

While support for lifelong learning can be provided to workers who are not employed (ie unemployed or not looking for work), most of the work-capable population are presently in work. Indeed, the UK employment rate remains at a historically high level of 75%.²¹ Support for the lifelong learning of people in work comes from two angles: support directly or indirectly provided to the workers themselves and support via initiatives targeting the business that employs them. The government can intervene through both routes to incentivise greater rates of upskilling and should do so given the evidence of a persistent market failure in the skills domain.

2.3.1 Direct-to-worker support

The UK operates a wide range of grants and other benefits designed to incentivise adult education and training. Most are funded through the adult education budgets (AEB) administered centrally, and by devolved authorities. The AEB provides support primarily for qualifications at levels 2 and 3 on the government's framework, ie qualifications between GCSE and A-level equivalent. Support is more broadly available for individuals without prior qualifications, and/or in receipt of low/no wages, and/or taking English/Maths qualifications. Funds primarily go

towards covering course fees, but some support for travel and accommodation is available for students with a particularly acute need, and/or in an emergency. At qualification levels 4 and above, the AEB offers minimal support.

Direct-to-worker support for lifelong learning at higher levels in the UK is currently evolving. The government's Lifelong Learning Entitlement (LLE) – previously the Lifelong Loan Entitlement – will roll out in 2025 and may (depending on its final design) present a step change in the options available to a worker wishing to upskill at levels 4 and above. The LLE will broaden access to the loan-based support currently provided to undergraduate students. It will fund individuals for up to four years covering both tuition fees and (in theory) maintenance costs (ie living costs/subsistence). Individuals who chose not to pursue higher education earlier in life will be given a clearer signal that the same resources extended to undergraduates are available for their use for both degree-level and non-degree-level study.

Meanwhile, individuals who have already completed a three-year bachelor's degree should receive a clearer route to accessing an additional year of loan-funded study.

Although the final details of the level and design of the support available through the LLE remain uncertain, it seems likely that the system will largely imitate the existing student loan setup. The two core weaknesses of the current student finance design are (i) that it is a loan (at least in name), which can discourage some learners from taking it up, and (ii) the level of subsistence support is low and inadequate for some individual circumstances.

Under the government's standardised qualification framework, one year of a typical bachelor-level qualification involves 1,200 hours of study (or total qualification time). On this basis, the support provided for subsistence through the government's maintenance loan for 2024/25 (£10,227 outside London and £13,348 inside London) implies an hourly rate of pay of £8.52 outside London and £11.12 inside London. This comes in significantly below the Living Wage Foundation's real living wage (RLW) of £12 outside London and £13.15 inside London. Outside London, subsistence support comes in at 29% below the RLW, and 25% below the national living wage of £11.44 (which applies to adults over the age of 23). In theory, maintenance loan levels are set based on RPIX inflation, but the government's choice

of inflation forecast can have a significant bearing on whether loan levels ultimately keep pace with inflation; of late, they have not.²²

Such low levels of subsistence support, provided in loan form, are very likely to be off-putting to a worker with caring responsibilities and/or financial liabilities, especially during a cost-of-living crisis. Furthermore, to sustain income for the full year, learners would also need to secure paid work which can flex around their studying for at least another 800 hours. While some younger students without caring responsibilities and/or long-term financial commitments can get by under such arrangements, more established workers may have financial constraints which demand higher rates of pay and income security, currently only available through full-time work. In some cases, such income levels might also be achieved through working unreasonably long weekly hours (potentially in multiple jobs) leaving no time for study, or making study an exceptionally stressful process. It seems questionable whether some in the UK workforce will be likely to step out of work, and voluntarily exchange their salary and income security for the level of support provided by the maintenance loan.

2.3.2 Incentives delivered through social security

The social security system interacts with the upskilling system and the uptake of skilling opportunities in a variety of ways, both productive and counter-productive. Through their work coach, claimants may be offered and encouraged to participate in a complex array of back-to-work schemes that involve some form of training. Alongside various sorts of work placement, this includes a selection of free level-3 courses and tailored schemes. Participation is constrained by complex conditionality. This includes an individual agreeing to give up a training course if they are offered “suitable” work.

In some circumstances, individuals will be able to continue receiving universal credit or other social security payments while enrolled. The rollout of two programmes which slightly expand this offer from the previous 8 weeks of support to a maximum of 12 weeks (the Train and Progress scheme) or 16 weeks (the Skills Bootcamps scheme) suggests the government has recognised the cost-of-living barrier to upskilling. However, even where support is available, navigating the

complex skills offer and the conditions attached to identify the best option for a worker can be very difficult. It will require a work coach with a strong skillset, capable of understanding individual needs and aspirations, the barriers they face, and the range of training and support schemes available.

The social security system has a variety of features which act counter-productively to dissuade individuals from participating in upskilling. These include the low rates of income support provided, insufficient for a decent standard of living, and features like the sanctions system which drive individuals into work, even where that work is unsuitable (potentially outside of an individual's area of interest/specialist), or otherwise of low quality. The Work Foundation has documented unemployed workers struggling to attend training courses because of the requirements placed on them to conduct job searches for up to 35 hours a week. This requirement places particular strain on individuals with caring responsibilities, and with mental and physical health conditions. Even where courses are paid for by the state, and/or universal credit payments are sustained, childcare costs can form a major obstacle to attending.²³

2.3.3 Support delivered through employers

The apprenticeship system is the most widely recognised form of government support incentivising businesses to invest in upskilling and in-work training. While often conceptualised as a qualification for younger workers, the design of the system has increasingly seen apprenticeships of different sorts taken up by older, more experienced workers.²⁴ While apprenticeship starts increased rapidly post-2009, this was not sufficient to offset a wider decline in enrolment in publicly funded training participation.²⁰

Outside apprenticeships, there is one other wide-reaching form of support for business-led upskilling: the government's corporation tax relief offer. Businesses can reclaim corporation tax (currently 25%) on all external costs incurred relating to training their workforce. The wage costs of administering and sending workers on training are generally considered not to be covered, though there is some conflicting information on this matter. The training relief available on corporation tax is an

under-discussed tax relief. Indeed, as far as we have been able to establish, the total value claimed by businesses under this relief is unknown (at least publicly).

The Employer Skills Survey sheds some light on the potential scale of the rebate passed to businesses. Assuming the rebate does not apply to the costs of on-the-job training, the total maximum rebate represents 25% of the private-sector expenditure on the costs of off-the-job training. We estimate that in 2019, the maximum potential value (assuming wage costs are not eligible) would have equated to approximately £1.3bn. However, as many businesses are not profitable in a given year, and therefore not liable to pay corporation tax, the true HM Treasury impact will be lower. Given that total UK corporation tax receipts typically come in at around £60bn, the sums involved are not trivial. The total government budget for classroom-based adult further education typically comes in at around £1.5–2.0bn per year.²⁵ The corporation tax relief on training expenditure is, therefore, a major component of the government's adult upskilling offer, but at present barely registers in conversations about the issue.

The rebate is only accessible to businesses that pay corporation tax, ie businesses that are profit-driven and/or profitable at (or around) the time of training. This excludes businesses that are in a less-profitable incubation or expansion phase, or those experiencing an exogenous shock to demand. Arguably, these businesses are those most in need of upskilling support, both as they will have the least resources to invest in training, and/or their business development phase will benefit most from skills inputs.

Our analysis suggests (Table 2), that for a profit-driven and profitable business, corporation tax relief might conceivably discount investment in off-the-job training by around 6%. This may represent a material saving for businesses, particularly larger businesses with bigger training budgets, and businesses operating in markets with very tight profit margins. However, the relief also has several weaknesses, which are discussed in further detail in subsequent sections.

Table 2: Employer expenditure on on-and off-the-job training in 2019 split into sub-categories of spend

Item	2019 value
Total training expenditure	£42.0bn
On-the-job training expenditure	£21.1bn
Off-the-job training expenditure	£20.9bn
<i>Off-the-job training expenditure breakdown</i>	
Courses expenditure	£17.5bn
Non-course training expenditure (workshops, seminars etc.)	£3.4bn
Off-the-job trainee labour costs	£7.3bn
Training management labour costs	£6.6bn
Fees to external providers	£3.6bn
Other costs, training centres, equipment, travel, etc.	£3.3bn
Total off-the-job non-labour costs	£6.9bn
<i>Corporation tax rebate value</i>	
Proportion of trainees in the private sector (NEF analysis of the Employer Skills Survey)	73%
Maximum potential tax rebate	£1.26bn
Rebate as a proportion of all off-the-job training expenditure	6%
Rebate as a proportion of all training expenditure	3%

Source: Employer Skills Survey

2.4 ALTERNATIVE APPROACHES TO STATE SUPPORT FOR TRAINING

2.4.1 Salary replacement

The idea of providing financial support to learners' subsistence costs at a higher, wage-replacement level is not unheard of in the UK. The Welsh government has operated a variety of iterations of schemes supporting the salary costs of employed workers engaging in training²⁶ and such schemes are currently in operation in Northern Ireland.²⁷ The UK government also provides some, highly limited, support for living costs while in training for recipients of means-tested benefits,²⁸ but such

support is not widely accessible nor are the pay levels adequate for a decent standard of living.

To secure subsistence at a level adequate to support a worker with higher financial liabilities, it is common for governments in western Europe to provide support tied to a worker's existing salary. This model mimics the furlough scheme operated during the COVID-19 pandemic in tying financial support to pre-existing earnings (or a percentage thereof) to protect them from counterproductive disruption. Such models are similar to what are often described as short-time working schemes and can be entirely independent of a worker's employer. More commonly, however, they are run through, or in tandem with, the employer. When such models are tied to training, workers are usually maintained on their prior salary (or a proportion of it) during their studying hours, with government and businesses splitting the cost.

The German model

The German government offer training grants to businesses covering salary and/or fees for sending workers on educational training. The government has tinkered with its policies over recent years, including through the 2019 Qualification Opportunities Act and the 2020 Work Tomorrow Act. These Acts progressively expanded the German government's scheme to cover a broader range of workers than previous iterations allowed and increased the generosity of support. With the support of their employer, workers who have not participated in vocational training within the last four years, can attend an educational course from an approved supplier, while continuing to receive their full work salary. Businesses are incentivised to permit workers to engage in the scheme through a grant which covers up to 90% of the employee's salary while training, and up to 100% of other training costs. The precise level of support varies by business size, with the largest business (over 2,500 employees) seeing the lowest government contribution to wages (25%) and other training costs (15%). In 2019, around 30,000 employees took part in the scheme, of whom 22,000 received the wage subsidy. The scheme cost an estimated €430m.

Given the generosity of the subsidies on offer, these numbers might seem low, but a major limiter on uptake is the requirement that a minimum of 120 hours of training must be undertaken (around three weeks) for employers to claim the subsidies. By comparison, in the UK in 2019, the average employee trainee spent just around 6

days (40–50 hours) in training (both on and off the job), suggesting the majority of trainees would not qualify for such a programme.

2.4.2 Human capital tax credits

One of the most popular proposals among UK civil society is the concept of a human capital tax credit. The proposal is inspired by the UK's Research and Development (R&D) Tax Credits. R&D tax credits provide either a corporation tax reduction, if a company is profit-making, or a cash credit if they are loss-making, payable when businesses invest in R&D. The overall value of the credit is greater when a company is profit-making. The incentives offered by the system are weighted to provide slightly less support to businesses which fall into the 'large company' category.^a When applied to skills-related investment, the theoretical advantage of the approach over the prevailing corporation tax relief system is that it is targeted at smaller businesses, and provides some support when a business is loss-making. Analogous schemes have been operated in Austria and some US states, though high-quality evaluation evidence on their effectiveness remains limited.²⁹ Many advocates suggest that a human capital tax credit should also be weighted towards supporting lower-paid, or lower-skilled, workers. Different variations of the proposal have been backed by the Centre for Social Justice,³⁰ researchers at the London School of Economics,³¹ the Learning and Work Institute,³² and the Resolution Foundation.³³

2.5 FACTORS AFFECTING SKILLS POLICY PERFORMANCE

A common critique of policies which provide universal subsidies to business activities relates to the level of deadweight which occurs. In other words, do government subsidies generate more desirable behaviours in individuals/businesses and subsidies passed-through to consumers, or, do they simply increase profit margins by subsidising activities that would have occurred anyway (deadweight)? A starting point for this analysis is pre-existing research on the UK government's R&D tax incentives. Guceri and Lui (2017) suggest that a 17% reduction in the cost to

^a A 'large company' is defined as one or more of: having over 500 employees, having turnover greater than €100m, or having gross assets worth more than €86m.

businesses of R&D delivered by tax incentives resulted in a 26% increase in total firm expenditure on R&D.³⁴ This represents an elasticity of around -1.6, and suggests that around £1.30 of additional R&D resulted from each £1 foregone by the Treasury in tax. Theoretically, the wider indirect, and unquantified, economic impacts (or so-called multipliers) which result from R&D should then further increase the government's return.

OECD research, now somewhat dated, highlights a range of concerns with the use of tax relief as an incentive for investment in skills, or human capital.³⁵ For example, it results in very high rates of deadweight loss and it tends to favour the interests of larger enterprises, as well as individuals with higher skill levels. Such policies are also criticised for functioning poorly during periods when firm profitability is depressed. Evidence suggests that for effects to be material at the national, macroeconomic, scale, the financial offer (ie stimulus) must be large. Perhaps the biggest upside of untargeted tax incentives is their simplicity to administer. More targeted interventions can deliver higher rates of pass-through but also incur higher levels of administration. Some studies have suggested that less-targeted support to training can be more effective when power/agency is given directly to workers; for instance, in the form of broad-based training vouchers, rather than in a highly business-, course- or sector-specific manner.³⁶

A large body of academic literature explores the level of deadweight associated with government subsidies for training. These studies typically look at contexts where there is a limited pot of funding distributed to a limited pool of recipients, as opposed to an unlimited (eg tax-based) incentive. While there are many instances in the literature of programmes with relatively high deadweight levels (eg with 60%+ of scheme costs delivering outcomes which would have occurred in the absence of the scheme), there are also many examples of programmes that deliver deadweight at 20% or below.³⁷ It is worth noting, however, that even a programme with high deadweight loss can be socially valuable if the targeted outcome is itself of particularly high social benefit. Nonetheless, a key question to explore is what parameters of a skills subsidy drive effective pass-through of funding to desired training outcomes.

Other studies have supported the idea that deadweight will be higher when subsidies are directed towards workers with higher pre-existing educational qualifications. Messer and Stefan (2009) present a field experiment with a stark difference in deadweight, ranging from 34% among workers with prior education only to the end of compulsory schooling, versus 91% among workers with a graduate qualification.³⁸

Martins (2021) highlights how training grants handed out by the European Social Fund (ESF) delivered increased employee training with a deadweight of only 26% – a notably high rate of pass-through.³⁹ Martins suggests that such low levels of deadweight may relate to the scheme's operation during a period of financial troubles, during which businesses were highly constrained in their ability to invest in upskilling, but also to the higher degree of targeting involved in the programme, which selected businesses with a particular training need. The overlap between government-subsidised training and short-time working schemes, which support employers to keep workers on their books during periods of low demand, is also highlighted as a potential benefit.

3. POLICY PROPOSALS

3.1 A NEW FRAMEWORK FOR SKILLS SUPPORT: A NATIONAL SKILLING WAGE

Regardless of whether an individual is in work, out-of-work, or in training, all are entitled to a respectable standard of living. The UK's current package of complicated, and often inadequate, support mechanisms fails to recognise this and indeed the societal benefit that arises from a healthy incentive for workers to upskill or reskill at any point in their career. Today, many workers do not have the security that they will be able to maintain an adequate standard of living through retraining or upskilling; they must contend with a complex and patchy landscape of government support programmes. The reforms of the government's upskilling offer, particularly the rollout of the LLE, offer a unique opportunity to strengthen the income protections provided to workers.

We propose the establishment of a National Skilling Wage (NSW). The NSW should sit at a level which guarantees a good standard of living for those who enter training in-work or out -work. The NSW is both an important tangible change to support levels and a communication tool designed to build confidence in the population to engage in upskilling.

An interesting dynamic would be introduced if the NSW were set at a level *above* the minimum wage, at least for those courses that deliver highly in-demand skills. The rationale for setting the NSW level at a pay point higher than the minimum wage is that it could drive a virtuous circle, in which low-paying employers experience salary competition with training options that provide workers with the higher skills necessary to access better-paid, more productive, jobs. Protections would be needed to prevent skills over-supply.

The NSW should apply across all forms of training, in-work, outside of work hours, and to those unemployed and/or inactive in the labour force. It should be paid to support the subsistence of every individual undertaking an approved course.

Payment should be conditional on educational providers delivering an approved and regulated course, and confirming that the individual involved is participating meaningfully in the training process.

A good starting point for the NSW is the RLW (£12 per hour, £13.15 p/h inside London), which will sit £0.56 p/h higher than the government's minimum wage for adults over 23 years (£11.44 p/h) in the 2024/25 tax year. Responsibility for paying the trainee the NSW would be split between the government and the employer, depending on the employee's context and the course they are undertaking. A separate question addresses whether individuals not training through their employer should still be liable to refund their subsistence costs to the government at a later date via a mechanism such as the current maintenance loan (Proposal Part Two). Further work will also be required to explore the interaction of the NSW with social security payments and work incentives.

3.2 PROPOSAL PART ONE: REFORMING TAX INCENTIVES ON EMPLOYER INVESTMENT IN SKILLS

3.2.1 Rationale

The government's current incentives for employer investment in training are not delivering and need reform. We propose that the government incentive on training, currently placed on course costs in the form of corporation tax relief, should be shifted to the labour costs of training and integrated into the wider framework of the NSW. Our initial proposal is that government support be provided via employer national insurance and specifically a credit to a business's employment allowance account (with such accounts to be extended to all businesses). Shifting the government incentive for business investment in training to labour costs has four primary benefits:

- First (i), shifting support to individual employee hours, and a rebate linked to employer national insurance, would widen eligibility for support, bringing charitable organisations, and non-profitable businesses into the scope of support. Government support for upskilling should not be conditional on firm profitability. Provided the training incentivised relates to good-quality, approved courses, there is a broader societal benefit to a worker being trained which is of benefit irrespective of short-term firm profitability. The proposed approach allows all businesses to receive a discount on their payroll tax bill if they enrol workers in training. While there are other routes to compensating

unprofitable businesses (ie the credits issued under the R&D incentive regime), we see advantages to incentives linked directly to employee hours and wages. It simplifies the offer, extends it to charitable organisations, and increases the transparency for the worker.

- Second (ii) incentives can be targeted to encourage the training of lower-paid (often lower-skilled) workers. By setting a government contribution at a flat, rather than a percentage, rate (eg £12 per hour of training) a greater relative incentive is created to upskill lower-paid workers. The government contribution, in relation to the salary costs of training, will be proportionately higher the lower paid the worker.
- Third, (iii) the shift will make it easier for the government to encourage upskilling in specific, skills-shortage areas. The current corporation-tax relief approach is entirely untargeted, and developing any mechanism to target it at specific areas of upskilling, for example, green skills or health and social care, would involve significant bureaucracy. By contrast, salary subsidies can be flexed based on the area of training the worker enrolls in. For instance, 50% of the NSW (ie £6 p/h) could be offered on all time spent training while a 100% (£12 p/h) rebate could be offered for time spent training on desirable courses such as those focused on green skills, health, and care.
- A potential additional benefit (iv) of the proposal to shift the subsidy to wages is that it enables employers to use training as a form of short-time working during periods of low demand and/or during unprofitable incubation phases of business development. Employers can use training to temporarily cut their wage bill while retaining workers on their books ready for when demand returns. This concept, demonstrated in the UK through the pandemic furlough scheme, and commonplace in Europe, provides businesses with resilience to external shocks. However, to protect against inefficiencies, the types and quality of the courses approved for the scheme would need close oversight.

In meeting the objectives of targeting support at lower-paid/lower-skilled workers and skills-shortage areas, and enabling the support to function as a support to businesses in a weaker financial position, the government can expect to receive

significantly greater value from its investment, with lower wastage (deadweight) subsidising activities which would have occurred anyway.

3.2.2 Design

We propose that the wage rebate for time spent training should take the form of a flat fixed payment. NEF modelling suggests that a payment of approximately £3 per hour trained would deliver a subsidy not dissimilar in overall value to the level of subsidy currently passed through corporation tax. However, we propose to tie the level of subsidy provided to an NSW rate which is pegged to the RLW, currently £12. Our initial test case assumes that employers are ultimately subsidised at a rate equivalent to 50% of the NSW, equivalent to £6 per hour, for general training, and at 100% of the NSW (£12) where workers are enrolled on courses relevant to specific skills-shortage areas, for instance, health and social care and green construction.

To support employers with the risks associated with labour mobility (employees moving on), one option for the scheme design could be that employers are initially subsidised to 100% of the NSW in every case. Employers enrolling workers not registered as skills-shortage areas would then pay back 50% of the NSW subsidy on a six-month time lag. For example, if a worker undertook 100 hours of training in January of year 1, the employer would initially receive a government subsidy worth £1,200. As of July of year 1, the firm would begin repaying 50% (£600) every month via an additional employer national insurance charge. The system, in essence, replicates the student loan in deferring payment of training costs until the financial rewards of training begin to accrue. Additional, more generous terms, might be extended to small and medium enterprises (SMEs), for example delaying the repayment trigger to 12 months from training or reducing the repayment rate. There is an argument that such repayment terms are not needed because, over the long term, businesses will automatically repay any additional productivity received from training through higher corporation taxes.

Illustrative example

Julie works as a junior engineer at a small gas and plumbing company in Birmingham with 10 employees. The company wants to move into installing heat pumps but does not currently have the required specialist knowledge. Julie is enrolled on a training course which lasts 3 days, at a full-time level of commitment (ie 3 x 8 hours). The company pays £525 to enrol Julie on the course. During this period Julie maintains her normal salary of £13 per hour. The total cost to the company is Julie's salary, £312 (not including non-salary payroll costs), plus the course costs, totalling £833.

Old system

The company makes a profit at the end of the year and can claim corporation tax relief on the £525 spent on Julie's course. The government passes relief to the company worth £131. If the company did not make a profit in the same year, it would receive no effective contribution from the state.

New system

The government immediately passes the company a tax credit worth 100% of the NSW per hour spent on training. The credit is paid to the employment allowance account and is worth £288 in total. As Julie is on a skills-shortage course, the company does not have to take any further action. The effective subsidy received has more than doubled.

If Julie's course were not a skills-shortage course, the company would have had to repay 50% (£144) of the NSW via an extra charge on employer national insurance, liable post-course completion. If, over the subsequent payment period, Julie left the company, the company would no longer be liable to repay the 50% NSW contribution and would keep a larger share of the initial tax credit.

The delivery mechanism for wage support could take a range of forms. A structure could be developed that copies aspects of the UK's R&D tax credit system, as proposed by Costa et al. (2018).⁴⁰ This system includes features that enable unprofitable businesses to receive cash rebates from the government which could be used to rebate the initial NSW outlay. However, we favour a new approach using

employer national insurance. Routing support through employer national insurance would provide a clearer link to employee salary protection and would allow workers to have visibility (via payslips) of the training hours their employer is logging on their behalf. National insurance payments are not linked to business profitability and therefore can be used to provide support during unprofitable periods. It is already commonplace to apply credits and additional charges via employer national insurance, such as the employment allowance credit.

Policy cost

We estimate that the present corporation tax relief has a maximum potential value in the order of £1.3bn per year, assuming wage costs are excluded from relief.^{41,b}

Businesses experience a range of different costs for off-the-job training, including course fees, salaries paid to training administrators, and trainee salary costs (Table 2). We estimate the current corporation tax relief effectively cuts the total cost of training to businesses by up to 6.2%. The proposed increase in the government subsidy to off-the-job training, paid at a rate of 50% of the NSW, would represent a further 7% reduction in the cost of off-the-job training to businesses, taking the government's effective contribution to 13.2% of the total training cost.^{42,43,c}

If the elasticity of government support for investment in human capital were to mirror that delivered on investment in R&D (-1.6), this would deliver around an 11% increase in investment in off-the-job training. The total annual cost of the policy would rise to £3bn, an increase of around £1.7bn. We would expect this upfront cost to be more than matched by increased tax returns from higher productivity in the long run. The upfront policy cost is higher than the cost of the German salary-replacement scheme because we are currently modelling it without any lower limit on the number of training hours completed. The German scheme has a minimum band of 120 hours of training. This would exclude the majority of in-work courses in the UK, but would potentially support the most valuable training investments.

^b NEF analysis of investment in training data presented in the Government Social Research report titled *Employer Skills Survey 2019: Training and Workforce Development*, November 2020.

^c NEF analysis of Employer Skills Survey 2019 data, and ONS Annual Survey of Hours and Earning (ASHE).

3.3 PROPOSAL PART TWO: PUTTING A NATIONAL SKILLING WAGE AT THE CENTRE OF STUDENT FINANCE

The government's proposed new LLE, if designed well, should deliver a step forward in broadening access to lifelong learning. However, significant work is required to adapt the student finance system, currently designed primarily for young undergraduates with parental support, into a system fit for mid-career workers, and individuals with caring responsibilities and financial liabilities. The final design may ultimately bear some resemblance to the Personal/Individual Learning/Training Accounts model which has already been rolled out in Wales and Scotland (albeit with relatively limited resources attached), has support from the UK Labour Party's Council of Skills Advisors,⁴⁴ and bears several similarities to the 'Skills Wallets' proposed by the Liberal Democrats.⁴⁵ Such accounts reframe student finance as an accessible and flexible drawdown facility. Our proposal would put an NSW at the heart of that offer.

The cost-of-living crisis presents an important design consideration for the new student finance mechanism. At current student finance rates the maintenance offer for workers with financial commitments will not be competitive with waged work, nor will it pay a living wage. The value of maintenance support should be increased to the NSW, with pay accumulated hourly. The accrual of hours studied could be based on the government's total qualification time framework, which sets the total hourly study and classroom time for a course. The framework, for instance, puts the qualification time for a typical level 2 qualification at 400 hours, and one year of full-time study at undergraduate level at 1,200 hours. Outside London, this would see annual maintenance support rise from its present level of around £10,200 to around £14,400. Inside London, support would rise from around £13,300 to around £15,800.

At this stage, we have not costed the full system effects of such a change, though we may do so in future work. Frequent changes to the loan system repayment terms, as well as the complex dynamics involving millions of students never fully repaying their loans make this a complex task. It was recently estimated that under the new loan terms, around 61% of students would fully repay their loans.⁴⁶ Our proposed change would likely reduce this figure materially if implemented without wider reforms to the loan-based system.

Further steps will be required to transform student finance into a functional personal learning account and a serious prospect for the workforce, as well as to improve the communication of its benefits. Payment timing should be reformed to better align with the needs of a household with financial commitments, moving away from the current once-a-term payment schedule and towards a weekly or monthly payment akin to a typical salary. Payment levels should align with the number of total qualification time hours being completed in the relevant month, with significant flexibility ranging from only a few qualification hours, right up to full-time-equivalent hours.

While not a pre-condition for the implementation of an NSW, further consideration should be given to two additional aspects of the student maintenance system. First, the extent to which it should be used as a tool to drive uptake in skills-shortage areas. The government could, for instance, replace 50% of the loan with grant funding, where students enrol in target skills-shortage courses. Second, whether the loan-based design remains the desirable format for the delivery of support.

On the one hand, the student finance system is progressive. The lowest earners see the largest value of debt written off. This advantage must be weighed against the deterrent effect on enrolment created by the taking on of such significant debts (even if those debts bear little resemblance to an ordinary loan). An area for further investigation is the extent to which this deterrent affects older, mid-career workers. Furthermore, while the system has some elements which make it more progressive than a purely publicly funded design, the ability, for instance, of wealthier students to entirely circumvent the debt, while the less well-off are saddled with an (up to) 30-year liability remains questionable.

The frontrunner policy to replace the student loan system is the option of a graduate tax or similar tax linked to the completion of educational qualifications. The student loan system already operates with a lot of similarities to such a tax, but it is not mandatory. Conversion to a tax would simply expand liability to all graduated workers. The downsides to a tax-based system, however, are the challenges aligning it with contexts in which a worker, for instance, undertakes courses of shorter lengths/lower fees. The loan system may perform better in a world where

qualifications of different shapes and sizes are taken flexibly throughout an individual's life.

3.4 TAX AND SPEND CONSIDERATIONS

The proposed reforms would increase short-term costs to the Exchequer in two regards: first, through the cost of the proposed in-work wage subsidy, and second by increasing the costs of the student finance system. We have discussed the potential for a portion of the cost of the scheme on the employer side to be repaid by businesses via national insurance in the period immediately after course completion. The objective of this mechanism, however, is not to raise revenue but rather to de-risk skills investment for businesses.

As businesses are likely to benefit from the additional productivity provided by their upskilled worker, there is likely to be a long-term return to the state via additional corporation tax take even without further revenue-raising mechanisms. It is on this basis that many governments do not see a need to directly recoup skills expenditure from businesses or individuals via additional tax charges. Indeed, given this return on investment, there is a rationale for government borrowing to invest in skills-related areas.

In the first instance, our proposals could be rolled out and ramped up simply through the re-allocation of existing resources, including abolishing the existing corporation tax relief for company skills spending and partially cross-funding the policy from the apprenticeship levy. This should provide sufficient funds to deliver a large but constrained pilot of the scheme. The apprenticeship levy had around £100m of underspend in the 2022/23 financial year, and the Labour Party, for example, has already proposed allocating 50% of apprenticeship levy funds to supporting wider employee upskilling.⁴⁷ Longer term, there may be a rationale for reviewing the balance between physical capital incentives offered via corporation tax, such as the government's recent 'full expensing' policy, and human capital incentives offered via skills policy, as well as the overall corporation tax rate, in light of the additional incentives being offered by the state.

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