



**World Class Apprenticeships™**  
Raising the Standard

**World-Class Apprenticeships:  
are they the answer to the  
age of stagnation?**

TOM BEWICK

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# Foreword

Defining and framing goals are critical to attracting public support for policy initiatives. Today, deciding how best to prepare young people and many current workers for careers and life touches on a whole host of policy agendas. Raising economic growth, increasing economic mobility, reducing inequality and youth unemployment, helping the disadvantaged, rebuilding the middle class with long-term careers, and wage growth incorporate most of the policy agendas linked to the education and training system.

Underlying the responsibility placed on education and training systems is the idea that raising the skills of individuals will improve their employment and earnings. Employers will willingly hire more skilled workers at higher wages because their work yields enough added value to do so. Left unsaid is the question, “what do we mean by skills?” Since “human capital” was operationalized by Jacob Mincer’s equation linking earnings to educational attainment and work experience, the main proxies for skill have included work experience, school attainment, degrees, and recently test scores on academic subjects.

The rising gap between high school and college graduates has reinforced this framework. In their widely cited book, *The Race Between Education and Technology*, Claudia Goldin and Lawrence Katz see technological progress driving the demand for skill, requiring that workers increase their educational levels to keep up. The increased wage advantage of college relative to high school graduates results from the slow growth in college graduates. Thus, the policy solution is more college graduates.

Challengers of this perspective highlight the importance of non-cognitive skills and occupational skills. James Heckman offers persuasive evidence that non-academic skills, such as teamwork, communication, and responsibility, play major roles in determining earnings and career outcomes. Other research reveals high returns to occupational skills, especially those providing certifications and licensing.

Still another chink in the “college for all” armour is the recognition that learning styles vary among people. Relying entirely on a classroom-based, academic approach will naturally discriminate against those who learn best by doing. Perhaps, these differences explain why the returns to college vary widely and why dropout rates are so high. A universal college approach does not promote equality, given differences in the way people learn.

As Tom Bewick masterfully explains, these arguments support a compelling theoretical case for a robust apprenticeship system as a key element of education and training policy. His paper provides a strong empirical case for apprenticeships too. It is clear to all who look that apprenticeship systems contribute greatly to lower youth unemployment. The evidence on earnings gains is solid as is the long-term use of skills learned in apprenticeship.

But, apprenticeships require employer offers, raising the question: will employers provide a sufficient number of apprenticeship slots? What is their incentive for taking on an apprentice? As this paper points out, the evidence from several countries, notably Switzerland, shows that most firms recoup their investment within the apprenticeship period itself, thereby limiting worries about other firms “poaching” workers once they complete their apprenticeship.

Many have argued that apprenticeship may work fine in central Europe but the model cannot be exported to countries with very different historical experience and economic structures. Events have overtaken this objection, with the dramatic increases in apprenticeship in Australia, England, and even a few places in the United States. With the right marketing and only limited incentives, it appears, large numbers of employers are finding it in their interests to hire apprentices.

While strongly supporting the expansion of apprenticeship, Tom Bewick raises a legitimate concern about maintaining high quality. In response, he brings forward the innovative concept of “World Class Apprenticeships”. Why not build standards that can lead to high levels of mastery in apprenticeship occupations? Developing and diffusing such standards would surely be helpful, especially to countries now trying to expand apprenticeship while assuring high quality. Of course, standards that are too rigid may not be adopted and standards that are too flexible may lose their strength as signalling mastery.

Tom Bewick deserves accolades not only for his compelling case for apprenticeship but also for introducing an innovative new element to apprenticeship and doing so thoughtfully. Let the debate about world class apprenticeships begin.

**Dr Robert I Lerman,**

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Washington DC, January 2015*

# Summary

This paper looks at the rising tide of interest in apprenticeship reform globally. Following the ‘Great Recession’ of 2008, many nations are seeking to tackle the adverse effects of youth unemployment and middle class wage stagnation by creating better employment opportunities, uprating human capital, and reforming technical and vocational training systems. Reform is particularly evident in countries that are expanding apprenticeship models – not least as a means of repairing the ‘broken bridge’ between school and workforce transitions.

This paper is in part a reflection of a roundtable discussion of transatlantic apprenticeship experts that took place in October 2014, as well as an online survey of a wider group that included employers. The dialogue focussed on the underlying drivers of global apprenticeship reform and whether there was any merit in the idea of developing an international apprenticeship standard. In addition to the roundtable discussion, the paper also explores the controversial issue of university expansion and rising levels of student debt in the UK and USA. When juxtaposed with evidence of wage stagnation and declining productivity in some sectors, the paper asks whether it is time to rebalance taxpayer resources away from investing in traditional three and four-year degree courses and into more work-based models of training, like apprenticeship.

To achieve these aims some further consideration of the internationalisation of apprenticeship may be required. The group concluded that a globally accredited standard has the potential to aid mobility and boost the value of apprenticeship for individuals and multi-national companies involved in providing them. It is anticipated that the next stage of the World Class Apprenticeships initiative will be to launch a pathfinder group of multi-national companies and learning providers in 2015. The group will work closely with INSSO and City & Guilds to pilot the key components of a globally accredited apprenticeship model, including providing some international placement opportunities.

# 1. That old, new thing – Apprenticeship

There is nothing new about apprenticeship as a means of passing on valuable skills and attributes to the next generation. Yet, in a number of countries it appears, more and more people are talking about the virtues of apprenticeship. The European Commission recently launched an *Apprenticeship Alliance* across 28 EU Member States.<sup>1</sup>

President Obama, in his State of the Union address,<sup>2</sup> signalled the importance of apprenticeship to reviving America's squeezed middle class. In England, where apprenticeships have enjoyed a renaissance in the past decade, a multi-million-pound TV advertising campaign has recently been launched. The *Get In, Go Far* ads – screened during prime time television – are aimed at signing up thousands more companies to the apprenticeship cause,<sup>3</sup> a campaign that is critical because, for all the success of apprenticeships in Britain in recent years, still less than 10 per cent of firms offer them, compared to 22 per cent of firms in Germany, for example.

Of course, for young people (and adults) the growing commitment to apprenticeship expansion is potentially a great boon, since learning whilst earning is gaining in popularity. In many countries, however, vocational training suffers from an image problem. The very idea of modern apprenticeship as a concept struggles with the short-termism of some employer recruitment behaviour and even prejudice, like academic snobbery. In some jurisdictions, apprenticeship programmes have to co-exist alongside a culturally pervasive norm that a classroom degree is worth more to an individual's long-term success than achieving mastery of a skill or profession via a work-based route.

The American author, and owner of a motorcycle repair shop, Matthew Crawford has described such a challenge as the consequence of an 'education monoculture'.<sup>4</sup> He sees it as a problem exacerbated by elites who see no other path to success than through academic learning. People who proudly manifest their skill or competence in manual work are often seen as 'a bit weird', portrayed as losers in the global economic race. At one level, Crawford is taking a sideswipe at

those who covet a career in law, consulting, or high finance as the be all and end all on the road to higher material rewards. As he puts it:

*Craftsmanship is the desire to do things well. And you can't repair a leaking toilet over the Internet; you'll still need a plumber. Habits of mind have an ethical dimension. And let's face it, an electronic office can be as dehumanizing as the assembly line.*<sup>5</sup>

The question for today's workforce pioneers, therefore, is: can apprenticeship be reinvented and remade for the twenty-first century? Can we make the ancient tradition of apprenticeship gain broad appeal again? Will enough employers want to engage? What incentives are needed, if any, to make them engage? Crucially, in a globalised world, can apprenticeship take on an international dimension so that firms and aspiring apprentices opting for this path enjoy a learning experience similar in scope, quality, and prestige to a full-time academic degree or a place at some top business school?

This paper attempts to answer these questions by first analysing the significant forces underlying labour market and apprenticeship reforms internationally. Indeed, it may not even be possible to conceive a model of world-class apprenticeship without some in-depth appreciation of what is happening across the globe in terms of the changing terms of international trade and the impact of squeezed living standards, particularly in advanced societies.

Based on a roundtable discussion with experts, the paper also looks at the design of apprenticeship, the policy issues driving their expansion, and, finally, whether there is any merit in developing an international apprenticeship standard to complement existing jurisdictional models. Although the poll was not conducted on a scientific basis, the paper publishes some indicative opinions gathered from an online survey. The aim of the World Class Apprenticeships programme is to facilitate further discussion and debate, with the aim of developing an international approach and the piloting of a trial scheme in 2015.

## 2. Why ‘average is over’ in an age of stagnation

Economists are somewhat puzzled by what’s been happening to the global economy since the crash of 2008. There’s much talk of stagnation, despite many advanced economies officially being out of recession. In the three decades prior to the collapse of Lehman Brothers, the global economy – even accounting for the occasional cyclical downturn and the dot-com bubble in 2000 – had witnessed significant growth upwards of 7 per cent per annum. This growth was particularly evident in the employment sphere with a ‘great doubling’ of the number of people in work around the globe.<sup>6</sup> Today, the worldwide employment figure stands at 2.9 billion, while some forecasters estimate it will have climbed to 3.5 billion workers by 2030.<sup>7</sup>

Driving this change, as we all know, have been some quite profound global forces. There’s no single factor to point to but rather a number of forces and underlying trends that are shaping the international context in which the apprenticeship reform debate is now taking place: trade liberalisation, e-commerce, ICT, demographics, migration, youth unemployment, and environmentalism.

Trade liberalisation, particularly the opening up of China as the world’s mass producer nation, and India, with its huge human resource capacity in IT and business outsource services, is just one example. The development of both countries has increased the number of non-farm jobs in the world’s economy by 900 million since 1980, lifting legions out of abject poverty.<sup>8</sup> It’s not surprising then that some of the developing world’s poorest generally report positive attitudes to globalisation and growing economic interdependence.<sup>9</sup> The response of people living in the West to globalisation in recent years, however, is more ambivalent, as the reported contradictory attitudes to immigration shows.

One major puzzle is what’s been happening to incomes in many advanced economies. Even before the recent crash there were signs that wages, particularly for those in middle-income and lower-waged occupations, were

already being squeezed. To provide some hard numbers, from a UK labour market perspective, the *Resolution Foundation* has been preparing annual audits of low pay since 2010. The latest study points out that:

*General wage stagnation has meant that growing numbers of workers over the last decade have found that being in work no longer guarantees economic security. Hourly median pay (excluding overtime) stood at £11.56 in April 2013, some 95p lower (adjusted for RPI inflation) than the 2009 peak, taking it back to its level in 2003. Since 2009, the number of workers earning less than a living wage [c. £7.75 per hour] – the amount that is assumed to provide a full-time worker (averaged across household types) with the means to achieve a minimum standard of living as defined by members of the UK public – has rocketed, from 3.4 million to 4.9 million in April 2013.<sup>10</sup>*

For the primary cause of the so-called ‘squeezed middle’, a number of theories have been advanced: fierce global competition and low-skilled migration driving down wages at the bottom end of the labour market, changes in technology or ‘machine intelligence’ hollowing out traditional white collar and administrative jobs,<sup>11</sup> a ‘race to the bottom’ as more GDP output goes to profits, and the relative decline in labour productivity affecting particular occupational sectors.

The changing distribution of global wealth is considered another major factor for rising income inequalities. A report by Credit Suisse in 2014 found that the bottom half of the global population of seven billion people own less than one per cent of total wealth, in stark contrast to the richest decile who, between them, own a staggering 87 per cent of global wealth. Interestingly, of the G7 nations, the researchers calculated that only the UK has recorded absolute increases in wealth inequality since 2000.<sup>12</sup>

These findings have led some experts in developed countries to single out the inflation-busting wage increases enjoyed by the top

one per cent of earners as one of the primary causes of growing income inequalities.<sup>13</sup> Iconoclasts, like the French economist Thomas Piketty, have sought to provide an overarching empirical explanation for the current economic malaise. In *Capital in the Twenty-First Century*, Piketty argues that it is the rate of capital return in developed countries over centuries that has persistently outstripped GDP growth and other forms of labour income. It is essentially these capital return rates, according to Piketty, which are the main cause of wealth concentration and therefore a decline in the living standards of working people in the middle and low wage distribution.<sup>14</sup>

Piketty's theories are not without controversy or criticism, even if there is widespread acceptance of many of the empirical findings that he espouses, specifically those relating to new forms of what he calls 'patrimonial capitalism.'<sup>15</sup>

Whatever the precise causes of the squeezed middle – or, most likely, a combination of such causes – there is no escaping the fact that wage stagnation for a significant and growing proportion of people living in advanced economies is a real phenomenon, as is the rising levels of youth unemployment and graduate underemployment. On both counts, the data shows, these trends became entrenched long before the global financial crisis hit.

The debate about growing income inequalities, therefore, is highly relevant to current efforts to reform and expand apprenticeships because of what the evidence tells us about the improved income and career prospects that formal apprenticeship can bring. Moreover, international research is mounting about the relationship between the lack of marketable skills in the population and socio-economic disadvantage.

The OECD has undertaken comprehensive analysis of cause and effect in workers accessing the labour market, specifically in terms of required job capabilities, through its pioneering *Programme for International Assessment of Adult Competencies (PIAAC)*. The results from the tests were illuminating in

that the study found individuals without good foundation skills (defined as problem-solving skills in technology-rich environments) are '1.8 times more likely to be unemployed, 1.4 times more likely to report health problems and 1.5 times more likely to have low levels of general trust as individuals with the highest level of foundation skills.'<sup>16</sup>

In other words, skills are increasingly the new global 'currency' determining social mobility and wellbeing. It is incumbent upon nations – governments, employers, and individuals – to get the best possible 'returns on investment'. This requires that countries 'assess the quality and quantity of the skills available in the population, determine the skills required in the labour market, and develop and use those skills effectively in better jobs that lead to better lives.'<sup>17</sup>

Since medieval times, apprenticeship has been at the fulcrum of cultivating foundation skills in a defined occupation, craft, or trade, leading to full mastery.<sup>18</sup> Building better apprenticeships in the twenty-first century is at least part of the answer to growing wage stagnation and the stalling of social mobility for some in low- to middle-income jobs, as well as addressing the OECD's wider point about effective skills utilisation.

As a work-based training model, combined with off-the-job education, apprenticeship can significantly help smooth the bumpy road that has become increasingly more precarious in school-to-work transitions for young people. Moreover, the global experience shows, particularly in countries with successful apprenticeship programmes, that they provide a functioning bridge between the too often separate worlds of formal education and work.

### 3. The ‘broken bridge’: education and employment

The challenge for a lot of economies is that the bridge between education and employment is broken. Globally, a young person is three times more likely to be out of work than his or her parents. The ILO estimates that 75 million young people are jobless. When estimates of underemployment of young people and those who have simply disappeared from the radar are taken into account, this number trebles. It is not uncommon to see 50 per cent jobless rates amongst 18-24-year-olds in parts of Europe, the Middle East, and Asia. And both the UK and Germany, at different ends of the youth unemployment spectrum, still have substantial numbers of young people who are NEET – not in education, employment, or training.

The paradox is that at the same time as these terrible job numbers are being reported, business survey after survey report major skills gaps and shortages. Estimates vary, depending on

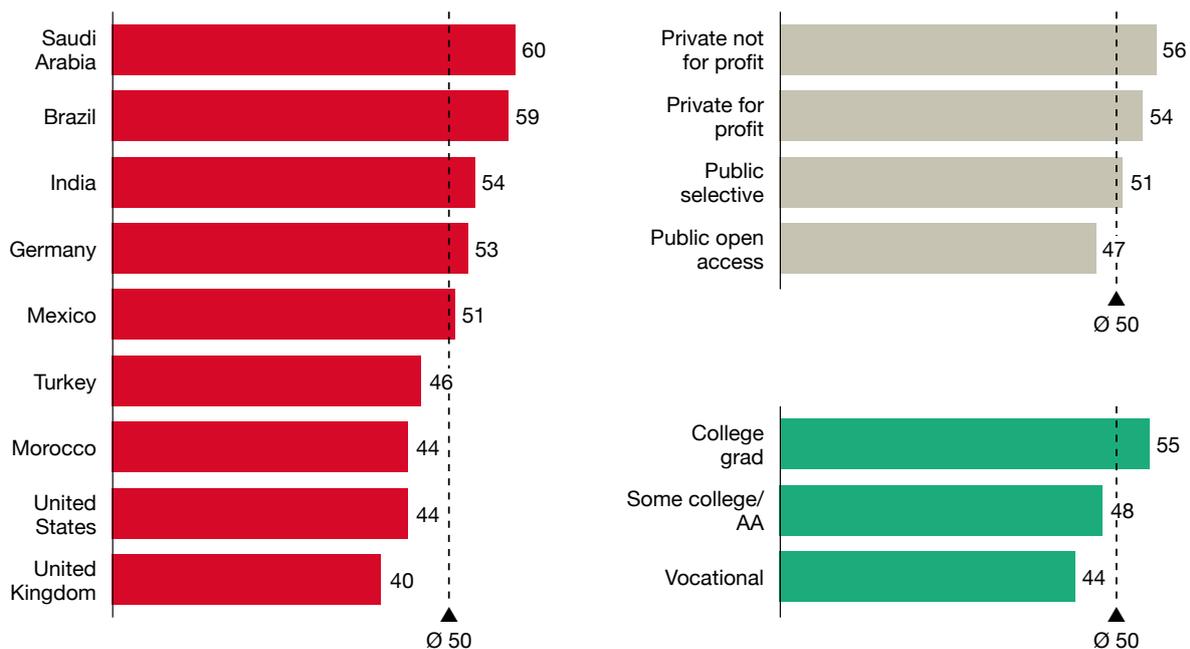
which group has conducted the survey, but some countries report up to 43 per cent of employers who say they have ‘hard to fill’ vacancies because of a lack of critical skills.<sup>19</sup> The McKinsey Global Institute estimates that this situation is set to get worse, highlighting that, by 2020, the global economy is likely to have a ‘shortfall of 85 million high- and middle-skilled workers.’<sup>20</sup>

The most comprehensive international study of these issues to date,<sup>21</sup> including a comparative survey of youth attitudes to post-compulsory education in nine countries, found that:

- Half of youth are not convinced that their postsecondary education has improved their chances of finding a job (see Figure 1).
- Almost 40 per cent of employers cite a lack of skills as the main reason for entry-level vacancies (see Figure 2).

**Figure 1: Only half of youth believe that their post-secondary studies improved their employment opportunities**

Students who believe their postsecondary studies improved their employment opportunities<sup>1</sup>  
% of respondents

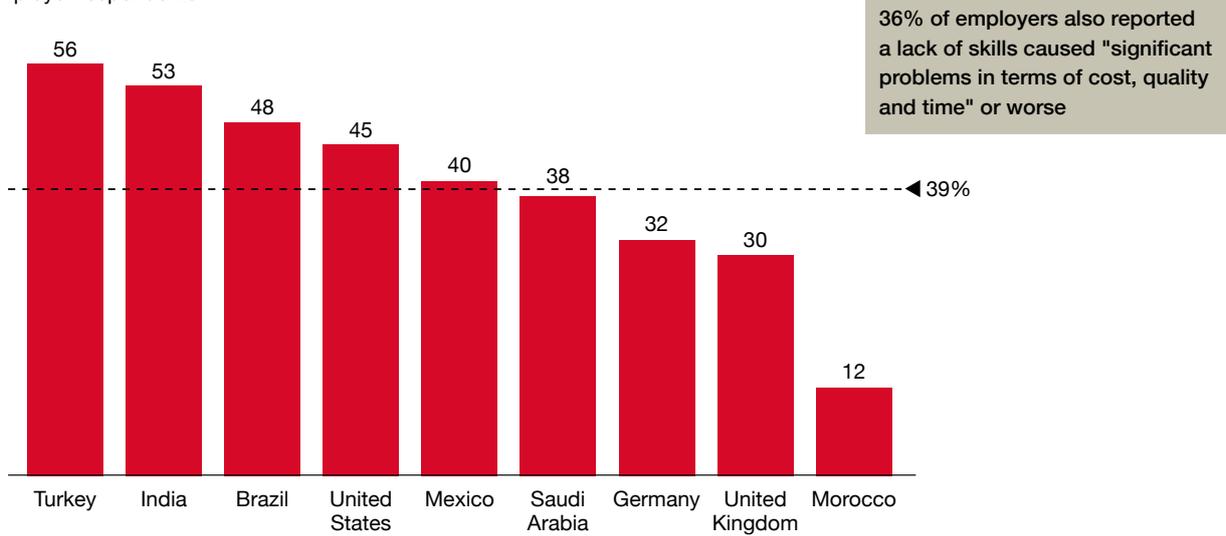


Source: McKinsey survey, Aug-Sept 2012

1 My post-high-school-education improved my chances of getting a job.

**Figure 2: 39% of employers say a skills shortage is a leading reason for entry-level vacancies**

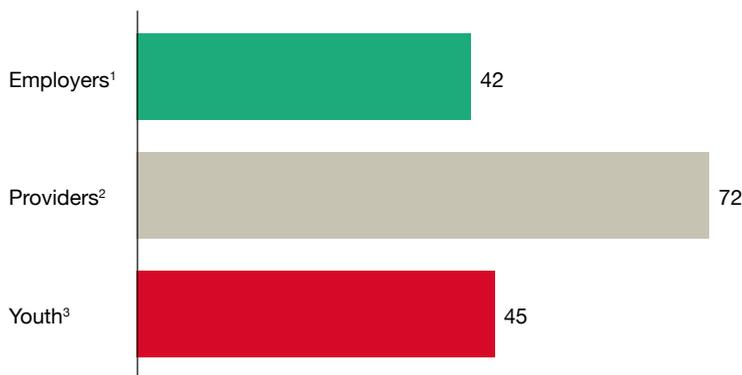
Lack of skills is a common reason for entry-level vacancies  
% of employer respondents



Source: McKinsey survey, Aug-Sept 2012

**Figure 3: Stakeholders hold different views about the readiness of graduates for the job market**

Agreement that graduates/new hires are adequately prepared  
% of respondents



- Overall, employees we hired in the past year have been adequately prepared by their prehire education and/or training.
- Overall, graduates from my institution are adequately prepared for entry-level positions in their chosen field of study
- Overall, I think I was adequately prepared for an entry-level position in my chosen field of study

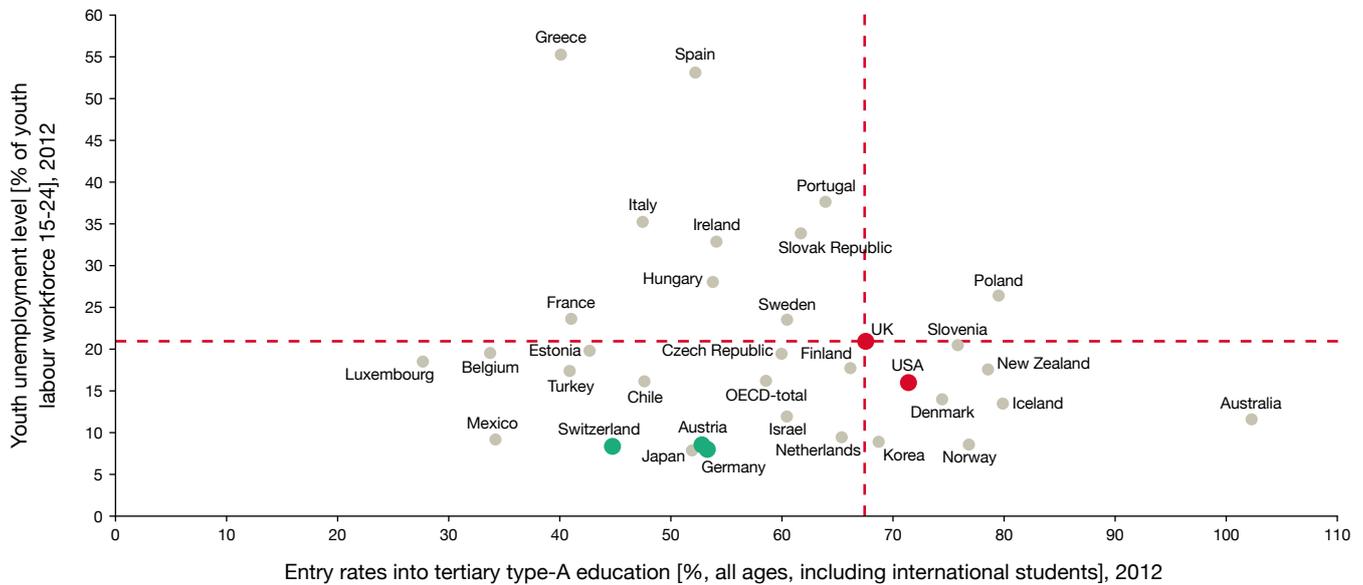
Source: McKinsey survey, Aug-Sept 2012

- There remains a yawning gap between how employers and young people view job readiness, and how the providers responsible for preparing young people for the world of work view their own performance in this area (see Figure 3).

The data from the study is particularly worrisome for the UK, where researchers found, of all the nations surveyed, that young people were most likely to report disenchantment with the system of post-compulsory education and the prospects of it helping them to find a decent job:

*The UK is home to many of the world's best and most famous universities, and it has increased the number of university places markedly. Even so, British youth give the lowest priority of those in any country in our survey to continuing in postsecondary education; only 40 per cent believe that postsecondary education will improve their chances of securing a job. British respondents also were not well informed when making decisions about postsecondary education. As a result, youth are quick to detour from the education-to-employment pathway.<sup>22</sup>*

**Figure 4: Youth unemployment levels compared to entry into tertiary-type A education (all ages, including international students), by OECD country, 2012 data.<sup>23</sup>**



In his book *Average is Over*, George Mason University professor Tyler Cowen neatly sums up the challenge from an American perspective:

*Being young and having no job remains stubbornly common. Wages for young people fortunate enough to get a job have gone down. Inflation-adjusted wages for young high school graduates were 11 percent higher in 2000 than they were more than a decade later, and inflation-adjusted wages of young college graduates (four years only) have fallen by more than 5 percent. Unemployment rates for young college graduates have been running for years now in the neighborhood of 10 percent and underemployment rates near 20 percent. The sorry truth is that a lot of young people are facing diminished job opportunities, even several years after the formal end of the recession in 2009, when the economy began to once again expand after a historic contraction.<sup>24</sup>*

The positions in Australia, Canada, Britain, and elsewhere in Europe are not that dissimilar. The real outliers are Germany, Austria, and Switzerland, where youth unemployment is amongst the lowest in the OECD and university

participation rates are significantly below the levels found in Britain and the United States.

The Germanic-speaking countries of Europe all have strong systems of apprenticeship. Of course, it is difficult to assert an exact correlation between the broad availability of apprenticeships in these jurisdictions and the observed low levels of youth unemployment. There could be other factors at play, such as the structure and management of the economy, a higher proportion of advanced manufacturing and gross value-added businesses requiring apprentices, and the complex incentives that underpin some of these labour markets. The list is not exhaustive, but these issues may also be indicative of why the Germanic systems of vocational training are generally quite difficult to replicate elsewhere.<sup>25</sup>

Whatever the real causes, it is not unreasonable to assume that the strong emphasis placed on 'dual systems' of vocational training that starts in schools at tenth grade, combined with both cultural and institutional incentives for employers to recruit via apprenticeship, is a key factor underpinning low youth unemployment in Germanic states.<sup>26</sup>

## 4. University expansion: a false dilemma?

The debate about wage stagnation and labour market polarisation is relevant to the question about whether to expand apprenticeship, because, as with any public policy choice, one has to be clear about the main objective. If the aim is simply to expand the number of apprentices in any given economy, using public subsidies for example, without much regard to the industrial and socio-economic systems underpinning the wider polity, then the net impact on improved skills and livelihoods is likely to be limited. In short, as even my 10-year-old son is fond of saying, ‘countries need skills that pay the bills’, and not just skills for their own sake.

To some extent, England has suffered this fate in recent years with the ‘dash for growth’ in apprenticeship numbers, arguably at the expense of quality labour market outcomes for individuals and employers. The majority of additional apprenticeships since 2010 have gone to the over-25s, often to individuals who have already enjoyed a subsidised higher education. Meanwhile, apprenticeships for 16-18-year-olds have plummeted.<sup>27</sup> An independent study of the UK system found that one in five apprentices did not receive the legal minimum (apprentice) wage of just £2.65 an hour in 2011.<sup>28</sup> It begs the question: how can this be good for the economy, never mind the poor apprentice?

In a similar way, developed countries need to reflect on the lessons learned from the experience of the massive expansion of higher education since the 1960s. Originally, college expansion was mainly in response to the growing need for professional managers and scientists in the post-war boom years, including the requirement for more public servants, like teachers.

As the West’s manufacturing output migrated to the Far East, its occupational structure was reshaped to provide more service-orientated jobs. Youth unemployment during this period skyrocketed, so one policy response was to allow a second major expansion of university education, mostly in the guise of supporting the ‘Knowledge Economy’.

Perhaps you could say that the policy objective from the 1980s onwards, in countries like Britain and USA, changed from trying to satisfy immediate labour demands in defined growth areas, such as public administration, engineers, and advanced technicians, to fulfilling socially driven demand, fuelled by concerns about youth unemployment. This, in turn, has culminated in allowing a lot more liberal arts majors and ‘new universities’ to flourish.

If young people could no longer get a job straight out of high school in a local firm, logic followed, then it was perhaps far kinder to subsidise them to attend college. At the time, the policy response seemed highly rational and a strong moral argument could be mounted that it was the right thing to do. After all, the manufacturing jobs that had migrated abroad were never coming back, so post-industrial societies needed some means of retraining people for working environments that were going to demand a lot more analytical, IT, and diagnostic skills, and communication, problem-solving, and social skills. In business surveys, these attributes are referred to as ‘hard’ and ‘soft skills’ respectively, precisely the range of capabilities that employers say they need.

The problem, in hindsight, has been the unintended consequences of a ‘college for all’ mind-set and how this has driven so many policy choices in recent decades. In addition, universities have been consuming a progressively higher share of national income without necessarily delivering a corresponding increase in economic growth.<sup>29</sup> Unfortunately, it would appear, a lot of blind faith has been applied to the notion that expanding the flow as well as the total stock of graduates in society would act like some kind of elixir, a magic formula capable of translating human capital potential into stellar economic performances across the board. Yet nowhere is such a hypothesis supported by the evidence.

Four decades on from this great expansion, the hard data – on both sides of the Atlantic – tells a more mixed and troubling story. Certainly, the accepted research in this field has always reported higher than average incomes over a lifetime for those obtaining degrees compared

to non-graduates. But the problem with many of these generic studies of wage premiums associated with higher education returns is that they mask a number of major anomalies in the collection of the data. And what they measure is not always the complete or *actual* picture.

Future income projections, for example, rely quite heavily on the extrapolation of past trends. In the past, fewer graduates – as a proportion of the young workforce – came onto the labour market, so it is erroneous to suggest, as some policymakers do, that by boosting the overall supply of graduates, the same price (wage levels) for occupations, will operate at broadly the same level in future. That’s just not how markets work. You only have to look at the way in which oil prices have recently plummeted to see what happens when producers simply go on pumping out supply regardless of market demand and global conditions.

Boosting the supply of any commodity, particularly if its availability in the marketplace results in a glut, will inevitably lead to a fall in price. That’s basic economics. And isn’t that the phenomenon of what is now happening to graduates of some courses who can’t find a job that will pay them at the expected ‘price’ or graduate wage?

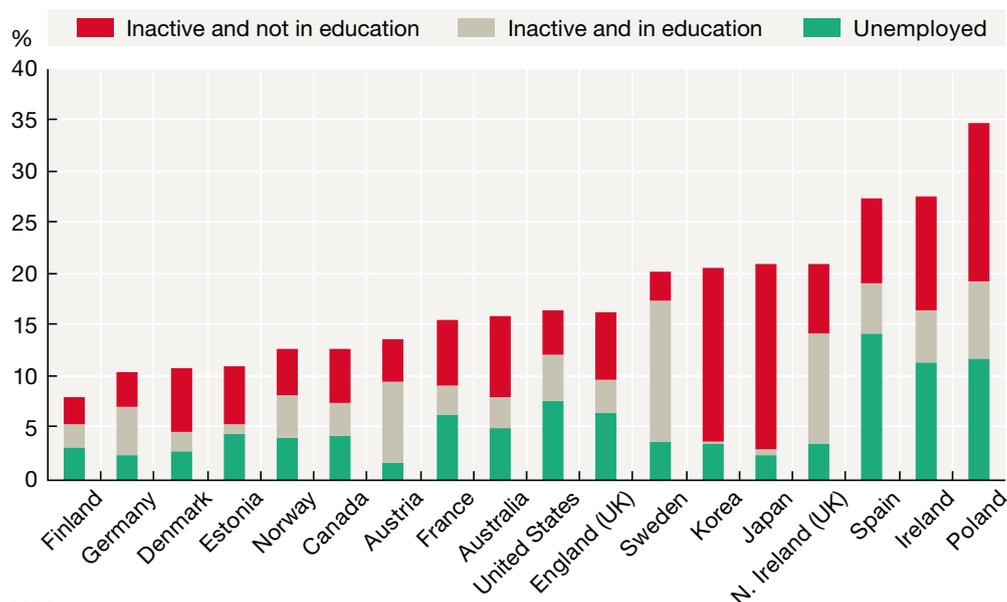
Indeed, the data in the UK about what is happening to graduate job prospects is getting better all the time. A key demand for this growing market in ‘consumer labour market information’ is the result of England’s universities being allowed to triple tuition fees in the aftermath of the 2010 general election. Independent newspapers have produced university guides for many years, but what is significant about more recent editions is the way in which these consumer guides are publishing more granular data about graduate employment and remuneration prospects.<sup>30</sup>

For example, the lobbying body *Universities UK* likes to trumpet the fact that the graduate unemployment rate is much lower than for non-graduates. And in general, in just about every advanced economy, that pattern holds true. A more accurate comparison would be to look at graduate unemployment across the UK, benchmarked to other advanced economies’ graduate unemployment rates. The OECD has carried out this exercise as part of its *Skills Beyond School* series. (See Figure 5).

The OECD’s findings do not make very encouraging reading: out of 18 countries, England came 11th and Northern Ireland 13th, in terms of unemployment *and* economic inactivity rates of graduates. Given that the

**Figure 5:**  
**Labour market circumstances of graduates**

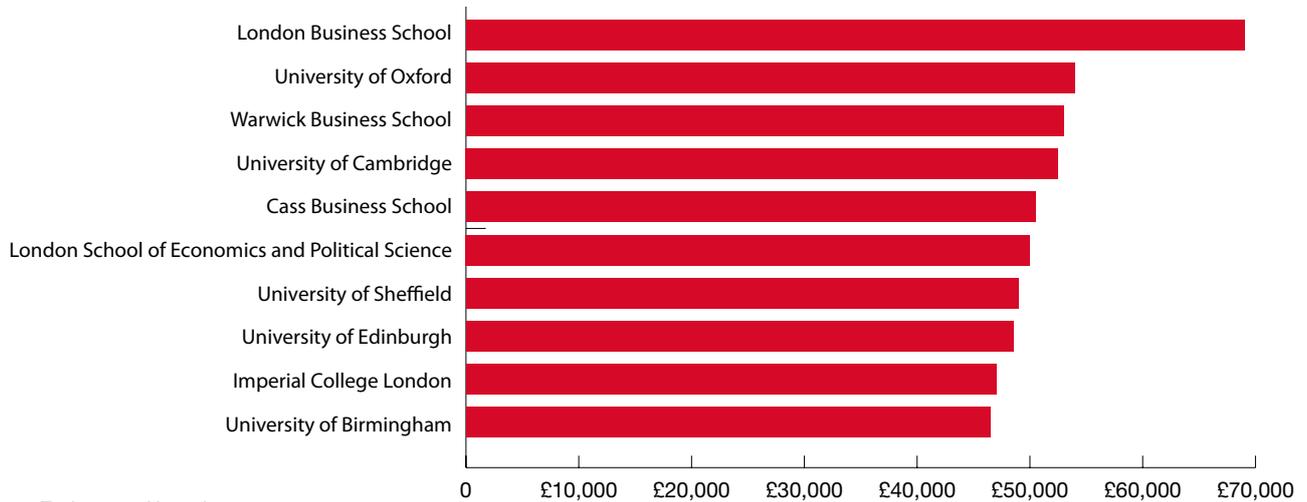
16-45 year-olds.  
Share of inactive and unemployed among short-cycle professional graduates



Source: Survey of Adult Skills (PIAAC) 2012

**Figure 6: Highest-paid graduates by institution attended, UK**

Top 10 institutions and the average salaries of graduates within five years of leaving



Source: Emlument Alumni

OECD's sample methodology stripped out many higher education courses related to 'arts and humanities', this perhaps signifies a real systemic problem with degree-level courses in the UK, specifically those that purport to be vocational in nature, such as business administration and law. The data suggests a real labour market mismatch in some degree choices, with the location of where British students choose to study still accounting for the biggest determinant of securing high levels of pay. One major survey of tens of thousands of UK graduates, taken five years after they have left university, shows that Oxbridge, top business schools, and Russell Group universities dominate the high earners.<sup>31</sup>

The problem with adopting crude comparisons like the unemployment rates of graduates compared to those of the lower skilled is that it makes no account for changing employer recruitment behaviour. In other words, is graduate unemployment in a given population generally lower because of the greater extrinsic or productive value that someone with a degree brings to a particular job role, i.e., more so than for non-graduates in the same role? Or, are employers changing their behaviour and preferring graduates in roles that traditionally would not have required a degree?

In this scenario, graduates might simply be crowding out non-graduates from the bottom end of the labour market. The evidence for these so-called 'displacement' and 'substitution' effects in employment can be found in the empirical data. The Office for National Statistics has been reporting for several years now that up to half of recent graduates are not in professional or graduate roles six months after leaving British higher education.<sup>32</sup>

We also know from reliable longitudinal survey evidence that a significant number will continue in non-graduate jobs, sometimes never escaping low-paid work. One estimate puts the number of degree holders trapped in low-skilled, low-paid work at 20 per cent. Meanwhile the unemployment rate for those who have completed a trade apprenticeship in the UK is less than 5 per cent, with, importantly, most of these jobs paying well above the living wage (approximately £16,000 per annum in 2014).<sup>33</sup>

Furthermore, longitudinal data from the Higher Education Statistics Agency shows that the numbers of graduates in work 3.5 years after graduating in the UK has steadily declined since 2003.<sup>34</sup> (See Figure 7)

These observations are further borne out by the various university guides that provide much more granular data by both course of study and the institution attended. For example, the *Good University Guide*, compiled by *The Sunday Times* newspaper, found that despite nearly £30,000 in tuition fees: '54 per cent of students from London Metropolitan University are not in professional posts six months after graduating. Almost a third of those who embark on a degree there fail to complete it.'<sup>35</sup>

Based on ONS data, the Guardian newspaper reported that: 'people with a degree in medicine or dentistry had the highest employment rate of all graduates, at 95 per cent... Medical graduates also had the highest pay, at £45,600 a year but media and information studies graduates had the lowest pay of all subject groups, at £21,000.'<sup>36</sup>

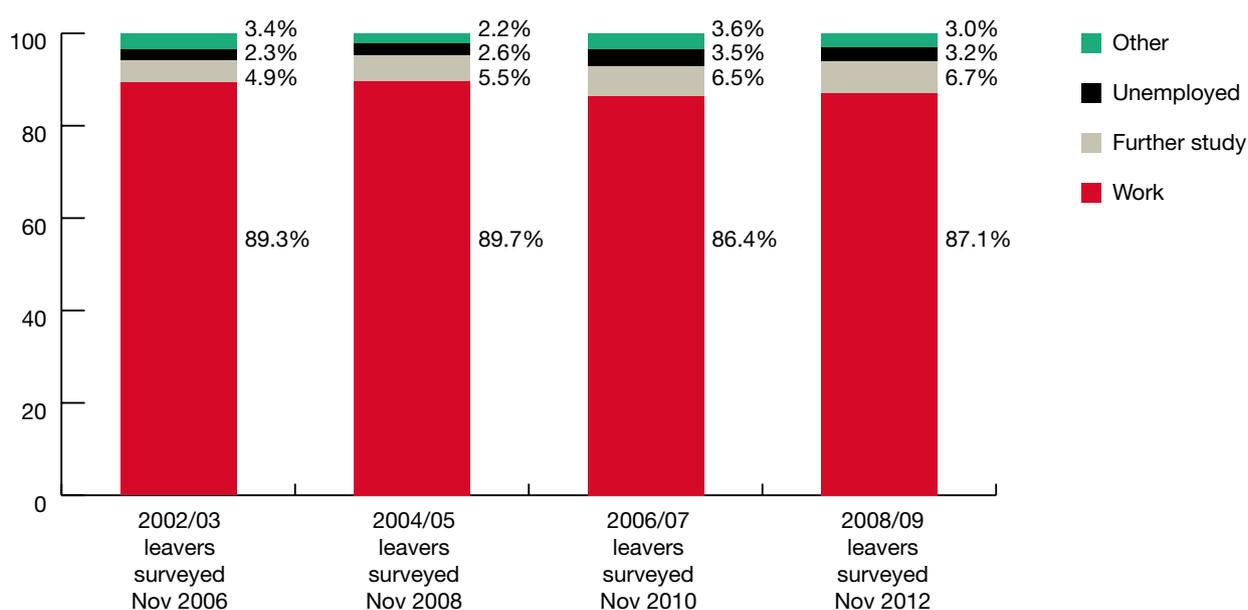
With the cap on domestic undergraduate student numbers recently lifted in the UK, the debate about the efficacy of higher education and taxpayer value for money is only likely to increase. One salvo has already been shot by

the independent Higher Education Commission: they have argued that the current student financing arrangements are 'the worst of both worlds'<sup>37</sup> because graduates are increasingly getting into unsustainable levels of debt, while the general taxpayer may have to get used to more loan write-offs as graduates fail to earn enough above the current annual threshold to trigger paying them back. Latest figures reported in *The Sunday Times*, quoting government sources, suggested that as much as £90 billion (45 per cent) of the current £200 billion Student Loan book may have to be written off in future.

Meanwhile, the consumer group *Which?* investigated higher-education fees and course quality in British higher education and concluded that more universities should be sanctioned for delivering both poor value-for-money and employment outcomes for their students.<sup>38</sup> The debate in Britain about public spending priorities, therefore, is only likely to intensify in the months and years ahead, particularly as the country grapples with an even bigger debt problem: the national deficit.

**Figure 7: Destinations of UK domicile leavers 2002/03 to 2008/09**

3½ years after graduation



Source: HESA Destinations of Leavers from Higher Education Longitudinal Survey

In the United States, student debt stands at \$1 trillion, surpassing credit card debt and second only to the nation's mortgage debt.<sup>39</sup> The average bachelor degree debt in 2013 stood at \$29,400, equivalent to about half of the annual GDP per capita of the United States in the same year.

One of the big differences between a mortgage and a student loan debt, of course, is that it is possible to foreclose on a property in arrears (i.e., cancelling the debt) whereas the student debt stays with an individual for life. With student debt, an individual can't simply file for bankruptcy, however traumatic such a prospect might be, whereas mortgage defaulters can declare insolvency and start over again.

And as we know from a lot of general studies of debt, the psychological impact on individuals who can't shake off their debts can lead to heightened anxiety, depression, and even suicide. Between 2007 and 2011, in England and Wales, the student suicide rate increased by 50 per cent. While no direct causal link between suicide and financial stress could be established, levels of student indebtedness did feature in some of the coroners' reports.<sup>40</sup> In the United States, 36 million federal loans are outstanding, with default rates running just short of 10 per cent. Interestingly, there are no national statistics available on student suicide rates, and 'there have been no epidemiological studies attempting to find a correlation between student loan indebtedness and suicide or suicide attempts.'<sup>41</sup>

In terms of the earnings potential of American graduates, particularly from non-Ivy League universities, the evidence suggests that some of the key performance metrics are increasingly headed in the wrong direction.

A study of student loan debt and 'gainful employment' by the American Enterprise Institute found that a significant number of university programmes were at risk of not reaching the legal minimum threshold of 'debt-to-income ratios', resulting in those graduates never earning enough to service debts and pay back loans. In Texas, where the data for public universities was more complete, researchers analysed the debt

repayments of people more than 10 years on from graduation. They found that at least 19 per cent of university programmes had not delivered 'gainful employment' opportunities to students who took out the loans, and a staggering 54 per cent of degree courses at these public institutions were deemed to be 'at risk' of not delivering gainful employment to former students who had taken out loans to study at them.<sup>42</sup>

In other words, up to half of all graduates from the Texas university system who have borrowed money to finance their higher education studies may never be in a position to secure good enough career prospects to fully repay their loans. Combined with the high dropout rates of American public universities, up to 40 per cent in some cases, the promise of educational opportunity being the cornerstone on which individuals 'punch their way to the middle class' is looking decidedly shaky. The Australian author Nicholas Wyman, writing about the US experience, provides a similar critique:

*I see the same problems: vocational education programs that are disrespected and in decline; parents and policy makers who see a college/university education as the only sure pathway for young people; and a middle-skills-gap that is hamstringing economic progress, particularly in the sciences, technology and manufacturing.<sup>43</sup>*

On a more positive note, longitudinal data from the Texas study found that some courses, notably biology degrees, led to significantly higher earnings a decade after graduation, with most former students being in a very strong position to clear their debts. To inform the debate further, the Hamilton Project has come up with probably the world's first advanced *Undergraduate Student Loan* calculator.<sup>44</sup> It allows students (and researchers) to compare the typical earnings and repayment profiles over 10 years, based on high, medium or low earnings potential, once graduates are in employment. Take US liberal arts majors, for example, graduating with an average debt of \$26,500 in 2013: in comparison with all other majors, they are likely to see around 50 per cent of their monthly income, the year after graduation, swallowed up in loan repayments,

compared to the mean rate of 30 per cent for all other majors. Indeed, the calculator shows that non-STEM graduates are generally at a disadvantage to science graduates because their 10-year earnings trajectory is usually much lower. Not all majors are created equal.

The problem is confounded by an earlier study by Dr Mark J. Perry of the University of Michigan that looked at the demand side of the American economy and the projections in future jobs by 2020. By analysing the US Bureau of Labor Statistics' official employment projections, he was able to determine which new jobs would require a degree.

Blowing a hole in the Knowledge Economy mantra, Perry discovered that only five of the top 30 fastest-growing occupations expected to create the most jobs by 2020 require a bachelor degree (or postgraduate qualification) – nursing, teachers in higher education, primary school teachers, accountants, and medical doctors – and 10 of the top 30 didn't require any kind of university qualification at all. These include the top 6 fastest-growing professions: retail sales staff; food preparation (including fast-food restaurant hobs); customer service representatives; labourers and freight, stock, and materials movers; lorry and van drivers; and various healthcare assistants relating to the ageing population.

Professor Robert I. Lerman of the Urban Institute in Washington, DC, has probably done more than most to grapple with the challenge of the downward trajectory of opportunities for America's middle class, particularly minorities, and the potential of expanding apprenticeship. He is a fervent campaigner for apprenticeships, which is perhaps helping to call time on America's largesse when it comes to public subsidies for higher education.<sup>45</sup>

The scale of differentials in terms of what America currently spends at the federal level on apprenticeship and what it spends supporting direct grants and subsidised student loans is quite marked. The federal unit responsible for apprenticeship at the US Department of Labor has earmarked around \$30 million per year to

spend on supporting the program nationally. Meanwhile, in 2015, the US Department of Education has requested \$69 billion in discretionary monies to support college education in the form of direct grants and subsidised student loans for higher education. Of this amount, 38 per cent (c. \$26 billion) of the budget is earmarked for the Pell Grants system, which is essentially the federal mechanism for subsidising student loans for less affluent Americans.<sup>46</sup>

Compared to what England spends on taxpayer-supported apprenticeship annually, Lerman estimates that America would need to raise \$8.5 billion to subsidise off-the-job training of apprenticeship, including launching significant marketing efforts to raise levels of employer engagement.<sup>47</sup>

The executive branch of the US government, overseen by Vice President Joe Biden and Labor Secretary Thomas E. Perez, has authorised a \$100 million grant program to boost the number of American apprenticeships over the next few years. The first federally funded expansion projects are expected to get off the ground in mid-2015.

What all these developments show, on both sides of the Atlantic, is a growing realisation that traditional investment in college expansion is no longer as effective as it once was. Wage stagnation and over-supply in some degree disciplines are placing downward wage pressure on many non-STEM graduates' ability to make a career pay. Moreover, the empirical evidence shows that the debt burden placed on students in the UK and USA is widening, even as the economic recovery gets underway.

One major paradox is that in some occupational sectors, skills gaps and shortages are on the rise again. In the past, a key policy response was to boost expansion in higher education – the Knowledge Economy. The solution in future may be to rebalance taxpayer and private resources away from traditional three- and four-year college degree courses and 'bricks and mortar' universities towards more productive work-based training models like apprenticeship – the Knowhow Economy.<sup>48</sup>

## 5. The value and definition of apprenticeship

The best available evidence internationally shows that, where structured apprenticeships exist, they nearly always achieve substantial returns on investment for individuals, employers, and society as a whole.<sup>49</sup> Returns on investment can be measured in terms of *extrinsic value*: improved productivity for the employer, for example, the training of a loyal and committed worker; as well as the more *intrinsic value* of a recognised career path that helps engender a real sense of pride or craftsmanship for the apprentice concerned.

Like any investment, however, it is not possible for financial returns to be delivered in a short time frame, which may explain the reason why a lot of companies, even in more mature systems of apprenticeship, still find it difficult to recruit and develop a pipeline of talent in this way. Take the famed example of Germany: 80 per cent of companies do not currently participate in the apprenticeship system and there are up to 250,000 young people stuck in a so-called ‘transition system’, neither engaged in the dual-system of training or working full-time for an employer.<sup>50</sup>

In terms of the value of apprenticeship, one of the most comprehensive studies of the ‘net benefits’ of employers investing in apprenticeships, by sector (in England), shows significant variation in the payback periods depending on the prior skill level and occupational sector of the apprentice. In general, most employers are able to recoup their financial investment one or two years after

the apprentice has qualified. But in sectors like engineering, the payback period can be as long as three years and seven months, whereas business administration has amongst the shortest payback periods, just nine months.<sup>51</sup> (See Table 1.)

Data from Germany, the United States, and Switzerland all confirm significant returns on investment in apprenticeship training. The payback periods vary depending on the occupational sector or methodology used to make the net benefit calculations. Dr Stefan Wolter and his colleagues at the *Centre for Research in Economics of Education*, based in Bern, have conducted several cost-benefit analyses of the Swiss and German apprenticeship systems.<sup>52</sup>

These studies confirm the empirical existence of net cost benefits accruing to all firms that participate in formal apprenticeship training. However, they also point to the reason why some firms do not participate in formal apprenticeship, which may simply be because the model of training is not profitable for them. In other words, the costs outweigh the benefits of taking on apprentices.

The Swiss researchers found that, even where firms do report significant ‘net benefits’ of apprenticeship, the financial returns are still highly sensitive to the wage rates of apprentices both pre- and immediately post-qualification. The policy implications of these findings are clear: set the apprentice wage too high and firms are unlikely to participate; too low, and the social stigma of apprenticeship being perceived as inferior to other forms of professional learning gets reinforced.

Interestingly, both Switzerland and Germany appear to avoid these kinds of social stigmas, with arguably one of the most highly valued apprenticeship systems in the world. Moreover, while the United States may have only a tiny fraction of its workforce in registered apprenticeship (RA) training, just 0.3% of the overall workforce (limited mainly to the building and construction trades), the data shows that 50,000 registered apprentices completing annually in America will earn on average \$62,000 per annum as a qualified

**Table 1: Employers’ net return on investment in apprenticeship by sector, in England, May 2012**

Sector	Apprenticeship level	Payback period
Engineering	Level 3	3 years, 7 months
Construction	Level 2+3	2 years, 3 months
Retailing	Level 2	2 years, 3 months
Hospitality	Level 2	10 months
Transport	Level 2 (mechanic)	6 months
Financial Services	Level 3	2 years, 6 months
	Level 2	3 years, 8 months
Business Administration	Level 2	9 months
Social Care	Level 2	3 years, 3 months

journeyman. This amount is much higher than the average wage for all occupations in the United States of \$46,000 recorded in 2013.<sup>53</sup>

To some extent the value of apprenticeship has to be understood alongside the notion of a formal definition of apprenticeship. What do we mean by apprenticeship? The danger of not properly defining apprenticeship is that almost any form of work-based training could be conceived as 'apprenticeship', as began to happen in England, between 2010 and 2013, when a number of work-based training programmes were rebadged by the government as apprenticeship. Concerns about the quality of these schemes, including fears about the devaluing of the apprenticeship brand, led the government to eventually reverse its decision.

Taking a widely accepted approach, an apprenticeship can be defined as the existence of a legally enforceable work contract between an employer and an apprentice, which specifies, for a particular duration of time, what learning, on the job and off the job, the apprentice will undertake to become competent or fully proficient in a defined career or occupational role. In the past, such a contract would have been specified in an *indenture* of some kind. An indentured apprentice prior to the Industrial Revolution would often work solely under the tutelage of a single master for several years, perhaps receiving food and lodgings in return for their servitude.

Looking around the world today, there is a diversity of apprenticeship models in place. In some countries – notably in the English-speaking world – apprenticeships are the modern equivalent of those indentured apprenticeships first pioneered by European medieval guilds. City & Guilds of London Institute grew out of this tradition, receiving its royal charter in 1878. Today, City & Guilds works in over 60 countries, offering vocational qualifications, including apprenticeship frameworks that meet employer needs.

In more recent times, particularly as various countries have used public subsidy to encourage apprenticeship expansion, these individual firm-apprentice contracts have become bound up in the broader notion of a

regulated apprenticeship framework, i.e., the institutions that govern the training standards, minimum legal pay rates, and the definition of what (and who) counts as an apprentice for the purpose of attracting public support.

Some national apprenticeship models are embedded in wider corporatist structures of economic management, like the dual systems of Germany, Austria, and Switzerland. Here, the delivery model is anchored in the overall apprenticeship 'eco-system'; for example, the way chambers of commerce, technical vocational schools, and local employers interact with one another to provide a defined apprenticeship route for young people. Public subsidy plays a part, but more often in the sense of supporting the eco-system: for example, the development of training standards for use in vocational schools, rather than directly supporting or subsidising the apprentice and the firm through direct cash contributions, as is the case in England.

There are increasingly new economy sectors, like digital industries, that make use of structured (sometimes unpaid) internships that, again, are similar in scope to apprenticeship. The fact that these professions are almost always degree-level entry may perhaps explain why they are not always considered a formal apprenticeship.

Another way to look at the issue is to think about apprenticeship definition and practice along a continuum. Some countries, such as the UK and Australia, have adopted in the past few decades quite an expansive view of what occupations constitute apprenticeship. By 'expansive' in this context, we mean the scope and range of occupational sectors that are eligible for apprenticeship support like public subsidy. Australia has in excess of 500 separate occupational roles recognised as apprenticeship or traineeships. In the UK, 1500 roles, spread across 170 sectors, are formally endorsed as apprenticeship frameworks.

In 2013, Germany formally recognised 331 apprenticeship occupations, from bank clerks to engineers and skilled craft technicians. An important aspect to understand about Germany's

dual approach is that all these occupations are clearly defined in the 2005 Vocational Training Act (BBiB). Federal legislation empowers the social partners and competent bodies like chambers to propose new apprenticeship frameworks (published in the Federal Gazette) and devise the competency-based training standards (developed by IHK), as well as modernise or update existing apprenticeship occupations. In the period 2001-2013, Germany developed 48 new apprenticeship occupations, while updating a further 194, according to the country's Federal Institute for Vocational Education and Training (BiBB).<sup>54</sup>

In England, public funding has been used to develop non-graduate apprenticeships in areas like customer service, business administration, and the creative industries. Higher apprenticeships, particularly schemes that involve studying for a bachelor's degree, are also being introduced in areas like accountancy, law, and engineering.

Some other countries, notably Canada and Ireland, are currently offering much less expansive apprenticeship models. Both these countries sit at the opposite end of the expansive continuum. Ireland supports just 26 occupations for apprenticeship, whereas federal Canada currently recognises around 55 Red Seal trades (although some provinces may recognise more). Both countries have traditionally conceived and delivered apprenticeships in the 'skilled trades' – for example, carpenters, plumbers, and electricians.

In terms of gender equality, all the major countries involved in formal apprenticeship record varying degrees of participation by men and women. In countries with traditional attitudes towards apprenticeship, such roles tend to cluster in mainly male-orientated trades, whereas women are found undertaking apprenticeship in sectors that will generally result in higher concentrations of female workers, such as in nursing, social care, and business administration.

Despite this fact, countries like England have achieved a relative gender balance – at the aggregate level at least – of 46% male and 54% female apprentices in 2013. Ireland has a corresponding balance of 86% male and 14%

female participation, due mainly to the focus of its formal apprenticeship system limited to the construction and allied services trades.<sup>55</sup> It's not possible currently to find international comparative statistics detailing ethnic minority participation in apprenticeship.

The available international evidence for both graduate level participation in education and formal apprenticeship shows that learning pays for both economies and individuals, but there is an urgent need to debate whether countries that have pursued a relentless drive to expand higher education participation would be better off expanding their apprenticeship systems instead. The evidence for this radical thought can be found in some of the data already discussed.

University education is becoming more expensive across the developed world, student indebtedness is growing, and graduate-level jobs (particularly those outside STEM subject areas or prestigious institutions) are not necessarily resulting in gainful employment for every former student. Meanwhile, the learning-and-earning approach associated with formal apprenticeship models reveals positive data that generally shows higher completion rates, more limited indebtedness for young people, and financial gains to companies that are usually able to achieve some payback, like productivity improvements, in a much shorter period of time than it takes for a typical graduate to recoup the financial investment that they may have made studying for a degree.

These findings potentially challenge universities and educators to think differently about how they choose to work with employers in the future to deliver the world-class skills that all advanced economies will require. A key part of that agenda may include the development of higher-level, world-class apprenticeships. Such apprenticeships could even operate across jurisdictions, as some degree courses already offer the chance for students to study abroad. Could this result in a shift away from publicly subsidising purely academic courses to more technical degrees, like the ones that various labour market studies suggest developed economies will need?

## 6. What makes an apprenticeship world class?

Google the term ‘world class’ via the web’s ubiquitous search engine and over 65 million results are returned. The top hits include ‘world-class teacher programs’, ‘world-class supply-chains’, ‘world-class player’, and even ‘world-class solitaire’! Clearly, this exercise suggests the term ‘world class’ can be found being used in many different contexts.

The dictionary definition of world class, an adjective, provides more precision: *‘Ranking among the foremost in the world; of an international standard of excellence; of the highest order’.*

If world class is really about being the best in the world, matching performance to international standards of excellence, it begs the question: what makes an apprenticeship world class?

As part of the background research for this paper, I contacted an extensive network of people who, like me, care a great deal about the future of apprenticeship. This rather unscientific approach was augmented by a small online

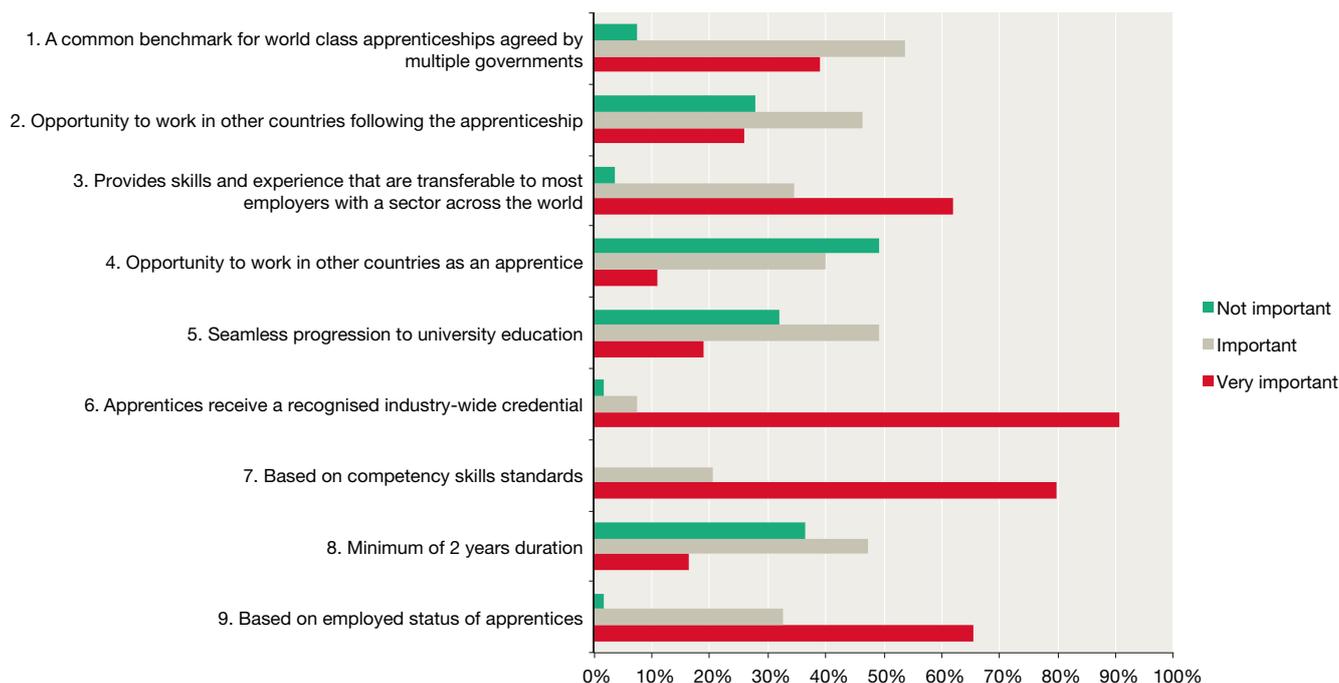
survey that elicited 56 responses from a range of stakeholders engaged in apprenticeship reform internationally.

The sample, which spanned several jurisdictions, included some multinational employers, policy experts in government ministries responsible for youth policy, practitioners at the sharp end of delivering apprenticeships (like trainers), a broad category of experts based in university departments and think tanks (analysts who write a lot about apprenticeship), and finally, officials of multi-lateral bodies such as the World Bank and the OECD. I received close to a full response rate from such a network.

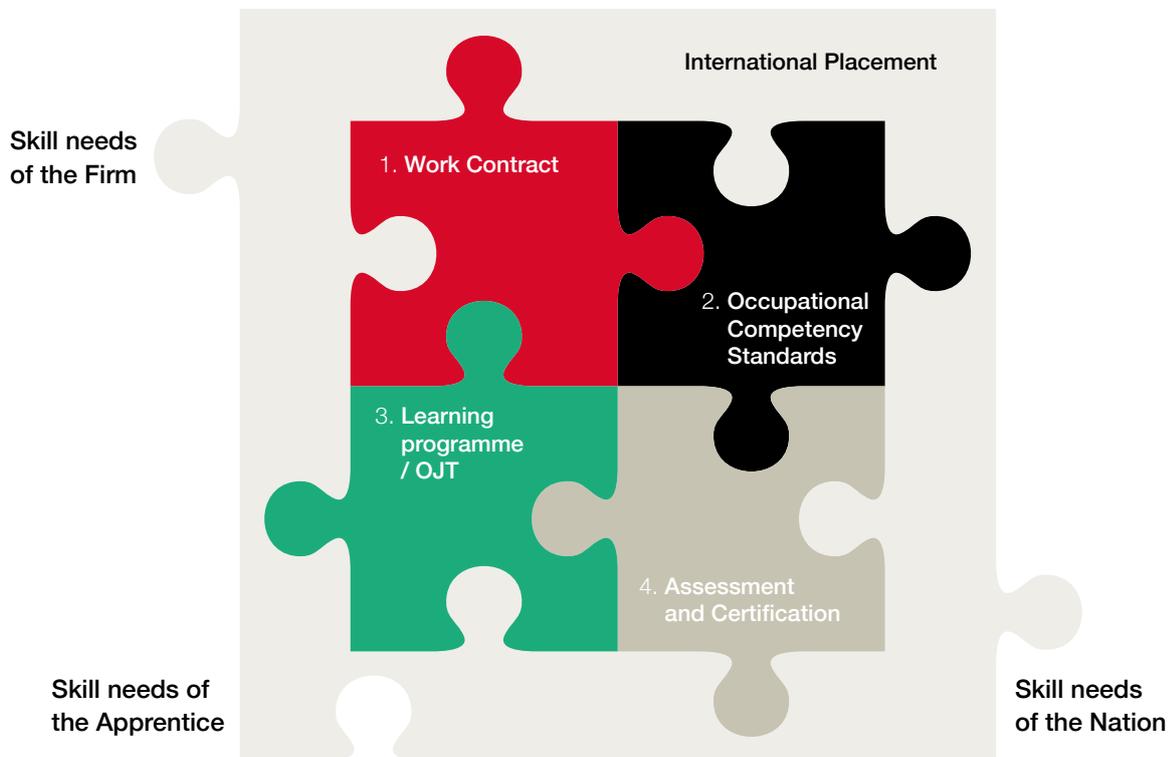
What became instantly apparent, even amongst the modest number of responses that we received, was how varied they were in terms of expressing a solid view about what makes an apprenticeship world class.

Broadly speaking, the responses could be divided into three categories or clusters. One cluster of respondents appeared to address

**Figure 8: Online respondents’ views of what constitutes a world-class apprenticeship**



**Figure 9: Possible key components of a world-class apprenticeship**



the question from a 'system-level' perspective. World-class apprenticeships in this context usually correlated to a particular country's model, like Germany or Switzerland, where indeed an internationally admired and mature system is already in place.

People in this part of my network typically said that world class meant: 'the right institutions in place to effect strong employer involvement and ensure quality vocational schools'. In other words, the key consideration here is mainly institutional structures as well as the distinct economic culture of some corporatist states. In Germany, for example, these structures include the formal role played by the trades unions and chambers of commerce as the 'social partners' or 'competent intermediary bodies' defined by law.

The second cluster of respondents replied to the question from a socio-economic

perspective: 'World-class apprenticeships are ones that boost social mobility, providing the technical skills an economy needs in the short to medium term while securing greater portability of labour', was one typical response.

From these perspectives there was a strong emphasis placed on how the different components of formal apprenticeships should interact with one another to result in the 'optimal level of skills performance', i.e., at the level of the firm, for individual apprentices, and the economy as a whole. Figure 9 summaries the key aspects of world-class apprenticeships from this viewpoint. In this group, the particular jurisdiction where apprenticeships operated was less important: countries do not have to aspire to become like Germany.

What mattered most was how integrated the various components of apprenticeship were in

### Figure 10: Core components of a world-class end-to-end apprenticeship model

1. An apprentice receives a paid work contract
2. Occupational standards of some description are used to determine the competence required to achieve mastery of a specific role
3. Both on-the-job and off-the-job training is deployed as a learning model
4. Competence is verified through both employer and independent assessment, which could include third-party or industry certification
5. International placement opportunities would be a unique feature of a world-class system

- **Routine expertise** in an occupation
- **Resourcefulness** – the capacity to think and act in situations not previously encountered
- **Craftsmanship** – pride in a job well done and an ethic of excellence
- **Functional literacies** – numeracy, literacy, digital, and graphical
- **Business-like attitudes** – customer- and client-focussed, value for money, whether in for-profit, public sector, or third-sector roles
- **Wider skills for growth** – the dispositions and wider skills for a lifetime of learning and change

terms of delivery of a quality 'end-to-end model of apprenticeship'. Figure 10 outlines five core components of a world-class apprenticeship model based on the views we received from this group.

Building on the second cluster of respondents, researchers from the *Centre for Real World Learning* at the University of Winchester, led by Professor Bill Lucas, have produced a fascinating piece of work exploring how to remake apprenticeships for the twenty-first century.<sup>56</sup>

Supported by the *City & Guilds Alliance*, Lucas and Spencer argue that we should view apprenticeships as something far bigger than simply the collection of different institutional structures and policies that underpin apprenticeship delivery. To them:

*The pedagogy of apprenticeships – the art, science, craft and nous of teaching and learning for apprentices – cannot be considered in the abstract... we have to ask and answer a more fundamental question, pedagogy for what? What are the desired outcomes of apprenticeships in the 21st century?*<sup>57</sup>

Lucas and Spencer propose six desirable outcomes of a world-class apprenticeship system. These include:

Like any outcome-based approach to learning, it should be possible to construct specific curriculum-based reforms that match up to these exacting standards. One challenge in future will be how to achieve such an ambition within an internationally recognised apprenticeship framework or agreed set of standards. Indeed, an approach to world-class apprenticeships may be required that is not dependent upon any particular jurisdictional arrangements, or even institutional structures, but, rather, the agreed ways of working between global employers, education providers, and pedagogical experts. In this vision, it is perhaps the standards, not so much country-level structures, which would drive the development and recognition of world-class apprentices.

## 7. Towards an international approach

Notwithstanding the challenge of gaining some global acceptance and traction for such an approach, there is a growing tide of interest in the idea of pioneering a world-class apprenticeship model. Just as with a number of international programmes that we take for granted today, it may initially take a small group of committed enthusiasts to come together to deliver something small scale, before much wider applications can be achieved later on.

In the education sphere, for example, an evolutionary international approach can be found in the prevalence of the International Baccalaureate World Schools. Today, nearly 4000 of these schools operate internationally, with over half in the Americas. These accredited World Schools, catering for the educational needs of 3 to 19-year-olds, all have one major thing in common: they follow an internationally developed curriculum and examination system, the IB, regardless of the jurisdiction in which the particular school operates. Thousands of young people progress onto university or the workplace with an internationally recognised qualification that is held in high esteem by both admission tutors and employers.

The International Baccalaureate began life just after the Second World War when Marie-Thérèse Maurette penned an essay entitled: 'Educational techniques for peace: do they exist?'<sup>58</sup> Her pioneering work at the International School of Geneva would result in a framework for international examinations accepted by universities, initially for student entry purposes.

By the 1960s, the IB Organisation (OBI), a nonprofit based in Geneva, had developed a rigorous off-the-shelf curriculum that was assisting schools in countries that required a fast-tracked means of ensuring the highest quality education for its citizens, equivalent to world-class standards.

Another example of international cooperation is ERASMUS, a Europe-wide programme that aids mobility for both students and teachers of 28 Member States of the European Union. Named after the Dutch philosopher Desiderius

Erasmus of Rotterdam, an opponent of dogma, who helped expand the knowledge, insights, and humanistic thoughts during the medieval renaissance, ERASMUS is also a backronym meaning *EuRopean community Action Scheme for the Mobility of University Students*.

The programme was first introduced in 1987, resulting in a pilot exchange programme between universities supporting over 3000 exchange students in the first year. Today, ERASMUS+ accounts for well over 200,000 exchange students per annum, accounting for in excess of 1 per cent of all European university enrolments, which makes it the largest such exchange placement scheme in the world.

Drawing inspiration from both these examples, there is no reason why employers engaged in apprenticeships, particularly multi-national employers, should not work together to develop the international apprenticeship equivalent of the IB and ERASMUS schemes: a globally recognised system of World-Class Apprenticeships (WCA) that offers both a robust, potentially off-the-shelf standard for countries and companies to benchmark against, as well as opportunities for apprentices to experience the skills of their occupation with the same global employer or in some other equivalent workplace abroad. In 2015, the International Skills Standards Organisation (INSSO) and City & Guilds are working with employers and others to help turn such a vision into reality.

From the roundtable of experts we consulted in October 2014, including the background research for this paper, there certainly appears to be strong support for such a venture. An online survey conducted by INSSO prior to a Palace of Westminster event showed that 87 per cent of people who responded thought that formal apprenticeships should offer some kind of international placement opportunity.

Not all agreed that every occupational sector should offer international apprenticeships. The five most popular sectors identified as being

open to *internationalisation* in terms of those who answered 'strongly agree' were:

1. Travel, tourism, and aviation
2. Information technology
3. Hospitality and catering
4. Engineering
5. Transport maintenance / creative industries  
(joint 5th place)

## 8. Conclusion

This paper began with a question: Are world-class apprenticeships the answer to the age of stagnation? The short answer, I believe, is yes.

Since Plato first taught Aristotle in the Parthenon of ancient Greece, human societies have been quarrelling about the best path to prosperity, whether through trade, conquest, or intellectual inquiry. Moreover, just about every historical epoch has relied upon apprentices of one kind or another. Leonardo da Vinci was an apprentice, as were many of the great pioneers of the first Industrial Revolution.

In a period of squeezed living standards and the failure of some aspects of our educational institutions to act as powerhouses of social mobility as perhaps they once did, is it not time to rethink how we confront the next stage of globalisation?

I have argued, both here and elsewhere, that slavishly following the promise of the Knowledge Economy is not working for many countries. Boosting apprenticeships – and encouraging new forms of apprenticeship in the twenty-first century – are important because they are the living embodiment of the Knowhow Economy: knowledge and skills, turned into marketable traits, that are applied to the real world of work and wellbeing.

Of course, this is not to say that societies won't continue to need a lot of people studying for academic degrees. Scholarship and art are what define civilisations after all. But, as the Principal of Robert Gordon University, Professor Ferdinand von Prondzynski, has observed: "Knowledge for its own sake" is no better as a pedagogical statement than "spinach for its own sake" would be a nutritional one'.<sup>59</sup>

In the twenty-first century, we may have to renew the purpose of our higher education and work-based skills and training systems. That probably requires defining more rigorously what we mean by world-class apprenticeships and making them more widely available, perhaps even ensuring that some of them are undertaken in different jurisdictions or countries around the globe. World-Class Apprenticeships is an idea whose time has come – it could help provide a promising contribution to one of the key economic challenges of our time: growing inequality in an age of stagnation.

# Acknowledgements

I would like to thank INSSO and City & Guilds for supporting the production of this paper. I am particularly indebted to the participants of the roundtable discussion in London, which took place in October 2014 (see below) prior to an evening reception at the Palace of Westminster. There are many other experts and policymakers who have given their time freely to consult on many of the ideas and analysis contained in this paper. Of course, any mistakes or omissions are my own.

## List of roundtable participants (14/10/14)

**Tom Bewick**, Director and CEO, INSSO, London, UK

**Mike Dawe**, Director of International, City & Guilds, London

**Kirstie Donnelly**, UK Managing Director, City & Guilds, London

**Michael Osbaldeston**, Special Adviser, Corporate Communications, City & Guilds, London

**Sarah Steinberg**, Policy Analyst, Center for American Progress, Washington, DC

**Professor Bob Lerman**, Institute Fellow, Urban Institute, Washington, DC

**Professor Bill Lucas**, Centre for Real-World Learning at the University of Winchester, England

**Nicholas Wyman**, Chief Executive, Innovation & Workplace Skills Institute, Australia, author of *Jobs U*, currently residing in New York, NY

**Parke Nicholson**, Senior Research Associate and Project Director, AICGS, Washington, DC

**Kimberly Frank**, Project Coordinator, AICGS, Washington, DC

**Cass Conrad**, Executive Director, School Support and Development, City University of New York, New York, NY

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Tom Bewick is the co-founder and CEO at INSSO. He has spent most of his career working in skills, employment and entrepreneurship education advising governments and corporations on successful workforce development strategies. As the founder CEO, he set up, from scratch, the industry training council for the creative and cultural industries (2004-2010), with the inaugural chair, Lord Hall of Birkenhead (Tony Hall), director-general of the BBC. This included securing funding and planning approval for a state of the art national skills academy in Thurrock and the introduction of creative apprenticeships. These days, Tom is an expert on globalisation, migration, labour market policies, economics, education management and apprenticeships. He can be found working in many parts of the world – in China, America, India, North Africa and the Middle East – advising clients on a variety of education and labour market reforms. An active trustee, he serves on the boards of Future Brilliance Foundation, Afghanistan organisation. Tom was elected Fellow of the Royal Society of Arts in 1999, and holds both a BSc. (Hons) and MSc. from the University of Bath and Ljubljana University, Slovenia. He writes an independent blog at [www.theknowhweconomy.com](http://www.theknowhweconomy.com)



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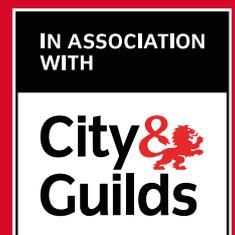
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