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Welfare Regimes and Education Regimes: Equality of Opportunity and Expenditure in the EU (and US)

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Abstract

Education is crucially important for later outcomes but has received limited attention in comparative research on welfare states. In light of this, we present an exploratory analysis of education systems across fourteen EU countries and the US. This builds on existing work on educational institutions, educational outcomes and welfare regimes. We focus on institutional features associated with inequality of educational opportunity, including academic selection, tracking and public/private provision; on educational outcomes; and on education expenditure. Our quantitative analysis identifies four clusters of countries: the Nordic, Continental, Mediterranean and English-speaking, which bear similarities to those identified in the welfare states literature. Each 'education regime' is associated with particular institutional features, educational outcomes and levels of public expenditure. Our analysis suggests that further comparative research on education, viewed as a key component of the welfare state, is warranted.

Introduction

Much comparative research in the field of social policy has focused on how welfare regimes might be conceptualised. Whilst the emphasis has tended to be on social transfer payments as opposed to services, the latter are fundamentally important within the welfare state. This paper seeks to add to the literature by focusing on one particular service area – until recently rarely examined in comparative research on the welfare state – namely education.

Education is important for the distribution of life chances and in recent decades has had a high policy profile at national and supranational levels. Given its significance for later outcomes and the variation between national education systems, it has been argued that future research in social policy needs to clarify the relationship between educational investment, educational institutions and

the distribution of life chances in different welfare states and education regimes (Allmendinger and Leibfried, 2003). We seek to contribute to this research agenda by exploring similarities and differences between education systems in Europe and the US. In short, how might education systems in Europe (and the US) be classified? Do the resulting 'education regimes' bear any relationship to welfare regimes identified in the literature?

Our analysis is underpinned by two key dimensions: (in)equality of opportunity, a key variable in comparative sociological and educational research; and public expenditure, frequently used in comparative research on the welfare state. The following section addresses the relationship between education and the welfare state and in so doing elaborates on these two key dimensions. The subsequent section outlines salient research relating to the classification of education systems and welfare regimes. We then present an exploratory analysis of education systems in fourteen EU countries and, for purposes of comparison, the US.[1] We focus in particular on dimensions relating to (in)equality of opportunity and expenditure on education. Four different clusters or 'education regimes' are identified, and narratives of one country exemplifying each are presented. The final section discusses the findings, how they relate to previous research and possible directions for future research.

Education and the welfare state

The essence of the welfare state has been succinctly summarised as 'government-protected minimum standards of income, nutrition, health, housing and education for every citizen, assured to every citizen as a political right, not as charity' (Wilensky, 1975: 1). Two implications for social policy are, first, that the welfare state means a redistribution of income, and, second, 'an emphasis on equality of opportunity for the young' (Wilensky and Lebeaux, 1965: xii). Whilst it might be expected that education would be seen as an integral part of the welfare state, it has been viewed as distinctive and 'special' (Wilensky, 1975: 3). Perhaps because of this, it is not always recognised as part of the policy package of the welfare state, even though education and skills are considered by some to be at its core (Iversen and Stephens, 2008). There is, moreover, a disjuncture between social policy and education policy in some countries. Whilst in Scandinavia (Anttonen and Sipilä, 1996) and the UK, education policy can be seen as part of 'social policy', in Germany it is separated, with education taking place in 'a universe quite distant from social policy' (Allmendinger and Leibfried, 2003: 63).

However, education has a pivotal role in the social investment strategy (Lister, 2004; van Kersbergen and Hemerijck, 2012), and, as such, social and education policies are interdependent (Nikolai, 2011). At the EU level, they are part of one policy sphere (Allmendinger and Leibfried, 2003). Educational attainment

and labour market outcomes are strongly related, with low educational attainment likely to lead to precarious positions in the labour market and high educational attainment fostering social mobility and increasing socio-economic opportunities (Hega and Hokenmaier, 2002). Whilst educational performance and pupils' opportunities are affected by parental background (see Breen and Jonsson, 2005; OECD, 2010b), they are also determined 'by institutions, and hence features of school systems' (Busemeyer and Trampusch, 2011: 430).

The difference between education and other social policies has been related to different notions of equality, with equality of opportunity being a key goal of education not equality of condition, arguably the rationale in other welfare state arenas (see Castles, 1989).[2] There are also differences between education and other social policies in relation to the nature of the expenditure and the beneficiaries.

Equality of condition and equality of opportunity

The concepts of 'equality of condition' and 'equality of opportunity' have been the subject of vigorous academic debate (e.g., Phillips, 2004; Roemer, 2009). 'Equality of condition', in its strong form, 'calls for the eradication of all significant divisions of wealth and income' (Phillips, 1977: 247), with redistributive institutions being an effective mechanism for achieving greater equality of condition (Brighouse, 2004).[3] 'Equality of opportunity' has different meanings (e.g., Breen, 2010; Phillips, 2004). In the field of education, it has been used to mean: equal input resources to schools (Coleman, 1975); equal access to the more advanced stages of education for all children, regardless of their sex or social origin; equal access to appropriate kinds of secondary schools, according to the child's age, aptitude and ability; or access to an appropriate education within a common comprehensive school (Silver, 1973). A more radical interpretation is that of equality of achievement (Halsey, 1973). With equality of outcome[4] as a policy goal, different treatment for those from more disadvantaged backgrounds becomes a key consideration, with primary and pre-school provision becoming a key locus for policy intervention (see Silver, 1973).

The term equality of opportunity can thus afford confusion. Coleman (1975) stresses that it is also misleading as it implies that equal educational opportunity is an achievable policy goal, which it is not: reductions in inequality are all that can reasonably be expected. Notwithstanding the multiple meanings, the concept continues to be used. It can refer to the provision of equal inputs, access to different levels of education, access to comprehensive schooling or equal educational outcomes. Research has tended to focus on inequalities in the attainment of educational qualifications and social positions – occupations and social class – and how these are associated with specific characteristics (see

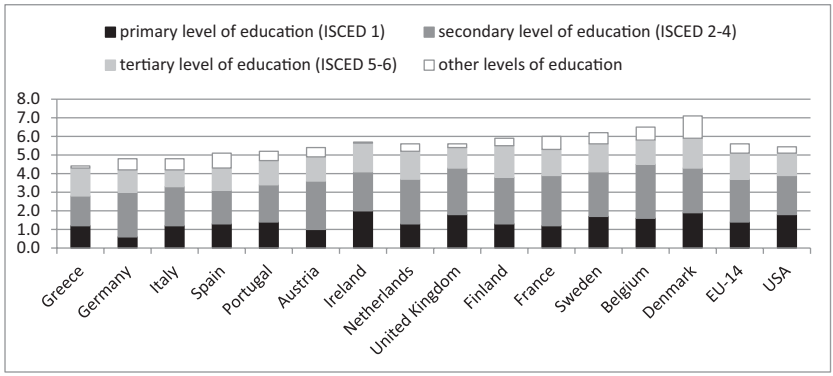

Figure 1. Public expenditure on primary, secondary and tertiary education as a percentage of GDP (2009)
Notes: The category 'other levels of education' includes expenditure for pre-primary education and expenditure not allocated by level.
Source: Eurostat (2012a).

Breen and Jonsson, 2005). In our empirical analysis, we apply three of the four definitions described: namely, all except provision of equal inputs.

Education and public expenditure

Education is universally available and compulsory between certain ages. Expenditure is thus directed towards the young, so distinguishing it from other forms of social expenditure. Public expenditure is a key dimension in comparative social policy research and is frequently the preferred dependent variable in quantitative analyses of welfare states. Not only are comparable data available, but public expenditure clearly relates to the actions of government (Castles, 1994). It can, moreover, be seen as an indicator of the priority governments ascribe to particular areas of the welfare state.

Education expenditure within the EU constitutes a significant proportion of public social expenditure, albeit less than pensions and health (see Table 1). Patterns of expenditure within education vary, with more being spent on primary and secondary education than on higher education, which is academically selective (see Figure 1).

In the following section, we examine research on education systems and welfare regimes and in so doing discuss institutional features and outcomes associated with certain (in)equalities of educational opportunity; we also examine associations between education systems and patterns of expenditure.

Education institutions and welfare regimes

Sociological, economic and historical research has compared features of education systems and outcomes. Educational institutions have typically been

TABLE 1. Public expenditure for selected functions and education as a percentage of GDP (2009)

	Pensions	Sickness/ health care	Family/ children	All levels of education combined
Austria	15.1	7.6	3.1	5.4
Belgium	12.1	8.2	2.2	6.5
Denmark	12.1	7.6	4.2	7.1
Finland	12.6	7.5	3.3	5.9
France	14.5	9.4	2.6	6.0
Germany	13.1	9.7	3.2	4.8
Greece	13.4	8.0	1.8	4.3
Ireland	7.3	10.7	3.7	5.5
Italy	16.0	7.3	1.4	4.8
Netherlands	12.8	10.3	1.3	5.6
Portugal	14.1	7.3	1.5	5.2
Spain	10.1	7.3	1.5	5.1
Sweden	12.9	8.0	3.2	6.2
UK	12.5	8.7	1.8	5.6

Notes:

Pensions: Part of periodic cash benefits under the disability, old-age, survivors and unemployment functions. Sum of following social benefits: disability pension, early retirement due to reduced capacity to work, old-age pension, anticipated old-age pension, partial pension, survivors' pension, early retirement benefit for labour market reasons (Eurostat, 2008).

Sickness/health care: Income maintenance and support in cash associated with physical/ mental illness, excluding disability. Health care intended to maintain, restore or improve the health of the people protected (Eurostat, 2008).

Family/children: Support in cash or kind (except health care) associated with the costs of pregnancy, childbirth and adoption, bringing up children and caring for other family members (Eurostat, 2008).

Education: Public and private, full-time and part-time education in the ordinary school and university system as defined in the international standard classification of education (Eurostat, 2012a).

classified in terms of stratification (cf., Hopper, 1968) and standardisation. Allmendinger (1989) classified institutions in this way, with standardisation being the degree to which the same standards are met nationwide (e.g., curriculum, budgets), and stratification being the proportion of a cohort that achieves the maximum number of years of schooling and the extent of differentiation within levels (i.e., tracking, with schools for higher and lower ability pupils). She found that occupational status was strongly determined by educational attainment for those educated in a stratified system but that this relationship was less strong in unstratified systems. A broad range of comparative literature has built on this work (e.g., Mueller and Shavit, 1998; Shavit and Blossfeld, 1993), with Kerckhoff (2000) proposing two ideal types: one being highly standardised and

stratified (typified by Germany), and another being relatively unstandardised and unstratified (typified by the US).

Research continues to extend our understanding of inequalities across education systems. In contrast to studies focusing on attainment and occupational outcomes, data from the Programme for International Student Assessment (PISA) have been used to examine pupils' educational achievement at the age of fifteen in reading, science and mathematics (OECD, 2010a). Significantly, inequalities between pupils from different social groups are accentuated by tracking (e.g., Pfeffer, 2008; van de Werfhorst and Mijs, 2010).

Green *et al.* (2006) drawing on logical comparative analysis of education systems and outcomes, using qualitative data and descriptive statistics, found that on various measures of equality, countries cluster according to regional and cultural patterns which tend to coincide with types of educational organisation. Countries with forms of comprehensive schooling that are the most developed tend to be those with educational outcomes that are the most equal and those where social background has the least impact on attainment; countries with the most intake selection and tracking tend to be the most unequal. They propose four models: the Nordic model (Denmark, Finland, Norway, Sweden and Iceland); Germanic (Austria, Belgium, Germany, Luxembourg, Switzerland and the Netherlands); Mediterranean (France, Greece and Italy) and Anglophone (UK, US and New Zealand).

Sociological and educational studies have tended to focus on the institutional features of education systems and outcomes and have not conceived of education as an integral part of the welfare state. If, as we have argued, education is viewed as a key element of the welfare state policy package, how might different European education systems be classified?

An extensive body of research has focused on typologies of welfare states. Thus, Esping-Andersen (1990), using scores of decommodification[5] in three social programmes (pensions, sickness and unemployment cash benefits), distinguished three 'regimes': the liberal, typified by individualism and the primacy of the market; the conservative corporatist, typified by a moderate level of decommodification; and the social-democratic, with high decommodification and a universal, highly distributive system of benefits. Much debate and critique has followed relating to the applicability, type and number of regimes (e.g., Lewis, 1992; Bonoli, 1997; Arts and Gelissen, 2002). Limited research has addressed services (e.g., Anttonen and Sipilä, 1996). However, Jensen (2008) has proposed that welfare regimes might be conceptualised along two dimensions — transfers and services — and stressed the need for a better understanding of different sectors, in particular education (cf., Bambra, 2005). In a similar vein, Kasza (2002), arguing that the concept of 'welfare regime' exaggerates the internal consistency of national welfare systems, proposed that comparative research might instead focus on particular policy areas.

Two specific policy areas, education (pre-school, primary and secondary) and pensions, were investigated by Beblavý *et al.* (2011) who explored social stratification in selected OECD countries. They found four clusters in the public system: stratification in education and pensions (e.g., Germany), stratification in education and equalisation in pensions (Belgium), equalisation in education and stratification in pensions (e.g., Sweden) and equalisation in both (e.g., UK).

Although subject to wide-ranging debate and critique, Esping-Andersen's typology has been used heuristically, specifically in relation to education. In terms of expenditure, Hega and Hokenmaier (2002) found a tendency for social democratic nations to invest in education at higher levels than liberal and conservative regimes, and for social democratic and liberal countries to spend more than conservative states on education as a share of total public spending. Liberal welfare states tended to be associated with greater support for general secondary education, whilst conservative states tended to provide extensive vocational education programmes. In relation to outcomes, Peter *et al.* (2010) found that the between-school level of educational inequality in secondary education, utilising PISA data, was the highest in conservative and the lowest in social democratic countries.

With respect to higher education (in selected OECD countries), Pechar and Andres (2011), using a range of indicators (e.g., expenditure, tuition fees and student financial support), identified three clusters of countries that align with Esping-Andersen's typology. Willemse and de Beer (2012), focusing on decommodification (public expenditure, enrolment, grants/loans and tuition fees) and stratification in higher education also found three clusters, which 'roughly correspond' (p. 116) to those proposed by Esping-Andersen, although three southern European states were found to belong to the liberal cluster with the Belgian system being a hybrid. Busemeyer and Nikolai (2010), focusing on higher education and vocational training, identified three clusters: Northern European; Mediterranean; English-speaking countries, except Ireland; and Japan.

Other comparative typologies have different conceptual underpinnings. Thus, Allmendinger and Leibfried (2003) explored 'educational poverty' via the level and differentiation of competences (using PISA data); they proposed 'four worlds of competence production' which bear resemblances to Castles' 'families of nations', with nations being defined in terms of historical, geographical, linguistic and cultural commonalities, namely English-speaking, Scandinavian, Continental Western Europe and Southern European (Castles, 2004).

Our analysis augments and extends previous research. Our attention is focused on the education system (pre-primary, primary, secondary and tertiary) in selected EU countries and the US (for purposes of comparison). We seek to answer two main research questions: To what extent do education systems vary in terms of institutional features associated with (in)equality of educational

opportunity and public expenditure? And do 'education regimes' underpinned by these notions bear any relationship to broader welfare regimes?

On the basis of previous research, we would expect countries to cluster in particular ways. Research focusing on expenditure, school systems and higher education suggests three clusters (social democratic, conservative and liberal), whilst research drawing on logical comparative and educational outcomes suggests four (Nordic, Germanic, Southern European, Anglophone). However, these studies have not focused on all levels of education, or used the same methods, so it is not possible to provide clear predictions of how countries might cluster.

Analysis of education systems

Methods

Our analysis uses indicators relating to primary, secondary and tertiary education in fourteen EU Member States (EU-15 excluding Luxembourg, for which no public expenditure data are available) and the US. Our classification is based on indicators broadly related to two dimensions of education systems: (in)equality of opportunity and expenditure.

In order to examine the clustering of countries, hierarchical cluster analysis is used. This enables exploratory analyses to be carried out based on combinations of variables. This method maximises the similarity of cases within each cluster: items in each cluster are thus similar in certain ways to others in the cluster and dissimilar to those in other clusters. In the analysis, the Ward method is used, applying squared Euclidean distance as the measure of similarity to determine the optimum number of clusters. The analysis is re-run with the selected number of clusters, which enables every country to be allocated to a particular cluster (Burns and Burns, 2008). For the continuous variables, *z*-transformations are used (giving each variable a mean of 0 and a standard deviation of 1).[6] The raw data for the analysis are based on the most recent figures available (2009, 2010 or 2011, from Eurostat, 2012a; OECD, 2010a, b, c, 2012b).

Our study is more nuanced than some previous studies in terms of the indicators used. This is due to our specific focus on (in)equality of opportunity and expenditure, and on the underlying differences in definitions and understandings of certain indicators at the level of individual countries (cf., Bonoli, 1997).[7] The following dimensions and associated variables are included in our analysis (for the raw data, see Appendix, Table A1).

Equality of opportunity: access

Participants in ISCED level 0 aged three years; participants in early education between four years and the start of compulsory education (as a percentage of the corresponding age group)

Access to pre-school education is associated with higher levels of educational achievement, especially for disadvantaged children (e.g., Heckman, 2006). However, institutional arrangements and starting ages vary (OECD, 2012b). To capture access to pre-primary education (as opposed to childcare) at different ages, we include the percentage of three-year olds who participate in school or centre-based programmes (for children aged at least three and not older than six); these programmes require teaching staff with pedagogical qualifications (Eurostat, 2012a).[8] We also include participants in early education (pre-primary) between the age of four and the start of compulsory education.

Equality of opportunity: schooling

Age at which decisions between different school types are generally made for the first time (OECD, 2012a); number of school types or distinct educational programmes available to fifteen-year olds

Inequalities between pupils from different social groups are magnified by tracking which involves pupils being selected into different types of schools on the basis of their academic performance. Different school tracks usually vary in terms of the curriculum and school composition: children with more highly educated parents are more likely to be educated in academically selective schools than those with less well-educated parents (Dustmann, 2004). We include the age of first selection and the number of school types for fifteen-year olds in our analysis to capture this variation.

Standards-based external examinations

Standards-based examinations define achievement relative to an external standard, not relative to other pupils in the class/school (Bishop, 2000). Such standardisation has been shown to decrease inequality (van de Werfhorst and Mijs, 2010). We thus include a variable relating to the existence of standards-based external examinations in our analysis.

Enrolment in 'private' institutions (government dependent or independent)

Primary and secondary education are provided in the main by public institutions, which are directly or indirectly administered by a public education authority. In some countries, a significant minority of pupils attend private institutions which are directly or indirectly administered by a non-governmental organisation (e.g., a church or private business) (Eurostat, 2011); some of these are government dependent (they receive more than half of their core funding from government agencies or their teaching staff are paid by the government, directly or indirectly), whilst others are government independent (Eurostat, 2005). Where fees are charged by private independent schools, segregation is likely to occur. Private government-dependent schools may also contribute to segregation (Jenkins *et al.*, 2008). We thus include the proportion of pupils

enrolled in government dependent and independent private institutions in our analysis.

Enrolment in vocational and general education programmes

Programmes at the upper secondary level can be broadly subdivided into general and vocational (school based and combined work and school based). 'Vocational specificity' is an important aspect of stratification as the timing and type of tracking is related to the extent of general or vocational education (Mueller and Shavit, 1998). We include the percentage of pupils in general and in vocational educational programmes in our analysis.

Equality of opportunity: outcomes

Difference in reading performance between 5th and 95th percentiles; reading performance below level 2; reading performance at levels 5 and 6 (highest levels)

The difference between the lowest and highest performing pupils (those at the 5th and 95th percentiles in the PISA reading assessment) represents the extent to which competence at age fifteen is distributed unevenly: the greater the gap, the greater the inequality. This variable, along with variables on the proportion of pupils with low and high levels of competence, are included to capture this aspect of inequality.

Strength of the relationship between student reading performance and of economic, social and cultural status (ESCS)

Variations in pupils' performance are related to their socio-economic background. The relationship between performance and socio-economic group is an 'indication of an equitable distribution of educational opportunities' in a school system (OECD, 2010b: 30). In order to capture this relationship in our analysis, we use the percentage of the variance in pupil performance explained by the PISA economic, social and cultural (ESCS) index.[9]

Early leavers from education and training

The educational outcomes of early school leavers are compromised as they have a higher risk of under- or unemployment in the labour market (Brzinsky-Fay, 2007). To take account of these unequal outcomes, we include in our analysis the proportion of eighteen- to twenty-four-year olds who leave school without completing upper secondary education.

Population with tertiary education, aged twenty-five to thirty-four

The higher the proportion of young people who have completed higher education, the less unequal the educational outcomes. In our analysis, we thus

include the percentage of the population aged twenty-five to thirty-four who are graduates of tertiary education.

Expenditure

Total public expenditure on primary, secondary and tertiary education; private expenditure on education as a percentage of GDP

Education spending on primary and secondary education is to some extent demand-driven as it is universally available and in the main compulsory (see Appendix, Table A2).[10] However, public expenditure on different levels of education (primary, secondary and tertiary) as a percentage of GDP is the key indicator of a country's investment in education and can be viewed as a reflection of the priority the country gives to education. Private expenditure on education is likely to be associated with countries' preferences for non-state-centred and more market-oriented solutions (see Wolf and Zohlnhoefer, 2009).

Ratio of public expenditure on primary and secondary education to tertiary education (using percentage of GDP)

Expenditure on different levels of education depends on countries' priorities for resource allocation within the area of education. The distribution of expenditure between primary and secondary education on the one hand and tertiary education on the other is an indicator of the relative emphasis placed on education at different levels.

Ratio of public expenditure on education to public social expenditure (using percentage of GDP)

Public education expenditure is related to the level of public social expenditure (Busemeyer, 2007). There is also evidence of a trade-off between state spending for cash-based social welfare programmes and education (Nikolai, 2011). We thus include public spending on education relative to social expenditure as an indicator of the importance attached to education expenditure compared with social expenditure.

Ratio of pupils to teachers in primary, secondary and post-secondary non-tertiary education

In some countries, the pupil–teacher ratio is a key determinant of the size of a country's teaching force and so provides an indication of the priority given to teaching and learning; it can also affect how much time and attention a teacher can devote to individual pupils. This variable is related to the allocation of resources in school-based education (Eurostat, 2012a).[11]

Findings

The hierarchical tree diagram (dendrogram) resulting from the hierarchical cluster analysis is presented in Figure 2. This lists all the countries and indicates

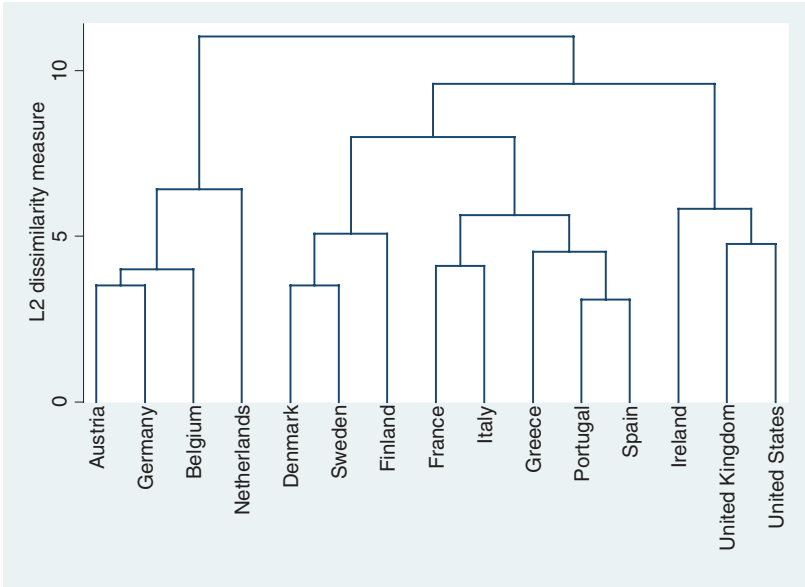

Figure 2. (Colour online) Hierarchical cluster analysis of education systems: Ward method, Euclidian distance measure

at what level of similarity any two clusters are joined. The *y*-axis is a measure of the similarity or distance at which clusters join.

Our analysis suggests the existence of four clusters of countries in the EU with respect to primary, secondary and tertiary education: the Nordic, Continental, Mediterranean and English-speaking. The dominant features distinguishing education regimes are age of first selection, the number of school types post age fifteen and expenditure.

Below, we summarise the main differentiating characteristics of each cluster in terms of features related to various dimensions of equality of opportunity and expenditure; where comparisons are made, these are to the mean score for the EU-14 countries and the US (for data see Table A1). For some variables, there is marked variation within clusters, and for this reason these are not discussed. We also provide a short narrative on one country in each cluster: we see these as exemplars not as 'ideal' types.

Nordic

Denmark, Finland, Sweden

All three Nordic countries have non-selective, publicly funded comprehensive school systems, covering the entire period of compulsory education (see Wiborg, 2009), with no tracking until the age of sixteen. The

proportion of fifteen-year olds with poor levels of reading is below average and the relationship between reading performance and social background is at or below the mean in all countries. The difference in reading scores between high and low performers is below average in Denmark and Finland.

In terms of access to different levels of education, enrolment in early years education is above average (except in Finland).[12] Participation in vocational education programmes is above average, and the percentage of early school leavers is low. The proportion of twenty-five- to thirty-four-year olds with tertiary education is above average. Levels of public expenditure on education are above average, particularly at secondary and tertiary levels,[13] and private expenditure is low.

Sweden can be seen to exemplify this cluster. For children between the ages of three and five, there is universal part-time pre-primary provision, which is free of charge (Eurydice, 2011). There is a nine-year compulsory comprehensive school system. As an 'intergrationist skill regime' (Busemeyer, 2009), vocational education is fully integrated into the general education system. All programmes, in principle, give access to tertiary education. Sweden thus provides a high level of equality of opportunity in terms of access to all levels of education. With respect to educational outcomes, the proportion of pupils with low levels of performance is around average and the strength of the relationship between performance and social background below average; however, the difference in reading scores between good and poor readers is above average. Significant reforms have taken place in Sweden in recent years with the introduction of independent publicly funded schools, some of which are for profit. Enrolment in these schools is comparatively high, particularly in the large urban conurbations. There have been concerns about segregation between pupil backgrounds as a result of the choice policies (Wiborg, 2010): independent schools, compared with municipality schools, have a larger proportion of girls, a larger proportion of pupils with parents who have continued with education following upper secondary school and a larger proportion of pupils with a foreign background (Skolverket, 2006).

Continental

Austria, Belgium, Germany, the Netherlands

School systems in the Continental cluster are highly tracked and stratified, with selection taking place between the ages of ten and twelve. The difference in reading scores between high and low performers is at or above the mean, as is the relationship between reading performance and social background (except in the Netherlands).

In terms of access to different levels of education, enrolment in pre-primary education between four and the beginning of compulsory education is high.

Beyond the age of fifteen, enrolment in vocational education programmes is high and the proportion of early school leavers is below average. The percentage of twenty-five- to thirty-four-year olds who have completed tertiary education varies between countries. Public expenditure across all levels of education is around the mean.

Germany exemplifies this cluster with a relatively low priority being given to education as measured by public expenditure on primary and higher education. Every child from three to the beginning of compulsory education (age six) has a legal right to day-care in a child day-care facility, such as a *Kindergarten* (Eurydice, 2011). Pupils are generally selected at the age of ten to twelve years on the basis of teachers' recommendations to different school tracks (*Gymnasium, Realschule, Hauptschule*); in some *Laender*, parents are not entitled to choose a track other than that recommended whilst in others the track selected by the teachers may be changed following a meeting with parents (Checchi and Flabbi, 2007). There is little permeability between tracks in this differentiated skill regime (Busemeyer, 2009); thus, the school system tends to produce and replicate educational inequalities across generations. However, graduates of the 'dual system' – 20 per cent of nineteen-year olds and 20 per cent of nineteen- to twenty-four-year olds are in apprenticeships (Steedman, 2012) – have better labour market opportunities and a higher social status than young people in liberal welfare regimes who are not higher education graduates (Pechar and Andres, 2011). Admission to university requires the award of the upper secondary qualification, the *Abitur*. There are also *Fachhochschulen*, which offer more vocationally applied courses than universities: admission requires the qualification awarded in year 12 of the *Fachoberschule* (upper secondary full-time vocational school) or under certain conditions at other vocational schools.

Mediterranean

France, Greece, Italy, Portugal, Spain

The countries in this cluster have stratified education systems with the first academic selection taking place between thirteen and fifteen. The share of low-performing readers tends to be high whilst the difference in reading scores between high and low performers and the relationship between reading performance and social background varies between countries.

In terms of access to different levels of education, pre-primary enrolment is high (except in Greece), participation in vocational education programmes varies between countries, and the proportion of early school leavers is high (except in France). The proportion of twenty-five- to thirty-four-year olds with tertiary education varies. Public expenditure on education tends to be below the mean.

Italy exemplifies this cluster with public expenditure on education being slightly below average. Non-compulsory provision for children between three

and six is provided in the *scuoladell'infanzia*. There is a stratified upper secondary school system with selection at the age of fourteen (from 2014/15, selection will take place at sixteen (Eurydice, 2011)). The three main school types comprise high schools (*licei*) (internally divided into four tracks – classical, scientific, linguistic and artistic), technical institutes (*istituti tecnici*) and vocational institutes (*istituti di formazione professionale)*. The decision about which school pupils should attend is based on counselling of pupils and parents by teachers and sometimes psychologists, with pupils' marks from the lower secondary school period informing their future orientation. Each of the school tracks is associated with different outcomes: nearly nine out of ten *licei* graduates progress to university compared with fewer than one in five graduates of *istituti di formazione professionale* (Checchi and Flabbi, 2007). There are also regionally organised vocational training courses that lead only to the labour market and are generally attended by pupils with low levels of academic achievement (Barone and Schizzerotto, 2010).

English-speaking

Ireland, UK, US

In the English-speaking cluster, academic selection normally takes place at fifteen to sixteen years of age. The difference in reading scores between high and low performers is above average, whilst the relationship between reading performance and social background varies between countries.

In terms of access to different levels of education, enrolment in pre-primary education varies. Participation in vocational education is low and the proportion of early school leavers high (except in the US). In all countries, the proportion of twenty-five- to thirty-four-year olds with tertiary education is high. Public expenditure on primary education is above average in all countries and on secondary education is above average in Ireland and the UK.

The UK, with above average expenditure on primary and secondary education exemplifies this cluster. Free part-time early years education is available for children aged three and four.[14] The school system is broadly comprehensive until the age of sixteen.[15] The introduction of a quasi-market has been a significant feature in England: parents express preferences for schools and funding follows pupils. There is a high proportion of government-dependent private schools[16] and their number is increasing rapidly as secondary schools in England convert to become publicly funded 'academies'.[17] There is a clear academic track beyond sixteen. For those who wish to pursue vocational education or training, the route is less clear-cut. Vocational programmes are provided in the main in institutional settings; participation in apprenticeships is low (around 10 per cent of nineteen-year olds and 5 per cent of nineteen- to twenty-four-year olds (Steedman, 2012)) and employer involvement minimal (see Hoeckel,

2008). Admission to higher education institutions is generally determined on the basis of external examinations taken at the end of upper secondary education.

Discussion

Although education can be seen to be an integral part of the welfare state, debates about welfare regimes have tended to focus on cash transfers and only more recently on services, with education having received relatively little attention. In this paper, we have aimed to add to the limited research on education and welfare regimes. Our exploratory analysis of education systems in selected EU countries and the US sought to establish if distinctive 'education regimes', akin to those identified in the broader research on comparative welfare states, could be discerned. Our analysis was underpinned conceptually by two key dimensions: (in)equality of opportunity and the priority governments give to education in terms of public expenditure. We found variation in terms of the interplay between stratification, educational outcomes and expenditure.

Our analysis revealed four clusters of countries: the Nordic, Continental, Mediterranean and English-speaking. These clusters bear a strong resemblance to those suggested by Green *et al.* (2006) in the education literature and to the 'families of nations' suggested by Castles (2004). This is important given that the framework for analysis and precise indicators differed in our analysis.

In the Nordic countries, public expenditure on education is high. Equality of opportunity in its various guises is high: pre-school participation is high (except in Finland) and there is comprehensive schooling during the period of compulsory education. In terms of educational outcomes, all countries have a below average proportion of poor readers at the age of fifteen and a very low proportion of early leavers from education. By way of contrast, the Continental countries can be seen to reproduce social stratification via the education system: the school system is stratified, with early academic selection. Public expenditure on education is around the mean overall but below average for primary education. Reading scores tend to be widely dispersed. In the Mediterranean countries, the education system is also stratified, but academic selection takes place later than in the Continental countries. Public expenditure on education tends to be below average. In the English-speaking cluster, public expenditure especially at primary levels is relatively high, but private expenditure is also high. In terms of educational outcomes, the difference between high and low performers in reading is above average, and the percentage of early leavers is high (except in the US). This cluster tends to be more inegalitarian than the Nordic cluster.

In conclusion, we have argued that education forms a crucial part of the welfare package. Our exploratory study has added to the continuing debates about the nature of welfare regimes. Significantly, our analysis, focusing on pre-

school, primary, secondary and tertiary education, identified 'education regimes' with similarities to some welfare regimes in the extant literature. Our findings are in accord with those of Beblavý *et al.* (2011) who suggest that the difference between the Continental and Mediterranean countries is much more pronounced than the analysis by Esping-Andersen (1990) indicates.

Our focus on education as a specific component of the welfare state and the role of (in)equality of opportunity as well as expenditure adds a new dimension to research in social policy. Given the paucity of research on education and welfare regimes, further comparative work is warranted. Detailed comparative analyses of recent education reforms and their outcomes would complement more historical perspectives.[18] The extent to which inequality of educational opportunity is transformed into social inequalities is also worth investigating. And more analysis and exploration is also required with regard to other EU and OECD countries.

Finally, given the reforms to education and training systems that are underway and the importance of education and training at the EU level, research into the dynamics of policy change is sorely needed. Our country narratives reveal that policy reforms are underway: these are likely to affect the policy mix in particular countries and the constellation of countries within clusters. Research on policies implemented might usefully explore the ways in which similar policy goals, particularly in relation to increasing equality of opportunity have been addressed in countries with different institutional designs.

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Notes

1 Due to data availability and quality, our analysis is limited to fourteen EU countries (EU-15 excluding Luxembourg, for which no public expenditure data are available) and the US.

2 Equality of condition is not necessarily a policy goal; for example, the US government has made no attempt to 'achieve equality of condition or anything like it' (Brighouse, 2004: 621).

3 Equality of condition, seen as equivalent to equality of outcome (Breen, 2010), has also been widened to include occupations, activities and responsibilities (see Phillips, 2004).

4 Phillips (2004) argues convincingly that equality of outcome has to be taken as a key measure of equality of opportunity.

5 Decommodification is viewed as the maintenance of a livelihood without reliance on the market.

6 The simultaneous use of continuous and dichotomous variables is allowed in cluster analysis.

7 Data on public expenditure on pre-school education are available, but there are no data on private expenditure, which is significant in some countries.

8 In some countries, qualifications are not at an equivalent level across providers, so similar quality cannot be assumed (see West *et al.*, 2010b).
9 The ESCS index is based on information provided by pupils on their mothers'/fathers' (higher of the two) occupational status, duration of education and the number of books at home.
10 However, the relationship between the percentage of the population aged five to fourteen and public expenditure on education is not consistent (see Table A2).
11 There is evidence to suggest that small classes can benefit lower-performing pupils and those from disadvantaged backgrounds (see Maasoumi *et al.*, 2005).
12 The distinctivness of Finland is also explored by Lewis (2009).
13 Compulsory education begins at the age of seven in Finland; this is likely to account for the below average public expenditure on primary education.
14 Free part-time early years education is also available to disadvantaged two-year olds in England.
15 Scotland and Wales have a fully comprehensive system; in England 5 per cent of secondary schools are academically selective; in Northern Ireland there is academic selection (see West *et al.*, 2010a).
16 A significant minority are run by the Protestant and Roman Catholic churches, which normally prioritise pupil admissions on the basis of religion/religious denomination; they tend to have more socially advantaged intakes than other schools (Allen and West, 2011).
17 Academies have a contractual agreement with central government; they have responsibility for deciding who should be admitted to the school.
18 See for example Wiborg's (2009) study of the political underpinnings of comprehensive education in Scandinavia (Denmark, Norway and Sweden), England and Germany.

References

Allen, R. and West, A. (2011), 'Why do faith secondary schools have advantaged intakes? The relative importance of neighbourhood characteristics, social background and religious identification amongst parents', *British Educational Research Journal*, 37: 4, 691–712.
Allmendinger, J. (1989), 'Educational systems and labor market outcomes', *European Sociological Review*, 5: 3, 231–50.
Allmendinger, J. and Leibfried, S. (2003), 'Education and the welfare state: the four worlds of competence production', *Journal of European Social Policy*, 13: 1, 63–81.
Anttonen, A. and Sipilä, J. (1996), 'European social care services: is it possible to identify models?', *Journal of European Social Policy*, 6: 2, 87–100.
Arts, W. and Gelissen, J. (2002), 'Three worlds of welfare capitalism or more?', *Journal of European Social Policy*, 12: 2, 137–58.
Bambra, C. (2005), 'Cash versus services: "worlds of welfare" and the decommodification of cash benefits and health care services', *Journal of Social Policy*, 34: 2, 195–213.
Barone, C. and Schizzerotto, A. (2008), 'The application of the ISCED97 to Italy', in S. L. Schneider (ed.), *The International Standard Classification of Education*, Mannheim: MZES.
Beblavý, M., Thum, A.-E. and Veselkova, M. (2011), 'Education policy and welfare regimes in OECD countries', Working Document No. 357, Centre for European Policy Studies.
Bishop, J. H. (2000), 'Curriculum-based external exit exam systems: do students learn more? How?', *Psychology, Public Policy, and Law*, 6: 1, 199–215.
Bonoli, G. (1997), 'Classifying welfare states: a two dimension approach', *Journal of Social Policy*, 26: 3, 351–72.
Breen, R. (2010), 'Social mobility and equality of opportunity, Geary Lecture, Spring 2010', *The Economic and Social Review*, 41: 4, 413–28.
Breen, R. and Jonsson, J. O. (2005), 'Inequality of opportunity in comparative perspective: recent research on educational attainment and social mobility', *Annual Review of Sociology*, 31: 223–43.

Brighouse, H. (2004), 'What's wrong with privatising schools?', *Journal of Philosophy of Education*, 38: 4, 617–31.
Brzinsky-Fay, C. (2007), 'Lost in transition? Labour market entry sequences of school leavers in Europe', *European Sociological Review*, 23: 4, 409–22.
Burns, R. P. and Burns, R. (2008), *Business Research Methods and Statistics Using SPSS*, London: Sage.
Busemeyer, M. R. (2007), 'Determinants of public education spending in 21 OECD democracies, 1980–2001', *Journal of European Public Policy*, 14: 4: 582–610.
Busemeyer, M. R. (2009), 'Asset specificity, institutional complementarities and the variety of skill regimes in coordinated market economies', *Socio-Economic Review*, 7: 3, 375–406.
Busemeyer, M. R. and Nikolai, R. (2010), 'Education', in F. G. Castles, S. Leibfried, J. Lewis, H. Obinger and C. Pierson (eds.), *The Oxford Handbook of the Welfare State*, Oxford: Oxford University Press.
Busemeyer, M. R. and Trampusch, C. (2011), 'Review article: comparative political science and the study of education', *British Journal of Political Science*, 41: 2, 413–43.
Castles, F. G. (1989), 'Explaining public education expenditure in OECD countries', *European Journal of Political Research*, 17: 4, 431–48.
Castles, F. G. (1994), 'Is expenditure enough? On the nature of the dependent variable in comparative public policy research', *The Journal of Commonwealth and Comparative Politics*, 32: 3, 349–63.
Castles, F. G. (2004), *The Future of the Welfare State*, Oxford: Oxford University Press.
Chapman, C., Laird, J., Ifill, N. and Kewal Ramani, A. (2011), *Trends in High School Dropout and Completion Rates in the United States: 1972–2009*, US Department of Education, Washington, DC: NCES.
Checchi, D. and Flabbi, L. (2007), 'Intergenerational mobility and schooling decisions in Germany and Italy: the impact of secondary school tracks', IZA Discussion Paper No. 2876, The Institute for the Study of Labor (IZA), Bonn, Germany.
Coleman, J. S. (1975), 'What is meant by "an equal educational opportunity"?', *Oxford Review of Education*, 1: 1, 27–9.
Dustmann, C. (2004), 'Parental backgrounds, secondary school track choice and wages', *Oxford Economic Papers*, 56: 2, 209–30.
Esping-Andersen, G. (1990), *The Three Worlds of Welfare Capitalism*, Oxford: Polity Press.
Eurostat (2005), *A Guide to Educational Expenditure Statistics*, Luxembourg: Eurostat.
Eurostat (2008), *ESSPROS Manual*, Luxembourg: Eurostat, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-07–027/EN/KS-RA-07–027-EN.PDF (accessed October 2012).
Eurostat (2011), Personal communication to first author.
Eurostat (2012a), 'Online Database', http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database (accessed August 2012).
Eurostat (2012b), 'Online Database', http://epp.eurostat.ec.europa.eu/portal/page/portal/social_protection/introduction (accessed August 2012).
Eurydice (2011), 'National system overview on education in Europe, 2011 edition: Italy, Finland, Germany, Sweden', http://eacea.ec.europa.eu/education/eurydice/eurypedia_en.php (accessed October 2012).
Green, A., Preston, J. and Janmaat, G. (2006), *Education, Equality and Social Cohesion: A Comparative Analysis*, London: Palgrave.
Halsey, A. H. (1973), 'Educational priority', in H. Silver (ed.), *Equal Opportunities in Education*, London: Methuen.
Heckman, J. (2006), 'Skill formation and the economics of investing in disadvantaged children', *Science*, 312: 5782, 1900–02.
Hega, G. M. and Hokenmaier, K. G. (2002), 'The welfare state and education: a comparison of social and educational policy in advanced industrial societies', *German Policy Studies*, 2: 1, 1–29.
Hoeckel, K. (2008), *Costs and Benefits in Vocational Education and Training*, Paris: OECD.

Hopper, E. J. (1968), 'A typology for the classification of education systems', *Sociology*, 2: 1, 29–45.
Iversen, T. and Stephens, J. D. (2008), 'Partisan politics, the welfare state, and three worlds of human capital formation', *Comparative Political Studies*, 41: 4–5, 507–46.
Jenkins, S. P., Micklewright, J. and Schnepf, S. V. (2008), 'Social segregation in secondary schools: how does England compare with other countries?', *Oxford Review of Education* 34: 1, 21–37.
Jensen, C. (2008), 'Worlds of welfare services and transfers', *Journal of European Social Policy*, 18: 2, 151–62.
Kasza, G. J. (2002), 'The illusion of welfare "regimes"', *Journal of Social Policy*, 31: 2, 271–87.
Kerckhoff, A. C. (2000), 'Transition from school to work in comparative perspective', in M. T. Hallinan (ed.), *Handbook of the Sociology of Education*, New York: Kluwer.
Lewis, J. (1992), 'Gender and the development of welfare regimes', *Journal of European Social Policy*, 2: 3, 158–73.
Lewis, J. (2009), *Work–Family Balance, Gender and Policy*, Cheltenham: Edward Elgar.
Lister, R. (2004), 'The Third Way's social investment state', in J. Lewis and R. Surrender (eds.), *Welfare State Change Towards a Third Way?*, Oxford: Oxford University Press.
Maasoumi, E., Millimet, D. L. and Rangaprasad, V. (2005), 'Class size and educational policy: who benefits from smaller classes', *Econometric Revue*, 24: 4, 333–68.
Mueller, W. and Shavit, Y. (1998), 'The institutional embededness of the stratification process: a comparative study of qualifications and occupations in thirteen countries', in Y. Shavit and W. Mueller (eds.), *From School to Work*, Oxford: Calderon Press.
Nikolai, R. (2011), 'Towards social investment? Patterns of public policy in the OECD world', in N. Morel, B. Palier and J. Palme (eds.), *Towards a Social Investment Welfare State? Ideas, Policies and Challenges*, Bristol: Policy Press.
OECD (2010a), *PISA 2009: What Students Know and Can Do (Volume I)*, Paris: OECD.
OECD (2010b), *PISA 2009 Results: Overcoming Social Background (Volume II)*, Paris: OECD.
OECD (2010c), *PISA 2009 Results: What makes a school successful? (Volume IV)*, Paris: OECD.
OECD (2012a), Personal communication to first author.
OECD (2012b), *Education at a Glance*, Paris: OECD.
OECD (2012c), 'Demography and population, OECD stat extracts', http://stats.oecd.org/Index.aspx?DataSetCode=POP_FIVE_HIST (accessed October 2012)
Pechar, H. and Andres, L. (2011), 'Higher education policies and welfare regimes: international comparative perspectives', *Higher Education Policy*, 24: 1, 25–52.
Peter, T., Edgerton, J. D. and Roberts, L. W. (2010), 'Welfare regimes and educational inequality: a cross-national exploration', *International Studies in Sociology of Education*, 20: 3, 241–64.
Pfeffer, F. T. (2008), 'Persistent inequality in educational attainment and its institutional context', *European Sociological Review*, 24: 5, 543–65.
Phillips, A. (2004), 'Defending equality of outcome', *The Journal of Political Philosophy*, 12: 1, 1–19.
Phillips, D. L. (1977), 'The equality debate: what does justice require?', *Theory and Society*, 4: 2, 247–72.
Roemer, J. E. (2009), 'Equality: its justification, nature and domain', in W. Salverda, B. Nolan and T. M. Smeeding (eds.), *The Oxford Handbook of Economic Inequality*, Oxford: Oxford University Press.
Shavit, Y. and Blossfeld, H. P. (eds.) (1993), *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*, Boulder, CO: Westview.
Silver, H. (1973), 'Editor's introduction', in H. Silver (ed.), *Equal Opportunities in Education*, London: Methuen.
Skolverket (2006), *Schools Like Any Other? Independent Schools as Part of the System 1991–2004*, Stockholm: Skloverket.
Steedman, H. (2012), 'Apprenticeship participation by age 2009/10: Australia, Austria, England, France, Germany, Switzerland', Centre for Economic Performance,

LSE, London. http://www.apprenticeships.org.uk/~/media/AAN/Documents2/AAN-StateofApprenticeship2010Update.ashx (accessed September 2012).

Van de Werfhorst, H. G. and Mijs, J. J. B. (2010), 'Achievement inequality and the institutional structure of educational systems: a comparative perspective', *Annual Review of Sociology*, 36: 407–28.

Van Kersbergen, K. and Hemerijck, A. (2012), 'Two decades of change in Europe: the emergence of the social investment state', *Journal of Social Policy*, 41: 3, 475–92.

West, A., Allmendinger, J., Nikolai, R. and Barham, E. (2010a), 'Policy decentralisation and educational achievement in Germany and the UK', *Environment and Planning C: Government and Policy*, 20: 3, 450–68.

West, A., Roberts, J. and Noden, P. (2010b), 'Funding early years education and care: can a mixed economy of providers deliver universal high quality provision?', *British Journal of Educational Studies*, 58: 2, 155–79.

Wiborg, S. (2009), *Education and Social Integration: Comprehensive Schooling in Europe*, New York: Palgrave Macmillan.

Wiborg, S. (2010), *Swedish Free Schools: Do They Work?* LLAKES Research Paper 18, London: LLAKES.

Wilensky, H. L. (1975), *The Welfare State and Equality*, Berkeley and Los Angeles: University of California Press.

Wilensky, H. L. and Lebeaux, C. N. (1965), *Industrial Society And Social Welfare*, Toronto: Collier-Macmillan.

Willemse, N. and de Beer, P. (2012), 'Three worlds of educational welfare states? A comparative study of higher education systems across welfare states', *Journal of European Social Policy*, 22: 2, 105–17.

Wolf, F. and Zohlnhoefer, R. (2009), 'Investing in human capital? The determinants of private education expenditure in 26 OECD countries', *Journal of European Social Policy*, 19: 3, 230–44.

TABLE A1

Country	Participants at ISCED level 0 aged 3 years – as % of population aged 3, 2010	Participants in early education (between 4 years old and the starting age of compulsory education) – as % of the corresponding age, 2010	First age of selection	Number of school types or distinct educational programmes available to 15 year olds	Existence of standards-based external examinations	Enrolment in government dependent and independent private institutions, 2009 (Dummy)	Enrolment in general upper secondary programmes, 2010	Enrolment in vocational pro-grammes, 2010	Early leavers from education and training, aged 18–24 years, 2011	Population with tertiary education, aged 25–34, 2010
Nordic countries										
Denmark	87.0	98.1	16	1	1	1	53.5	46.5	9.6	38
Finland	47.2	73.1	16	1	1	0	30.3	69.7	9.8	39
Sweden	90.5	95.1	16	1	0	1	43.9	55.0	6.6	42
Continental W. European countries										
Austria	61.1	92.1	10	4	0	0	23.2	71.0	8.3	21
Belgium	98.8	99.1	12	4	0	1	27.0	73.0	12.3	44
Germany	88.9	96.2	10	4	0.35	1	55.7	44.3	6.2	26
Netherlands	0.0	99.6	12	7	1	1	33.0	67.0	9.1	41
Mediterranean countries										
Greece	52.9	73.5	15	2	0	0	69.3	30.7	13.1	31
Italy	93.0	97.1	14	3	1	0	40.0	60.0	18.2	21
France	99.0	100.0	16	1	1	0	48.5	51.5	12.0	43
Portugal	73.4	89.3	15	3	0	1	61.2	34.9	23.2	24
Spain	99.1	99.4	16	1	0	1	55.4	44.6	26.5	39
English-speaking countries										
Ireland	65.5	85.4	15	4	1	0	62.5	5.0	16.6	48
United Kingdom	83.4	96.7	16	1	1	1	67.9	32.1	15.0	46
United States	50.9	74.4	16	1	0.07	1	100	0.0	8.1	42
Mean (EU-14 plus US)	72.7	91.3	14.33	2.53	0.49	1	51.43	45.69	12.97	36.33

TABLE A1 Continued.

Country	Reading performance: difference between 5th and 95th percentiles, 2009	Reading performance below level 2	Reading performance level 5 and 6	Percentage of variance in pupil performance explained by PISA ESCS index, 2009	Public expenditure on primary education (ISCED 1) as % of GDP, 2009	Public expenditure on secondary education (ISCED 2–4) as % of GDP, 2009	Public expenditure on tertiary education (ISCED 5–6) as % of GDP, 2009	Private expenditure on education as % of GDP, 2009	Ratio of public expenditure on education to public social expenditure as % of GDP, 2009	Ratio of public expenditure on primary and secondary education to expenditure on tertiary education as % of GDP, 2009	Ratio of pupils to teachers in primary, secondary and post-secondary non-tertiary education (ISCED 1–4) 2010
Nordic countries											
Denmark	274	15.2	4.7	14.5	2.12	2.94	2.41	0.33	0.27	2.10	11.4
Finland	284	8.1	14.5	7.8	1.35	2.89	2.16	0.16	0.23	1.96	13.8
Sweden	324	17.4	9.0	13.4	1.75	2.75	2.04	0.18	0.23	2.21	12.0
Continental W. European countries											
Austria	325	27.6	4.9	16.6	1.05	2.83	1.57	0.51	0.20	2.47	10.4
Belgium	330	17.7	11.2	19.3	1.50	2.85	1.47	0.38	0.23	2.96	10.5
Germany	346	19.8	9.6	16.7	0.69	2.48	1.34	0.80	0.17	2.37	9.5
Netherlands	285	14.3	9.8	12.8	1.48	2.42	1.63	1.01	0.20	2.39	16.1
Mediterranean countries											
Greece	311	21.3	5.6	12.5	1.16	1.45	1.48	0.26	0.15	1.76	8.6
Italy	310	21.0	5.8	11.8	1.18	2.18	0.86	0.45	0.17	3.91	11.7
France	307	18.5	7.6	17.9	1.18	2.69	1.34	0.61	0.19	2.89	16.1
Portugal	285	17.6	4.8	16.5	1.56	2.6	1.07	0.38	0.23	3.89	8.9
Spain	287	19.6	3.3	13.6	1.27	1.88	1.14	0.72	0.20	2.76	11.3

TABLE A1 Continued.

English-speaking											
Ireland	308	17.2	7	12.6	2.32	2.58	1.54	0.37	0.25	3.18	15.2
United Kingdom	312	18.4	8	13.7	1.76	2.78	0.81	1.87	0.20	5.60	17.3
United States	317	17.6	9.9	16.8	1.84	2.06	1.24	2.03	0.33	3.16	14.5
Mean (EU plus US)	307	18.09	7.71	14.43	1.48	2.49	1.47	0.67	0.22	2.91	12.49

Notes:

Participants at ISCED level 0 aged three years – as % of population aged three (for Greece aged four) and participants in early education (between four years old and the starting age of compulsory education) – as % of the corresponding age group 2010 (Eurostat, 2012a).

First age of selection (OECD, 2010c: 203).

Number of school types or distinct educational programmes available to fifteen-year olds (OECD, 2010c: 203).

Existence of standards-based external examinations: extent to which standards-based external examinations exist in secondary education (value <1: exist in some parts of system (e.g. regional/programme variation)) (OECD, 2010c: 229; for France, see Bishop 2000).

Enrolment in government dependent and independent private institutions 2009: dummy based on enrolment in government dependent and independent private institutions (ISCED 1–4) as % of all pupils in public and private (government dependent and independent) institutions (Greece 2008; Netherlands 2004) 1>10%; 0<10% (Eurostat, 2012a).

Enrolment in general upper secondary programmes 2010 (OECD, 2012b: 332).

Enrolment in vocational programmes 2010 (OECD, 2012b: 332).

Early leavers from education and training, aged 18–24 years 2011 (Eurostat, 2012a; for the US, see Chapman *et al.*, 2011).

Population with tertiary education (ISCED 5A, 5B and advanced research programmes), aged 25–34, 2010 (OECD, 2012b: 36).

Reading percentiles between 5th and 95th percentiles, 2009 (OECD, 2010a: 197).

Reading performances below level 2 and levels 5 and 6, 2009 (OECD, 2010a: 194).

Percentage of variance in pupil performance explained by PISA index of economic, social and cultural status (ESCS), 2009 (OECD, 2010b: 153).

Total public expenditure on primary secondary and tertiary education; private expenditure on education as a percentage of GDP 2009 (Eurostat, 2012a).

Ratio of public expenditure on education to public social expenditure as % of GDP 2009 (own calculations based on Eurostat, 2012a, b).

Ratio of public expenditure on primary and secondary education to expenditure on tertiary education as % of GDP 2009 (own calculations based on Eurostat, 2012a).

Ratio of pupils to teachers in primary, secondary and post-secondary non-tertiary education 2010 (ISCED 1–4) (Eurostat, 2012a).

TABLE A2

Country	5–14 year olds as a percentage of total population, 2010	Public expenditure on primary and lower secondary education (ISCED1, 2) as a % of GDP, 2009
Austria	10.09	3.88
Belgium	11.12	4.35
Denmark	12.18	5.06
Finland	10.97	4.24
France	12.18	3.87
Germany	9.34	3.17
Greece	9.35	2.61
Ireland	13.54	4.9
Italy	9.32	3.36
Netherlands	12.04	3.9
Portugal	10.3	4.16
Spain	9.65	3.15
Sweden	10.69	4.5
United Kingdom	11.42	4.54
United States	13.18	3.9

Source: OECD (2012c), Eurostat (2012a).

Welfare Regimes and Education Regimes: Equality of Opportunity and Expenditure in the EU (and US)

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