

4 Comparative Perspectives

Education and Training System Effects on Youth Transitions and Opportunities

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Abstract

This chapter aims to do two things. First, it discusses the literature on the different types of upper secondary education and training systems across OECD countries and reviews some historical evidence on the differential effects of these systems on youth transitions. A typology of upper secondary systems is developed, drawing on the traditional classifications by educational characteristics within comparative education and taking into account the contextual influences of different labor market regimes and welfare systems elaborated in the comparative political economy literature. The effects of the different types of system on skills outcomes are analyzed in terms of their impacts on levels and distributions of young people's literacy and numeracy skills, using the recent data from the OECD Survey of Adult Skills. The implications of these different skills outcomes for youth transitions are considered. Second, the chapter reviews the evidence on changes across countries in youth transitions since the beginning of the 2007/2008 financial crisis – in terms of education participation rates, youth and graduate unemployment and employment rates, graduate wage premia, and rates of return to degrees – and considers how upper secondary education and training systems may have mediated these. It concludes that the upper secondary education training systems continue to exercise differential influences on youth transitions as before the crisis and that varying effects of the crisis on youth transitions across countries are most likely mainly due to different labor market conditions.

Introduction

We may expect that the changes that have occurred since the onset of the global financial crisis in 2007/2008 will have major and lasting effects on young people's lives and future opportunities. Young people have been

disproportionately affected by declining real incomes (Atkinson 2014), precarious employment (Standing 2011),¹ and rising unemployment – although in some countries, of course, much more than others. Some of these changes may be largely due to the recession and affect only this generation of youth, although the repercussions for them will be long lasting (see Ashton, this volume). Other changes, however, are more structural and long term. As in the case of rising youth unemployment rates, they predated the recession, which then exacerbated them, and they will be likely to affect future generations of young people (Bell and Blanchflower 2011).

Major changes in welfare and social security arrangements, not least for pensions, have been precipitated by the combination of long-term declines in birth rates and increases in longevity and the consequent ageing of populations in all the more developed countries and some less developed ones as well (Hills 2015). The problems arising from the growing costs of pensions and health care in aging populations are not new, but they have been intensified by the economic crisis and the additional pressures this has placed on public finances and personal savings. They will impact on young people long into the future.

The same may be said of the housing crisis affecting all developed and most developing countries in different degrees. This predated the financial crisis – and indeed brought on the near collapse of the banking systems in the USA, the UK, and other countries such as Spain (Stiglitz 2010). The shortage of housing, and continual inflation of property and rental prices, affects young people particularly, so much so that we now talk of a “generation rent” for whom high rents and house prices make getting onto the housing ladder a distant prospect. Many, perhaps the majority, are unlikely to own their own homes until their middle age, thus delaying many of the other transitions often associated with home ownership – such as getting married and having children – and depriving this generation of what has been one of the most powerful sources of social mobility for previous postwar generations in western Europe (Dorling 2014).

These two structural changes – both exacerbated by the crisis – alone are massively and probably permanently reshaping the opportunity structures and life chances of the current and future generations of young people, as well as the relations between generations. To put it somewhat bluntly, young working people are increasingly shouldering,

¹ According to Atkinson (2014), between 2008 and 2013, median earnings of full-time workers in the UK rose by 6 percent less than prices, but in the case of 22–29-year-olds the shortfall was over 10 percent.

through their taxes and pension contributions, the growing costs of the welfare of older generations. While this has been true of previous generations – since a basic principle of welfare systems is that they smooth out the risks over the life course (Hills 2015) – the current younger generation is unlikely to reap the same benefits when old that previous generations have done. They will work longer, retire later, and receive less generous pensions than their parents' generation (Willetts 2010). At the same time, young people are increasingly subordinated to older generations, both financially and politically.

Many young people are continuing to live in the parental home until their late twenties, while others who move out earlier – the so-called boomerang children – are often forced to return through lack of resources to live independently. Those that can rent are usually tenants of an older generation of landlords who, as Thomas Piketty (2014) warns, are fast becoming the bearers of a return of the “rentier capitalism” of previous eras. Those who can afford to buy homes do so at an astronomical price, and are, in effect, contributing to a vast transfer of wealth from the younger generation to older generations who own the overwhelming majority of the overpriced housing stock (Dorling 2014). Escape from either scenario increasingly requires an inheritance or financial support from parents and grandparents, but this option, available only to some, also binds young adults in relations of dependency with their parents. This may be construed as a positive strengthening of intergenerational bonds, which might be enhanced yet further by reductions in inheritance taxes in one Conservative scenario (Willetts 2010). Alternatively, it can be seen as a brake on the political expression of a generation whose sense of political efficacy is already at rock bottom in the face of the overwhelming dominance of the “gray” vote. The reshaping of relations between generations goes beyond intergenerational transfers. It is also a reconfiguration of cultural politics. Compare the relative constraint of the current young generation with the power to shape cultural and political movements enjoyed by the baby boomer generation that came of age in the 1960s.

Piketty's analysis of the deep structural trends in modern capitalism goes much further than this and, if he is right, suggests yet more far-reaching changes in opportunity structures and life chances for future generations of youth. In his analysis of the long-term evolution of capitalism, Piketty shows that with the post-1970s slowing of growth in populations and Gross Domestic Product (GDP), returns to capital greatly exceed growth in national output, thus raising the ratio of private wealth to national income. As private wealth is more unequally distributed than incomes, its relative growth yields dividends that multiply the effects

of the already rising inequality in earnings resulting from weaker trade unions, skills-biased technological change, globalization, and stronger corporate elites. As the ratio of private wealth to national income grows to levels last seen in the Edwardian era in the UK, increasing shares of wealth are inherited rather than earned – already typically over 70 percent in western Europe. This will further reduce social mobility for future generations of young people (Piketty 2014).

The Great Recession is a product of all these structural tendencies and indeed accelerates the labor market changes that arise from them, probably permanently reshaping the patterns of opportunities and life course transitions for young people. However, at the same time these forces are subject to political intervention and change. As Piketty shows, the substantial reduction in inequalities of wealth and incomes experienced in the years between 1914 and 1970 – now reversed – was not just the result of the considerable physical destruction of private wealth during the two world wars, although that may have been a major factor. It was also substantially affected by political decisions to increase public ownership and public spending, which reduced the share of private wealth in the economy, and also by policies on the taxation of wealth, incomes and inheritances, and on minimum wages, explicitly designed to reduce inequality in earnings and household incomes. Political choices will be no less important in the future. The choices made by nation-states – and to some extent by global institutions – will affect the course of these deep structural changes, just as they have affected the impact of the Great Recession in different countries (Green, Mostafa, and Preston 2010).

Political choices shape institutional change, and the nature of the institutions in different countries mediates the effects of global historical forces on their societies (Soskice 2014). We therefore need to understand these institutions, and how they vary internationally, to understand the different life course patterns of young people in different places. Education and training systems represent one such institution.

The Effects of Upper Secondary Education and Training Systems on Skills Outcomes and Youth Transitions

Previous comparative work on upper secondary education (and training) and youth transitions has tended to contrast the situation in countries with “dual systems” of apprenticeship (Ashton, this volume) with that in English-speaking countries, which lack such well-embedded systems of apprenticeship, and with other European national systems, such as in the Nordic countries, that rely on comprehensive upper secondary education and training systems, coupled with work experience.

A series of Anglo-German comparative studies (e.g., Bynner and Roberts 1991; Evans and Heinz 1994; Kerckhoff 2001) have suggested that apprenticeship systems provide smoother transitions into work for young people, with more certainty about entry into employment in skilled and relatively well-paid occupations. The rather mixed and diversified system in England, by contrast, has been associated with less clearly defined transition pathways, which can be both circuitous and frequently disrupted. Other work on the effects of apprenticeship systems (Brown, Kirpal, and Rauner 2007) focuses on the role of long cycle apprenticeships in professional socialization and therefore in the formation of adult identities among young people. By contrast again, English-speaking countries have largely replaced the traditional long apprenticeship, with its emphasis on the gradual acquisition of occupation skills, identities, and work values, with various forms of competence-led training, largely bereft of this socializing element. They have been seen as providing a comparatively weak basis for young people's employability and their adult identity formation (Brown, Kirpal, and Rauner 2007).

Other research has made wider claims for the effects of apprenticeship systems. Research in the comparative political economy tradition, for instance, has frequently argued that dual systems of apprenticeship not only provide smoother transitions into employment and lower rates of youth unemployment (Allmendinger 1989; Breen 2005; Gangl 2003), but also contribute toward the reduction of skills inequalities. Countries with such systems are generally observed to retain a higher proportion of adults with intermediate skills and thus to reduce the hollowing-out of skills stocks and consequent skills polarization associated with more liberal economies and other types of education and training system (Estevez-Abe, Iverson, and Soskice 2001; Brown, Green, and Lauder 2001). Going further still, others have argued that, when combined with certain forms of labor market organization, and particularly centralized systems of wage bargaining, apprenticeship systems promote wage equalization (Busemeyer and Iversen 2012; Busemeyer 2014) among adult workers.

In what follows we look at how far these claims about differential system effects on young people's educational outcomes and employment transitions are substantiated by the evidence on skills and employment from the OECD Survey of Adult Skills (OECD 2013c).² The survey tested adult skills in literacy, numeracy, and problems solving, but we confine ourselves here to the results for literacy and numeracy.

² This is also sometimes known as PIAAC for "Programme for International Adult Assessment of Competences."

Literacy and numeracy, of course, constitute only one part – although arguably a very important part – of the set of knowledge, competence, and attitudinal outcomes that shape young people’s future employment transitions. However, using cross-country data on education achievement (skills) as opposed to educational attainment (qualifications) has one very important advantage in terms of comparative analysis. Educational qualifications cannot easily be compared across countries or over time. International standardization of education levels (as in the ISCED levels³) is highly tendentious and subject to manipulation by the country authorities that attribute qualifications to levels. Comparisons within countries of trends in qualification levels are equally dubious since the content and mode of assessment in examinations change significantly over time. By contrast, international skills assessment is designed to be comparable across countries and over time. Not surprisingly, the aggregate results of skills tests provide a much better predictor of cross-country variations in economic outcomes at the macro level than do alternative measures of educational attainment, such as years of schooling or qualification levels (see Hanushek and Woessmann 2010).

A Typology of Upper Secondary Education and Training Systems

We can identify four broad types of upper secondary education and training systems in OECD countries from the comparative education and training literature that classifies systems according to institutional structures, forms of curriculum and assessment, and modes of governance and regulation (Busemeyer and Iversen 2012; CEDEFOP 2008; Dumas, Mehaut, and Olympio 2013; Green 2003; Greinert 2004; Lasonen and Young 1998; Maurice, Sellier, and Silvestre 1986; McLean 1990; OECD 1985; Raffe et al. 2001; Verdier 2013).

The country groups emerging from this bear a close resemblance to the classifications of economies and welfare systems in the comparative political economy literature, with liberal Anglophone countries representing one type, the social market and social democratic countries representing two further types, and southern Europe and East Asia, in some of the literature at least, being accredited with separate though less distinctive political economy models (see Esping-Andersen 1990; Green, Mostafa, and Preston 2010; Hall and Soskice 2001; Pontusson 2008).

³ ISCED stands for “The International Standard Classification of Education” developed by UNESCO and OECD.

The connections between the two forms of classification analyzed in the more recent literature should not be surprising, since education systems form an integral part of welfare systems in general, and since their functioning is substantially affected by the way the external contexts, such as labor market and welfare institutions, interact with them (see Busemeyer 2014; Green and Janmaat 2011).⁴

Type 1 Systems

These are predominantly school-based systems with general academic and vocational provision in different types of dedicated upper secondary institution and with apprenticeships representing separate but residual systems. This is the modal type in southern European countries and other western countries influenced historically by the French education system and also, through more complex genealogies, in central and eastern European (CEE) and East Asian countries (Green 2013). Programs in upper secondary institutions normally last for two or – more usually – three years from the age of fifteen, as in the original model of the modern French *lycée*, and end with a qualification which gives access to general university higher education (ISCED 5A) in the case of general education students, and vocational tertiary education (at ISCED Level 4 or 5B) for vocational students. The curricula in different general and vocational programs today generally share certain common core elements, but programs are typically organized around a cluster of subjects specific to the disciplinary or vocational orientation of program. Diplomas are normally based on externally administered “grouped examinations” that require passes in a range of subjects, including core areas of language and Math. The majority of continental European and East Asian OECD countries have systems of this type (e.g., in our sample – the Czech Republic, Denmark, Estonia, France, Finland, Greece, Italy, Netherlands, Japan, Poland, and Russia).⁵

⁴ The main difference between the two classification systems is that France tends to be classified with the southern European model in the education typologies, whereas it is normally grouped with northwestern European countries in the comparative political economy literature. The advantage of considering the classification systems from the comparative education literature in addition to those from the comparative political economy literature is that it provides more fine-grained distinctions between the different types of school-based system, and the effects of their different pedagogic approaches, whereas the latter tends to focus primarily on a single contrast between apprenticeship systems and school-based systems and the effects of the contrasting forms of linkage between skills formation and labor market systems in the two cases.

⁵ Denmark could be considered a borderline case because up to 30 percent of young people take a form of apprenticeship, but many of the apprentices are not on traditional apprentice contracts as in dual system apprenticeships.

Type 2 Systems

These are predominantly comprehensive, school-based systems with academic and vocational provision within the same institution and with, again, apprenticeships representing a largely residual alternative form. Provision is organized either as a standardized, core plus options program, as in most North American high schools, or in differentiated programs with distinctive subject specialisms but overlapping cores of general education, as in Norway or Sweden. These systems share most of the characteristics of Type 1 systems, but tend to have a higher degree of integration of curricula and assessment across the range of provision (Raffe et al. 2001). They can be regarded generally as relatively standardized on one level – since there is only one main type of upper secondary institution. However, governance and regulation varies considerably between the US and Scandinavian contexts, with school choice and diversity policies in the former leading to much greater institutional variation than would be found in the more standardized Nordic systems. A number of countries have a few such institutions (*eniaia lykeio* in Greece; *lycées polyvalents* in France; and tertiary colleges in England) but only four OECD countries have this type of institution as the dominant institutional form (Canada, Norway, Sweden, and the USA). Because of differences in governance and regulation, Type 2 systems are best divided between Type 2a for the North American variant and Type 2b for the Nordic Variant.

Type 3 Systems

These are systems with participation distributed relatively equally between school-based general education and employment-based dual systems of apprenticeship and are found exclusively in social market political economies. In this kind of system the provision at upper secondary level may be of similar duration across the different tracks (as with the normatively three-year apprenticeships and final stage *Abitur* courses in Germany), and the vocational track may contain significant mandatory components of general education [as in all dual system apprenticeships (Solga et al. 2014)]. However, the general and vocational tracks remain very distinctive, with sharp differences in forms of regulation, curricula, and assessment, and with clearly differentiated final qualifications and subsequent progression possibilities in education, training, and work (e.g., in Germany, university for *Abitur* graduates from the *Gymnasium* and *Realschule* and skilled jobs or higher technical courses for apprentice graduates). In respect of their dual systems, Type 3 systems have distinctive forms of regulation based on social partner organizations. This means

that apprenticeship systems are closely integrated with labor market institutions and the world of work, and this has important effects on the labor market value of the qualifications they offer and the consequent incentives this provides for apprentices (Busemeyer and Iversen 2012). A number of countries have traditional dual systems of apprenticeship, where provision is regulated by the social partners, and with apprentices recruited by firms and placed on employment contracts (including Austria, Belgium, Denmark, Germany, Ireland, Luxembourg, Netherlands, and Switzerland). But it is only in Austria, Germany, and Switzerland where a third or more of young people participate in them (OECD 2008, 331, table C1.1; Steedman 2001, 2010). In the varieties of capitalism literature these three countries present the core cases of the social market model of political economy.

Type 4 Systems

These are “mixed systems” that include many different school- and employment-based programs of variable length and quality but with dominant academic tracks. Programs in these systems are often organized on a modular basis, to promote flexible combinations of options. Assessment in general subjects can be through elective single subject awards (as with the English A levels) or, in some cases, by grouped awards that specify a given combination of subjects to be assessed, as in *Bachillerato* in Spain. Vocational courses are often competence-based and students are assessed on the basis of their ability to demonstrate competences rather than on their knowledge of a syllabus, and programs often do not have a prescribed duration. Regulation and governance in mixed systems is generally more liberal and market-oriented than in other systems, with much diversity in programs and types of providers, including private training organizations and, in the case of the UK, private awarding bodies. Systems in this group tend to have lower participation rates among 17- and 18-year-olds and relatively high rates of early school leaving [defined by the European Commission as those who leave education without qualifications above the ISCED 3 C (short) level].⁶ Systems broadly conforming to this type can be found in Australia, England, Northern Ireland, Ireland, Scotland, Spain, and New Zealand. With the exception of Spain, these countries all belong to the liberal model of political economy identified in the varieties of capitalism literature.

⁶ See Eurostat data at: http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/School_enrolment_and_early_leavers_from_education_and_training

To what extent are the different system types associated with different aggregate outcomes in terms of levels and distributions of skills? To date there has been very little literature that examines the contribution of upper secondary education and training systems to skills gain (see Green and Pensiero 2015a). A more extensive literature exists, however, on effects of system types on skills inequality. Much of this relates to the question of tracking and the paradoxical way in which this intersects with the relative parity of esteem between academic and vocational education in different types of system.

All upper secondary systems involve some kind of hierarchical differentiation between general academic courses and vocational programs, even where these take place in the same institution (Van Houtte and Demanet 2012). However, arguably, the key difference between the four types lies in the size of the status and quality gap existing between the academic and vocational tracks. In Type 3 systems, including general academic institutions and dual system apprenticeships, vocational provision is generally considered to be of high quality and the programs attract a large number of students (sometimes a majority of the age group), coming from across the ability range, including a substantial proportion graduating from the academic *Gymnasium* or even university (Schneider and Tieben 2011). These higher achieving entrants add to the prestige of the vocational system, the quality of its outputs, and the value of its qualifications on the labor market, the latter being boosted in addition by strong labor market demand for intermediate skills (Hall and Soskice 2001). With such apprenticeship systems, it is argued (Raffe et al. 2001), there will be greater parity of esteem between the academic and vocational tracks, and consequently expectations and achievement in the vocational tracks will be higher. This may help to reduce inequality in skills outcomes.

In Type 1 and Type 2 systems there are typically also status differences between academic and vocational tracks (which can be greater than in Type 3 systems) and this is particularly the case where the vocational tracks do not give full access to higher education, as is typical in Type 1 systems. The higher achieving students are likely to enroll in academic tracks, with vocational tracks taking a higher proportion of lower achieving students, who cannot access the general tracks. However, the status gap between the tracks is partially mitigated by a common structure to programs, particularly in Type 2 systems, so that they all last three or more years and require a given amount of time learning in core general education subjects, such as the national language and Math (Hodgen et al. 2010). As in the apprenticeship systems, this may serve to raise the literacy and numeracy skills of the lower achievers, thus reducing

skills gaps. In the Nordic version of comprehensive, school-based upper secondary education and training, there is much less between-school variation than in the North American system and this is also likely to reduce the degree to which these schools reproduce skills inequalities.

In more mixed systems, however, the inequality-mitigating features of Types 1, 2, and 3 systems, with their mandatory core curricula and long cycle programs, are usually absent. Participation is heavily skewed toward the general academic tracks that are considered to be of much higher status. Vocational programs are variable in quality, often short in duration, and do not necessarily offer progression routes into higher-level programs or high quality jobs. Wage returns to vocational qualification on the labor market tend to be relatively low (see for the UK: Greenwood, Jenkins, and Vignoles 2007). Where, as in the UK, there remains considerable labor market demand for low skills recruits, participants on these programs may have little incentive to raise their skills levels (Keep and Mayhew 2014). Furthermore, vocational programs are typically competence-based, largely oriented toward immediate labor market entry, and frequently involve very little general education or continuing study of Math and language. A Nuffield Foundation survey of twenty-four countries and country regions found that none of the Anglophone countries and country regions, excepting the USA and Canada (British Columbia, BC), mandated the study of both English and Math in all upper secondary programs, whereas almost all the other countries (barring France, the Netherlands, and Singapore) required the study of both Math and the national language on all programs (Hodgen et al. 2010). Lower status vocational tracks often fail to attract students in sufficient numbers to include a broad cross-section of young people with different levels of attainment and this, combined with the lack of transparency that comes with system complexity, may mean achievement norms are weakened. These systems are not expected to reduce skills inequalities.

Skills Outcomes of Different Systems

The analysis that follows uses the data on literacy and numeracy skills from the OECD's Survey of Adult Skills (SAS). The survey is based on nationally representative samples derived from standardized stratified sampling, with minimum sample sizes of 5,000 (or 4,500 achieved sample), and was conducted in households through interviewer-supervised, computer-based tests of skills of adults aged 16 to 64 in twenty-five countries and country regions in 2011/2012 (OECD 2013c). The tests used a battery of questions of different levels of complexity and scores were computed based on the principles of item response theory in

order to take into account both the number of correct answers and the difficulty of the items. The survey provides the most up-to-date comparative information we have about the literacy and numeracy skills of young people in different OECD countries.

Levels of Skill

What do the data tell us about the average levels of literacy and numeracy skills of young people in different countries? Figures 4.1 and 4.2 show the mean skills levels in numeracy and literacy in different countries for young people aged 16–24 and 55–65. The first thing to note is that the average skills level of young people in the Anglophone countries is low relative to that in most other countries in both numeracy and literacy. The USA ranks last (22nd) in numeracy, with England (19th), Ireland (18th), Northern Ireland (16th), and Canada (15th) not performing much better. In literacy, relative performance is only slightly better, with England third from the bottom, in 21st place, and the other English-speaking countries ranked 20th (Ireland), 19th (Northern Ireland), 18th (USA), and 13th (Canada). Most remarkably, England and the USA are the only countries where the younger age group performs scarcely better on average than the older, 55–65 age group. Young people in countries with dual systems of apprenticeship perform somewhat better on average than those in the Anglophone countries. Both Austria and Germany are in the top half of the country rankings in both literacy and numeracy. However, they are still some way behind the best performing countries and country regions, which are Finland, Flanders, Japan, and Korea.

How significant are these differences across countries? The range of scores in SAS is considerable with, for instance, 36 points separating the mean scores for numeracy among 16–24-year-olds in Finland and the Netherlands, at the top, and in the USA, at the bottom – a difference, according to the OECD, associated, on average across the OECD, with five years of schooling (OECD 2013c, 63). As the OECD analysis of the data shows (OECD 2013c, 84), there is considerable overlap between country scores, so that the means for many countries will not be significantly different from those for, say, four or five other countries, close by in the rankings. Nevertheless OECD can separate out three groups of countries whose scores are not significantly different from the OECD mean, or which are significantly higher or lower than the mean (OECD 2013c, 82, figure 2.7a). East Asian countries (Japan and Korea) and social market countries (Austria, Belgian Flanders, Germany, and Netherlands) all fall in the top scoring band, along with two of the Nordic countries (Finland and Sweden) – with Denmark and Norway in the middle band. All of

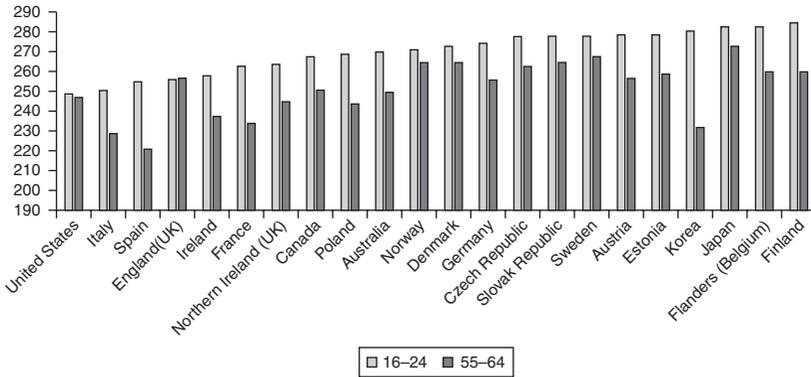


Figure 4.1. Numeracy means by age group, 16–24 and 55–65.
 Source: OECD (2013c) *Skills Outlook 2013: First Results from the Survey of Adult Skill*. Paris: OECD.

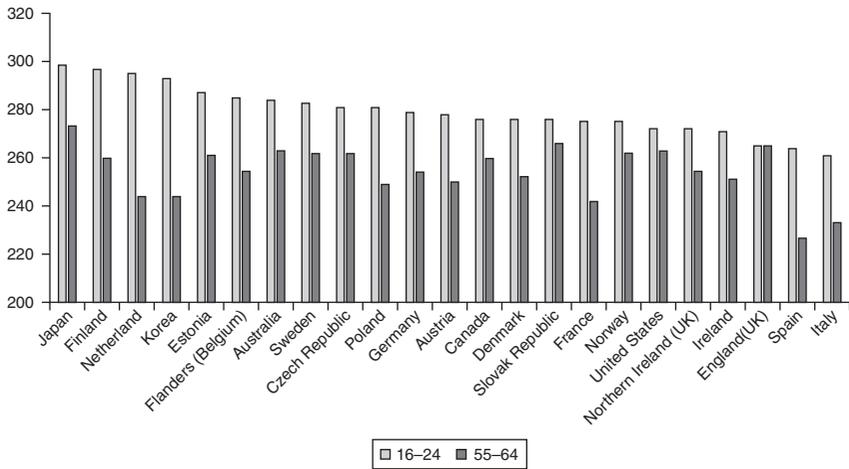


Figure 4.2. Literacy means by age group, 16–24 and 55–65.
 Source: OECD (2013c) *Skills Outlook 2013: First Results from the Survey of Adult Skill*. Paris: OECD

the Mediterranean countries (Cyprus, France, Italy, and Spain) and four of the Anglophone countries (England, Ireland, Northern Ireland, and the USA) fall into the bottom band – with Canada and Australia in the latter case in the middle band. This pattern of variation by country groups associated with the different varieties of capitalism and related

upper secondary system types is remarkably consistent across different measures in SAS.

If we dig deeper into the distribution we can understand more about why the averages differ across countries. Anglophone and southern European countries tend to have a larger proportion of people scoring at the lowest levels than other groups of countries. This is the familiar “long-tail of under-achievers” often discussed in relation to the UK skills distribution. At the same time, the proportions scoring at the highest levels are well below average in the southern European countries and only just above the average in English-speaking countries. OECD (2014) provide the proportions of 25–34-year-olds in each country sample scoring at below level 2 and at levels 4 and above for both literacy and numeracy (Education at a Glance, Indicator A1.8). Taking the average of the values for the countries in each country group, we can see that about one-fifth of young people are scoring at the lowest level in numeracy in southern European (21 percent) and Anglophone countries (20 percent), compared with 13 percent in CEE countries, 11 percent in the German-speaking countries, 11 percent in the Nordic countries, and 7 percent in the East Asian countries. In literacy, southern European countries, on average, also exhibit a relatively high proportion scoring at the lowest level (18 percent) whereas Anglophones do somewhat better in relative terms (13 percent). However, both groups of countries still stand out as having on average higher proportions of low achievers relative to other country groups, including German-speaking countries (11 percent), Nordic and CEE countries (both 10 percent), and East Asian countries (3 percent).

Skills Distributions

The distributions of literacy and numeracy skills, this time for 25–29-year-olds, also reveal substantial differences between countries and country groups. Figure 4.3 shows the difference between the mean scores of the bottom and top quintiles for literacy and numeracy. In both literacy and numeracy skills the English-speaking countries tend to have rather wide distributions relative to most other countries, with England, the USA, and Ireland being among the six most unequal countries. The East Asian countries, by contrast, have narrow distributions relative to other countries. Austria and Germany are in the more equal half of the range of countries. Our significance tests show that numeracy scores in England, Sweden, and the USA are not statistically different from each other, but the skills in these countries are significantly more unequal than in all the rest. In literacy, there is no significant difference between England,

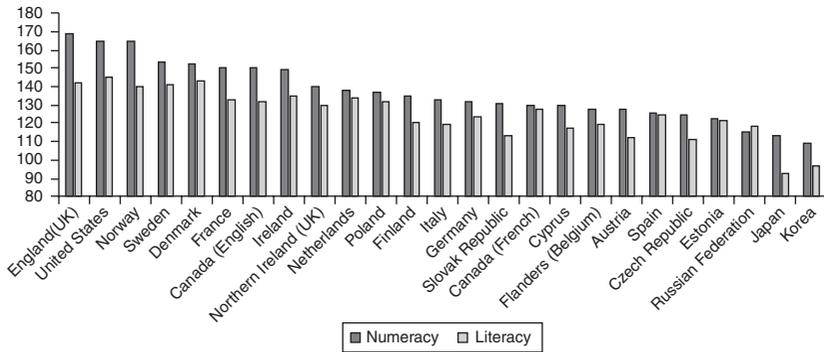


Figure 4.3. Differences between means for top and bottom quintiles in numeracy and literacy scores.

Source: Own calculations derived from data in: OECD (2013c) *Skills Outlook 2013: First Results from the Survey of Adult Skill*. Paris: OECD.

Ireland, Netherlands, Norway, Sweden, and the USA at the top end, so we can say with confidence that three of the English-speaking countries in this group are among the five countries most unequal in skills. Only Northern Ireland, among the English-speaking countries, occupies a more middling position in terms of inequality of skills.

SAS also contains data on the educational levels of parents of respondents, so we are able to calculate a social gradient of skills measure showing the effects of social background on skills acquisition. Figure 4.4 shows the average gap in numeracy skills in each country for 16–24-year-olds and 55–65-year-olds between those with a graduate parent and those with no parent having more than lower secondary education. Among the younger age group the social gap in achievement is relatively high in English-speaking countries, and particularly so in England and the USA, relative to that in other country groups. The country group patterns in general are somewhat similar to those for skills distributions, except in the case of southern European countries, which tend to have relatively wide skills distributions but relatively shallow social gradients for skills (a combination that is probably the product of high regional disparities and combined with relatively low social disparities). CEE countries, social market countries, and Nordic countries fall in the middle of the ranking on this measure of inequality of skills opportunity, whereas the East Asian countries display smaller social origins effects than all other countries. The social gradients tend to be considerably steeper for the younger age group than the older one, except in a few countries (e.g., Ireland, Finland, and Francophone Canada).

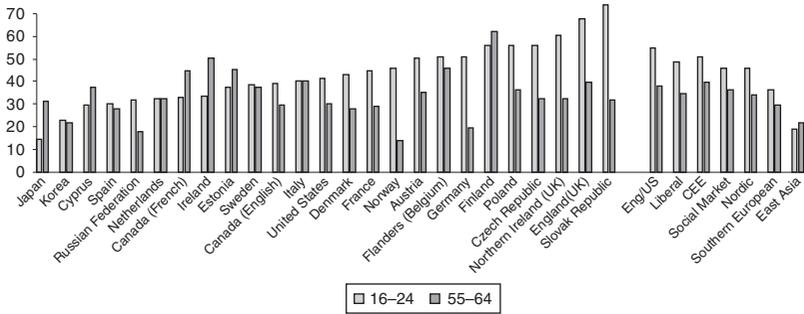


Figure 4.4. Social gradients for numeracy for younger and older age groups.

Source: Own calculations derived from data in OECD (2013c) *Skills Outlook 2013: First Results from the Survey of Adult Skill*. Paris: OECD

The skills inequalities illustrated afore reflect an accumulation of skills inequalities over the life course and cannot be attributed to upper secondary education and training systems alone. However, our recent analysis using a pseudo cohort derived from 15-year-olds in PISA 2000 and the 25–29-year-olds in SAS in 2011/2012 suggests that countries with Type 3 school-based general education and extensive dual systems of apprenticeship, and countries with integrated school-based upper secondary systems, both tend to be better at mitigating skills inequalities during the upper secondary phase than countries with Type 4 “Mixed Systems” (Green and Pensiero 2015b). They also tend to be better at maintaining or improving average levels of skill during this phase, relative to other countries (see Green and Pensiero 2015a). The system characteristics found to be associated with these outcomes were: high rates of completion of full upper secondary education (ISCED 3 A and B long cycle); mandatory learning of Math and the national language on all upper secondary programs; and relatively high parity of esteem between academic and vocational tracks (measured by the prevalence of vocational enrollment in upper secondary education, and the social mix of participants on these programs). Nordic countries and countries with dual systems of apprenticeship rank relatively high on all these measures, whereas countries with mixed systems rank relatively low.

How might these different skills outcomes across countries affect youth transitions to employment? We cannot seek to trace the effects in detail here, but certain points can be made that provide support for dominant existing comparative theories of youth transitions and that suggest some of the mechanisms by which the different types of systems have differential effects on transitions. Most obviously, we can see that countries with dual

systems of apprenticeship are well placed to provide smooth transitions to work for the majority of their young people, not only because of the early integration of young people into work roles provided by the apprenticeship system, but also because they are relatively effective in raising the mean level of literacy and numeracy skills and in ensuring a minimum of young people entering the labor market with very low levels of basic skills. Systems in East Asia and in the Nordic countries with comprehensive upper secondary systems lack the early integration of learning and work that is integral to the apprenticeship systems, but they still provide advantages for smooth transitions to work for the majority of young people, through achieving high average literacy and numeracy levels among youth and again ensuring that only a very small proportion of young people are disadvantaged in employment opportunities by very low levels of basic skills. Liberal Anglophone countries, and particularly the UK and the USA, on the other hand, turn out generations of young people with highly polarized skill sets, reflecting skills demand in the economies to some extent (Brown et al. 2001), but resulting in very unequal opportunities for more and less skilled young people in terms of employment.

How Have the Different Upper Secondary Systems Affected Youth Transitions during the Great Recession?

Given that SAS is a single cross-section from 2011/2012 it cannot tell us how levels and distributions of numeracy and literacy skills have changed in the six years after the onset of the financial crisis. However, we can use other time-series data (from OECD Education at a Glance and Eurostats) to assess changes over time in participation rates, youth unemployment levels, and returns to degrees, which all have a bearing on youth transitions.

As in many previous recessions, young people have tended to stay in education and training longer, rather than attempt early transitions into a depressed labor market. As the Eurostat data show (Eurostats 2014), between 2009 and 2011 there was a diminishing proportion of early school leavers (defined as those leaving with no qualification above ISCED 3 C short) in most EU countries. A number of countries in central and eastern Europe experienced modest increases in early school leaving (Croatia, Czech Republic, Hungary, Poland, Romania, and Slovakia), but in western Europe all countries experienced declines, except Belgium and Sweden.⁷

⁷ See Eurostat data at: http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/School_enrolment_and_early_leavers_from_education_and_training

Participation rates in higher education have also held up in most countries, despite the rises in tuition costs in some of these. Between 2007 and 2012, entry rates to Tertiary 5A programs increased on average across the OECD, and in all countries except Greece, Hungary, Portugal, and Sweden, which showed small declines (OECD 2014, Indicator 3C.2a). Entry to Type 5B programs also remained stable in most countries. However, the OECD note (OECD 2014, 331) that data for 2013 show a decline which they attribute to a delayed response to the financial crisis.

Upper secondary and tertiary education and training systems have generally not changed very substantially in their basic design in the few years since the onset of the financial crisis, with the exception of some special programs introduced for those most at risk in some countries (see Chapter 1 for Germany). What has changed most is the relationship between qualifications gained and employment opportunities i.e., the nature of the transitions to work. As we know, unemployment rates among young people have risen disproportionately to those in the adult population in many countries. Overall unemployment of young people aged 15–24 has tended to rise in most countries, but much faster in some countries than others. OECD youth unemployment rate data (OECD 2013d) show the change in youth unemployment rates by country between 2007 and 2012. The East Asian and social market countries (here Austria, Germany, Belgium, and Luxembourg) have fared best with no change in youth unemployment levels on average for the countries in each group. Nordic countries have seen only small increases. Southern Europe has, of course, experienced the most dramatic increases in youth unemployment, with rates rising on average by 21 percentage points. The liberal English-speaking countries and the central and eastern European countries lie somewhere between the extremes with rises in unemployment rates of 8 and 13 percentage points respectively.

Employment rates for graduates have been declining in most OECD countries since 2008 except in Germany, Luxembourg, Korea, and Japan (OECD 2013, table A5.3a). Looking at the averages for countries in different country groups (Figure 4.5) there is a slight increase in employment rates of graduates in the social market countries (Austria, Belgium, Germany, and Luxembourg) and in the East Asian countries (Korea and Japan), but a substantial decline in other country groups, with the largest decline in southern European countries. Graduate underemployment and overqualification also appear to be on the rise in some countries (Green and Zhu 2010), although we do not have data to measure this for a wide range of countries. A recent analysis from the Chartered Institute of Personnel and Development (CIPD 2015), based on European Social Survey data, suggests that between 2004 and 2010 58.8 percent of UK

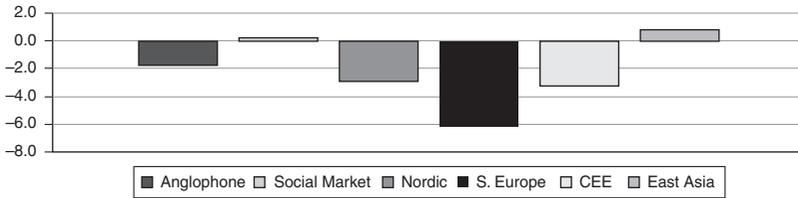


Figure 4.5. Changes in employment rates of 25–34-year-olds with tertiary qualifications between 2008 and 2011.

Source: OECD (2013) *Education at a Glance*: Table A5.3a. Employment rates, by educational attainment and age group (2000, 2005, 2008, and 2011).

graduates were not in jobs that respondents considered required a degree to enter – the third highest rate after Greece and Estonia for all the countries in the survey. However, this estimate will be higher than estimates that use a more encompassing definition of what constitutes a “graduate job” (based on the skills required to do the job).

It is hard to find data on what has happened to the graduate wage premium for young people across countries in the period since the onset of the recession. OECD provide data for different age cohorts for 2011 (OECD 2013a, table A6.1) which show that in all country groups except the Nordic group, older, 55–64-year-old male and female graduates enjoyed larger wage premia for degrees than their 25–34-year-old counterparts, but this may reflect the fact that they have had longer in the labor market to maximize the benefits of their degrees, rather than any decline over time in the graduate wage premium. But whatever the overtime trend in the wage premium, it is clear from the OECD’s published data that there remained a substantial advantage in earnings for graduates compared with nongraduates by 2011, albeit that this may be due to the fact that earnings of nongraduates are declining as fast or faster than earning of graduates during this period. OECD estimates for 2011 (OECD 2013a, table A6.1) show that tertiary educated adults across the OECD countries earn 1.5 times more than those with education only to upper secondary level. This wage premium applies to both tertiary Type A and tertiary Type B graduates. Men in OECD countries with Type B tertiary education earn on average 26 percent more than those with only upper secondary education and women 32 percent more. For most countries in the OECD these wage returns to tertiary graduates held up during the 2000s, but in a few countries, including in the UK, the USA, Sweden, and New Zealand, there were small declines between 2005 and 2012 (OECD 2014, table A6.2a). Graduate wage

differentials for 25–34-year-olds, while positive in all country groups, are substantially higher in social democratic and eastern European countries, than in liberal, East Asian, and social market countries.

The trends in the rates of return to degrees show a more mixed picture. OECD data covering the short period from the start of the financial crisis in 2007 until 2009 show increases in the rates of return for male graduates in eastern European, East Asian, and social democratic states, as well as in the small northwest continental European states, but declines in the liberal and Mediterranean states.⁸ For female graduates there were increases in eastern European and East Asian states, but declines in the liberal, social market, social democratic, and Mediterranean states, as well as in the small northwest European states (Green, Liu, and Pensiero 2014).

How far have different upper secondary education and training systems protected young people against the effects of declining job opportunities since the financial crisis? We cannot answer this question with any certainty, since most of the divergence between countries in youth unemployment rates since the financial crisis will be due to the differences in labor market conditions. However, there is some evidence that dual systems of apprenticeship continue to be associated with lower levels of youth unemployment, as they have in the past. As Chapter 1 argued, this has remained the case in Germany, despite the gradual decline in the number participating in traditional dual system apprenticeships, partly because of the introduction of a new “transition system” that provides shelter from unemployment for the growing number of less qualified young people who are now not able to directly access an employment-based apprenticeship.

Figure 4.6 uses data from SAS, conducted in 2011/2012, and shows the relationship between youth employment rates for 20–24-year-olds and the proportion of young employees aged 16–25 who are on apprenticeship or trainee contracts. The two are positively and significantly related ($r = 0.29$, $p < 0.2$). This association supports previous findings that good quality apprenticeship systems do tend to promote higher rates of employment among young people and suggests that this relationship still held up during the recession. However, it is clearly only in the three countries with a large proportion of young people in apprenticeships (Denmark, Austria, and Germany) where this effect occurs. For the majority of countries with only a small proportion of young people

⁸ *Source:* For 2009, data are obtained from *Education at a Glance* (OECD 2013a) Table A7.3a for male and Table A7.3b for female. For 2007, data are from *Education at a Glance* (OECD 2011) table A9.3. For 2003, data are from *Education at a Glance* (OECD 2006) table A9.5.

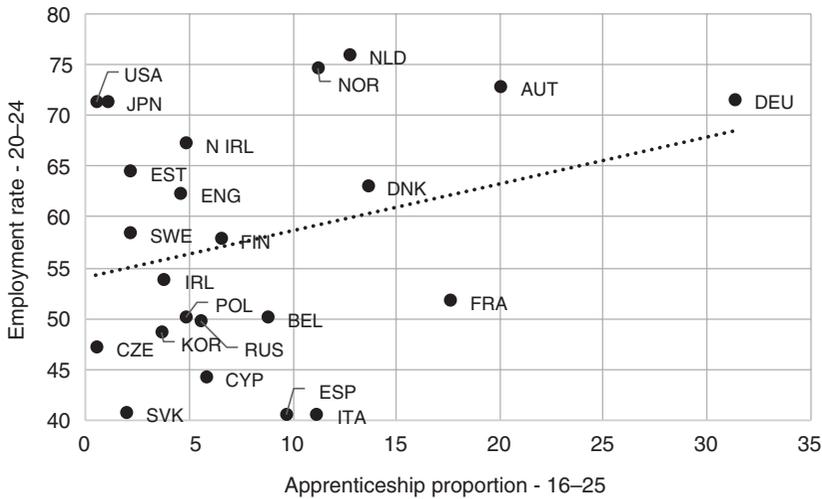


Figure 4.6. The relationship across countries between apprenticeship provision and youth employment rates.

Source: Own calculation from data in OECD (2013c) *Skills Outlook 2013: First Results from the Survey of Adult Skill*. Paris: OECD.

in apprenticeships there appears to be no association with employment rates.

In terms of the effects of different types of upper secondary provision on skills inequality and consequent wage inequality, we have currently too few data to make any assessment. The reductions in early school leaving that we saw earlier may be having some effect in reducing inequality in skills outcomes in the majority of countries where this applies, but it seems unlikely that this would be having a large effect on the variation across countries in wage inequality. What we know of the changes in income inequality since the beginning of the recession suggests that the differences across countries and country groups have been maintained or exacerbated. Between 2007 and 2011, household income inequality increased from its already relatively high level in England and the USA and in the CEE countries but declined in Nordic and East Asian countries (OECD 2015). Social market and social democratic countries continue, on average, to have the lowest rates of income inequality in Europe, although income inequality has been rising in almost all countries. Changes in income inequality here, however, are not necessarily related to any recent changes in skills inequalities, which generally show a lagged relationship across countries to wage inequality (Bedard and Ferrall 2003).

Conclusions

The analysis of cross-sectional time-series data on education system characteristics and outcomes can tell us a great deal about how the different types of upper secondary provision affect youth transitions. As we argue above, there is substantial evidence that high participation in dual systems of apprenticeship helps to reduce inequalities in skills, as well as supporting smooth transitions to work and higher employment rates among young people. The relatively smooth transitions no doubt owe mostly to the basic property of apprenticeship systems, which is that they integrate young people into the labor market from the outset, since that is the defining feature of the genuine apprenticeship system. However, the relative success of these systems in raising mean level of literacy and numeracy skills, and in reducing the proportions with very low levels of these skills, may also be a factor in ensuring that most young people still find work. The Nordic and East Asian countries have also been relatively good in maintaining employment rates among graduates and young people generally, including during the recession. In these cases, this is not achieved primarily through an early integration of education and work, since most of these countries do not have German-style occupational labor markets or developed apprenticeship training. What they do have, however, is quite standardized and broad-based long-cycle schooling at the upper secondary level, which appears effective in ensuring relatively high levels of literacy and numeracy skills for the vast majority of young people. This is likely to be an important factor in facilitating a smooth transition to work for the majority of young people.

By contrast, the mainly Anglophone countries, with highly diversified, market-oriented provision in upper secondary education and training, and lacking mandatory study of Math and English at the upper secondary level, are less successful in achieving higher average levels of literacy and numeracy, and less effective in mitigating literacy and numeracy skills inequality during the life course. The young people graduating from these systems are relatively polarized in terms of their command of some of the key skills required for entering and maintaining employment. Not surprisingly, those with the lowest skills, often from the vocational tracks, experience much bumpier transitions to work than the most highly skilled, who usually come from the academic tracks. The liberal systems have been relatively successful in raising participation rates in higher education, and this implied up until recently relatively good employment prospects for the growing proportion of young people who acquired degrees, who also benefitted from relatively good wage returns from their qualifications. This situation, however, may well be changing, with rising unemployment and underemployment among graduates in some Anglophone countries.

These broad cross-country patterns in the effects of upper secondary education and training do not appear to have been substantially disrupted by the financial crisis and ensuing recession, although they may be over the longer term. The strongly divergent pattern across countries in youth unemployment since the financial crisis is most likely due to the substantial differences in the depth and longevity of the recession in different countries (Green, Mostafa, and Preston 2010). Upper secondary education and training systems that have been most effective in the past in facilitating young people's transitions to work may have acted to mitigate the effects of adverse post-crisis labor market conditions in some countries. But it seems unlikely that the growing gulf between youth employment opportunities in northern and southern Europe, for instance, can be attributed primarily to differences in these systems.

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