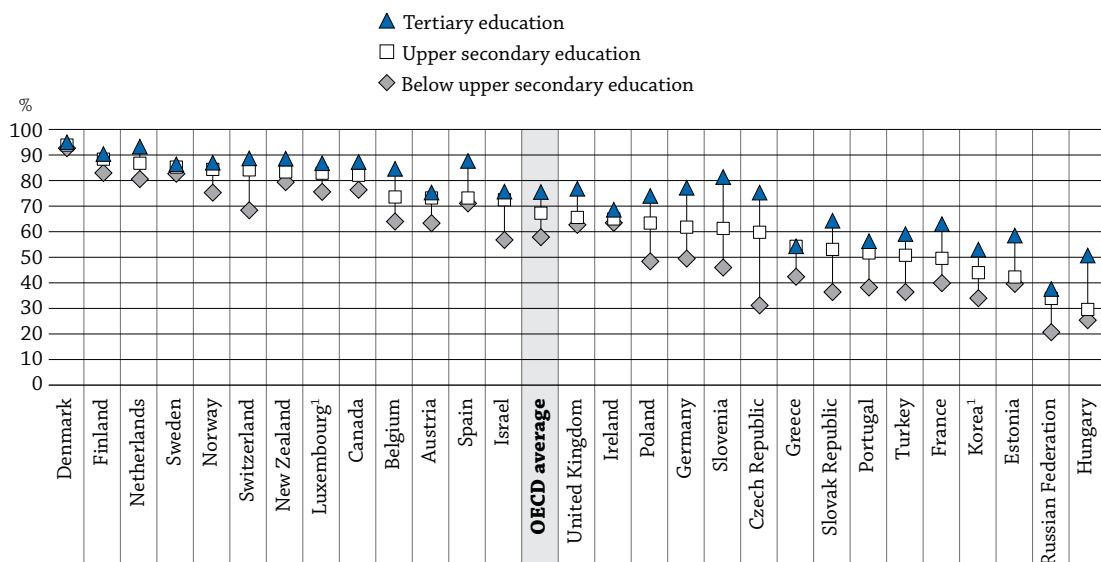


WHAT ARE THE SOCIAL OUTCOMES OF EDUCATION?

- Adults aged 25 to 64 with higher levels of educational attainment are, on average, more satisfied with life, engaged in society and likely to report that they are in good health, even after accounting for differences in gender, age and income.
- Students in grade 8 (approximately 14 years old) who have higher levels of civic knowledge as measured by the International Civic and Citizenship Education Study (ICCS) are generally more likely to vote and be supportive of gender equality, although they are not necessarily more likely to trust civic institutions.


Chart A11.1. Proportion of adults satisfied with life, by level of education (2008)



1. Year of reference 2009.

Countries are ranked in descending order of the proportion of adults aged 25-64 reporting satisfaction in life, among adults who have attained upper secondary education.

Source: OECD, Table A11.1. See Annex 3 for notes (www.oecd.org/edu/eag2011).

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■ Context

There is growing interest in looking beyond the traditional economic measures of individual success, such as income, employment and GDP per capita, towards non-economic aspects of well-being and social progress, such as life satisfaction, civic engagement and health. Recent initiatives, such as the Stiglitz-Sen Commission on the Measurement of Economic Performance and Social Progress and the World Health Organization's Commission on Social Determinants of Health, have been prompted by concerns that society is not as cohesive as it should be and that citizens are not as healthy and happy as they deserve to be. Several OECD countries have seen a decline in indicators of civic engagement, such as voting, volunteering and interpersonal trust, changes that may well have significant and lasting consequences for the quality of democratic societies (OECD, 2010). The health of the population is a major concern in OECD countries, as the increasing prevalence of conditions such as obesity and depression has led to a significant reduction in the quality of life for many individuals and growing public expenditures on healthcare.

A large body of literature suggests that education is positively associated with a variety of social outcomes, such as better health, stronger civic engagement and reduced crime (OECD, 2007c; 2010e). A small but increasing number of studies further suggest that education has a positive *causal* effect on these social outcomes (see for example, Grossman, 2006 for health). There is also research suggesting that education can be a relatively cost-effective means to improve health and reduce crime (see for example Lochner and Moretti, 2004).

■ Other findings

- **Adults with higher levels of educational attainment are generally more likely than those with lower levels of attainment to exhibit greater satisfaction with life, stronger civic engagement (i.e. vote, volunteer, express political interest and show interpersonal trust) and better perceived health.** An individual's engagement in society and perceived health conditions appear to vary across different levels of educational attainment, even after accounting for age, gender and income differences. This suggests that education may have an impact on these outcomes by raising skills and abilities, although other factors related to the choice of education may also be at play. The differences in life satisfaction between below upper secondary and upper secondary attainment is partly driven by individual differences in income, suggesting that there may be income effects of education on life satisfaction for these individuals.
- In all the surveyed OECD countries, **students in grade 8 with higher measured levels of civic competencies (i.e. knowing and understanding elements and concepts of citizenship) showed higher levels of anticipated adult electoral participation and supportive attitudes towards gender equality.** However, the relationships between competencies and all the social outcomes are not necessarily positive. For example, in Chile, the Czech Republic, Greece, Italy, Mexico and the Russian Federation, the higher the level of civic knowledge, the less a student is likely to trust civic institutions. This suggests that **country contexts may shape the ways in which competencies affect people's perceptions of civic institutions.**

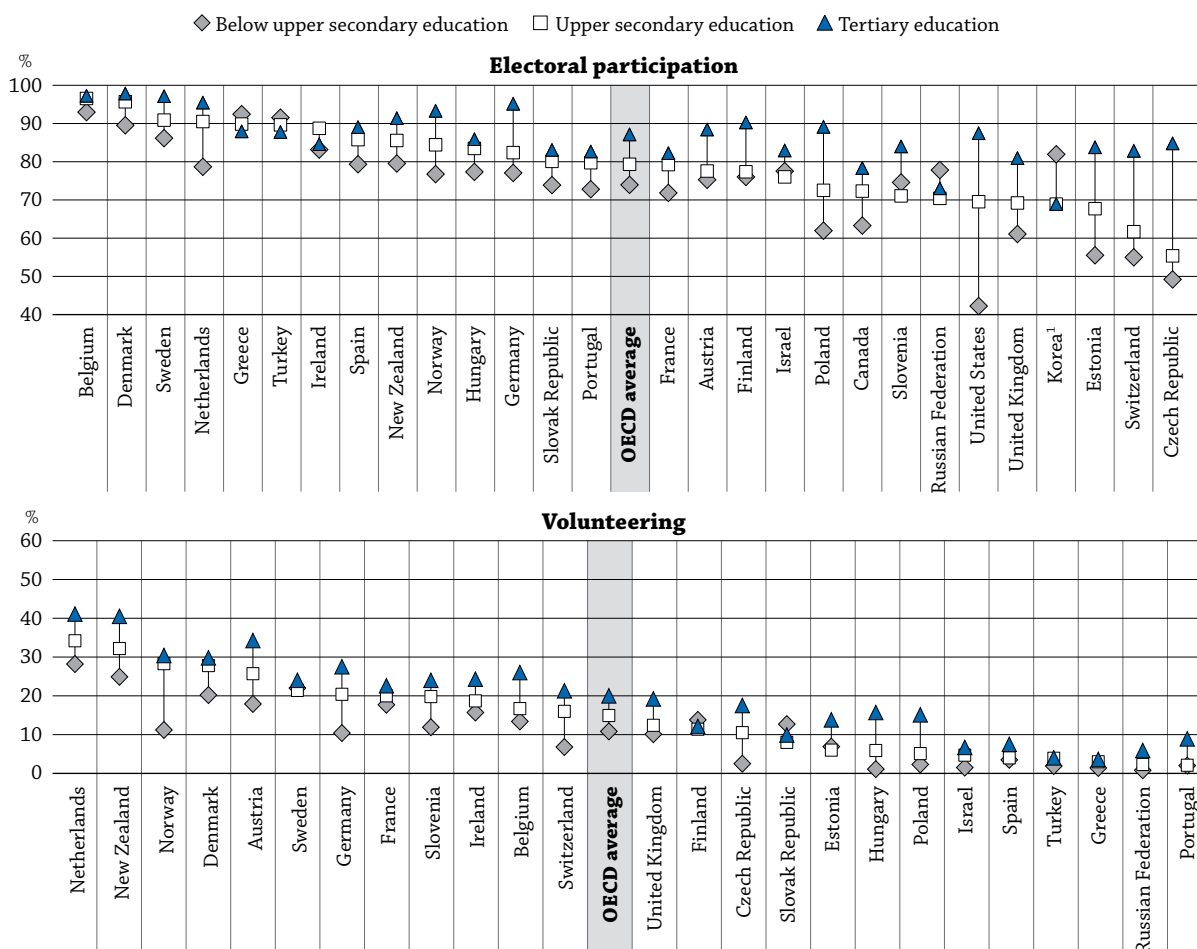
Analysis

Given the potentially significant cross-country differences in norms (e.g. social desirability of expressing one's satisfaction with life) and institutional contexts (e.g. eligibility and compulsory nature of voting), indicators related to social outcomes should be interpreted with caution. The main focus should be on *within-country* differences in social outcomes across levels of educational attainment and civic competencies rather than *cross-country* comparisons.

Educational attainment and social outcomes

Educational attainment is positively associated with various measures of social outcomes, including electoral participation, political interest, interpersonal trust, volunteering, self-reported good health and satisfaction with life (Charts A11.1, A11.2, Table A11.1, and Table A11.4, available on line). With the exception of electoral participation in Korea, all surveyed countries with statistically significant associations between education and these social outcomes show the relationship to be positive. In Canada, for example, only 63.4% of adults who have not attained an upper secondary education vote in national elections; but this proportion rises to 78.4% among adults with a tertiary education. These associations generally hold even after accounting for age and gender (Table A11.3 and Table A11.5 available on line).

Chart A11.2. Proportion of adults voting and volunteering, by level of education (2008)
 Percentage of 25-64 year-olds, by educational attainment



1. Year of reference 2009.

Countries are ranked in descending order of the proportion of adults aged 25-64 reporting electoral participation and volunteering among adults who have attained upper secondary education.

Source: OECD, Table A11.1. See Annex 3 for notes (www.oecd.org/edu/eag2011).

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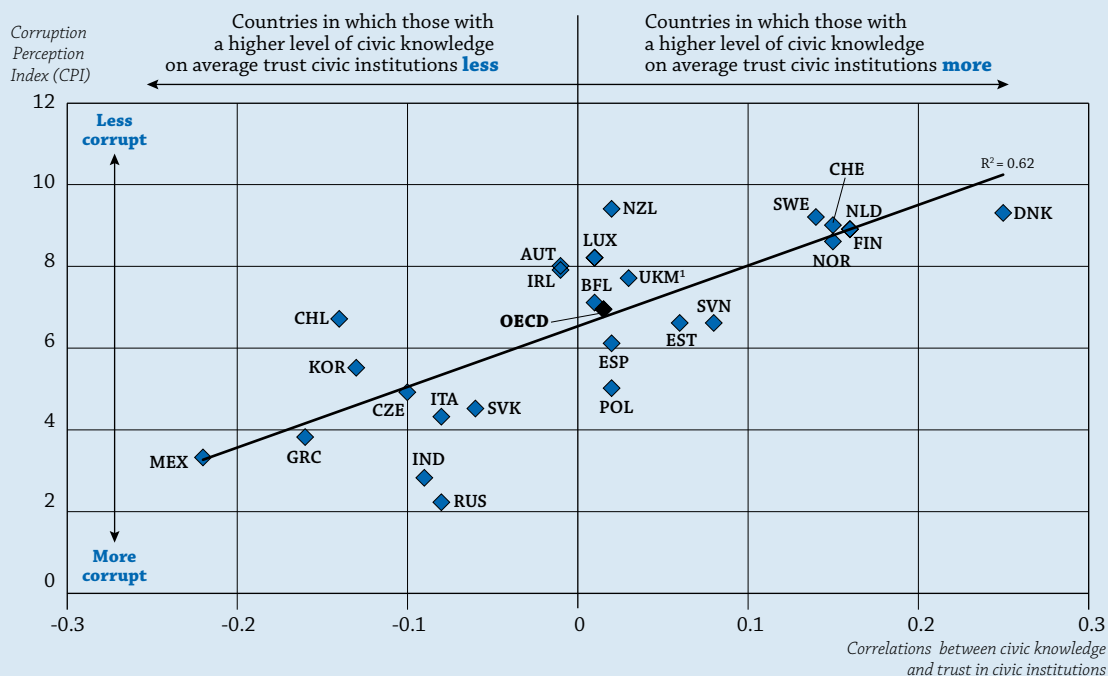
For most countries with statistically significant associations between education and either electoral participation or volunteering, the associations remain positive, even after accounting for differences in age, gender and income (Table A11.3). This suggests that education’s contribution to civic engagement may involve fostering skills as well as raising incomes.

For many countries there is not a statistically significant relationship between education and satisfaction with life for those with lower levels of education (i.e. upper secondary or below) once differences in income are taken into account (Table A11.3). This suggests that obtaining an upper secondary education may contribute to life satisfaction largely by increasing individuals’ income. However, for most countries with statistically significant association between education and satisfaction with life, the association remains significant among those who have attained tertiary education, even after accounting for age, gender and income. This indicates that higher levels of education may contribute to life satisfaction beyond their effect on income. For example, tertiary education may help individuals develop skills, social status and access to networks that could lead to greater satisfaction with life.

Civic competencies and social outcomes

Education can enhance social outcomes by helping individuals make informed and competent decisions by providing information, improving cognitive skills and strengthening socio-emotional capabilities, such as conscientiousness, self-efficacy and social skills. As such, education can help individuals follow healthier lifestyles and increase their engagement in civil society. Educational institutions such as schools can also offer an ideal environment for children to develop healthy habits and participatory attitudes and norms conducive to social cohesion. For instance, open classroom climate, practical involvement in civic matters and school ethos that promote active citizenship can foster civic participation.

Box A11.1. Relationship between “returns to civic knowledge on trust” and “perceptions of corruption”



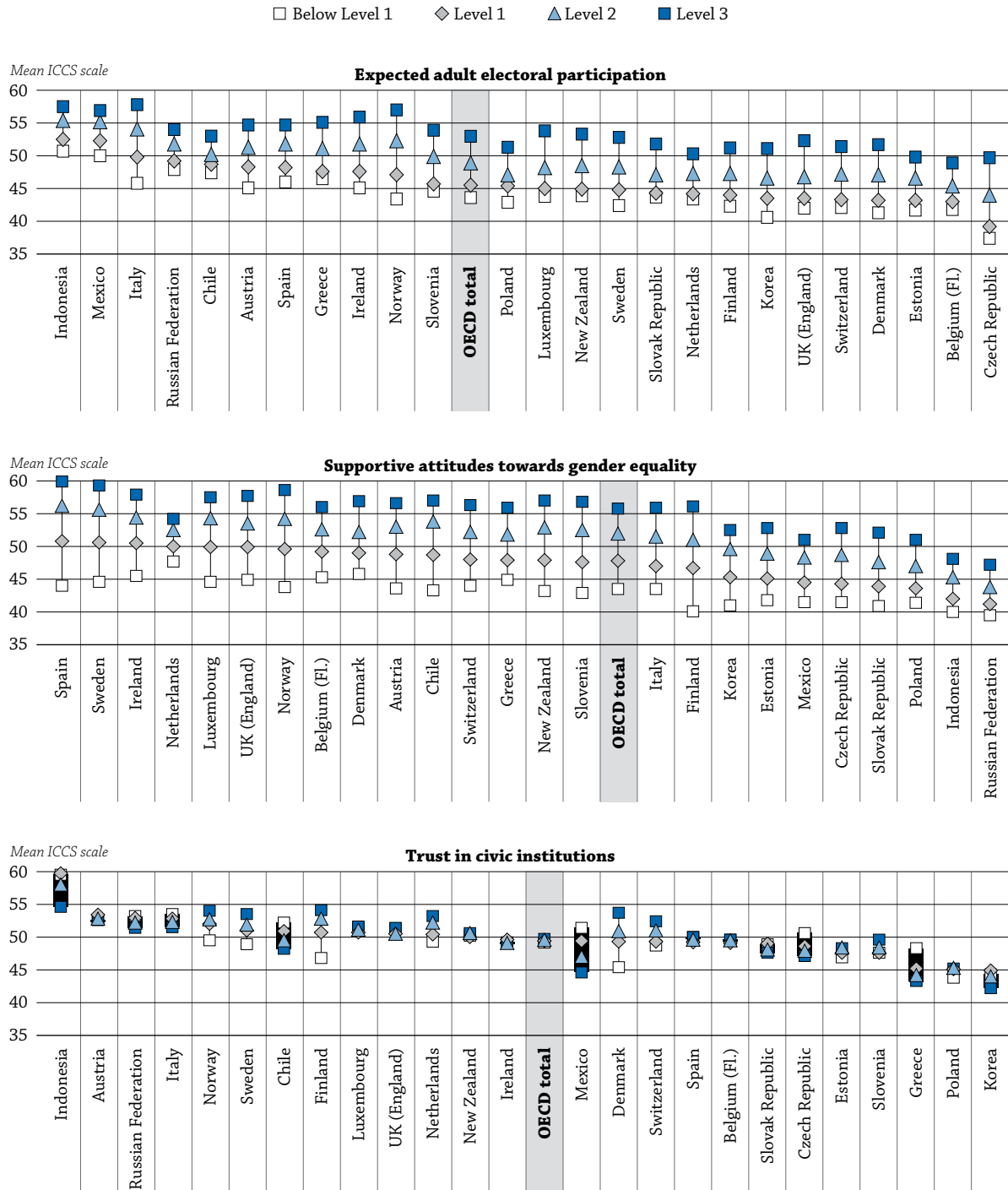
Notes: Correlations between civic knowledge and trust are calculated based on linear correlations at the country level. A high score on the Corruption Perception Index (CPI) implies a low level of perceived corruption.

1. Data for the United Kingdom (UKM) only refer to England.

Source: OECD, Table A11.6 available on line. International Civic and Citizenship Education Study (ICCS) 2009, Corruption Perceptions Index 2009 by Transparency International. See Annex 3 for notes (www.oecd.org/edu/eag2011).

StatLink <http://dx.doi.org/10.1787/888932460876>

Chart A11.3. Civic engagement, by students' level of civic knowledge (2009)
 Mean scale of civic engagement among grade 8 students, by level of civic knowledge



Notes: Countries are ranked in descending order of the mean scales of Grade 8 students' civic and social engagement (i.e. expect to participate in elections, have supportive attitudes towards gender equality and display trust in civic institutions) among those who have achieved Level 1 in civic knowledge. For the third panel (Trust in civic institutions), the countries highlighted in black are those in which individuals with a higher average scale of civic knowledge tend to trust civic institutions less. Mean ICCS scales are based on Rasch Partial Credit Model and the resulting weighted likelihood estimates (WLEs) were transformed into a metric with a mean of 50 and a standard deviation of 10. The Definitions section provides details of the ICCS scale.

Source: OECD, Table A11.2. See Annex 3 for notes (www.oecd.org/edu/eag2011).

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Indeed, in all surveyed OECD countries, students in grade 8 (approximately 14 years of age) with higher levels of civic competencies show higher levels of expected adult electoral participation and supportive attitudes towards gender equality (Chart A11.3). In Norway, for example, those who are at the lowest level on a civic competency scale score only an average of 43.4 points on the ICCS scale of expected adult electoral participation, whereas those who are at the highest level on the scale score 57.0 points (Table A11.2, see Definitions below for details on the scales).

However, the relationship between competencies and social outcomes is not always positive. For example, for Chile, the Czech Republic, Greece, Italy, Mexico and the Russian Federation, the higher the level of civic knowledge, the more likely that a student has less trust in civic institutions (Chart A11.3 and Table A11.2). This may imply that national context shapes the way in which competencies affect people's perceptions about civic institutions. Indeed, in countries with a relatively high level of perceived corruption, the more civic knowledge one has, the less likely it is that one trusts civic institutions (Box A11.1). This does not necessarily imply a “negative effect” of education, however. If civic institutions are indeed corrupt in a country, a negative relationship between civic knowledge and institutional trust may indicate that the education system in that country provides a sound and critical attitude towards institutions.

Definitions

This section describes the education variables (i.e. educational attainment and civic competency) and social outcome variables. See Annex 3 (www.oecd.org/edu/eag2011) for detailed descriptions of the variables, including the actual questions used in each survey.

Civic knowledge means knowing about and understanding elements and concepts of citizenship as well as those of traditional civics (Schultz, 2010). The ICCS assessment is based on a 79-item test administered to lower-secondary students (8th grade) and covers issues related to civic society and systems, civic principles, civic participation and civic identities. Three-quarters of the test items involve reasoning and analysis associated with civics and citizenship, and the rest focuses on knowledge about civics and citizenship. Civic knowledge is measured on a scale with an international average of 500 points and a standard deviation of 100. There is significant variation across and within countries in civic knowledge: half of the total variance in civic knowledge was found to be at the student level, a quarter at the school level and a quarter across countries. See Schulz *et al.*, (2010) for more details on how civic knowledge is conceptualised.

Educational attainment variables in each data source are converted to three categories of educational attainment (below upper secondary education, upper secondary education and tertiary education) based on the ISCED-97 classification system. Those in the “upper secondary education” category include those who have attained post-secondary non-tertiary education (ISCED 4).

Electoral participation is captured by the percentage of adults who reported voting during the previous national election. European Social Survey (ESS) 2008, General Social Survey (GSS) 2008 for Canada and New Zealand, KEDI's Lifelong Education Survey 2009 for Korea, European Values Survey (EVS) 2008 for Luxembourg and the Current Population Survey (CPS) 2008 for the United States provide this information. The analysis in this chapter is limited to adults who are eligible to vote. Countries with compulsory voting are included in the data (i.e. Belgium, Greece, Luxembourg and Turkey). For countries with a voting-registration requirement that is not enforced or automated (e.g. Ireland, the United Kingdom and the United States), the analysis includes those who are potentially eligible (e.g. are citizens of the country) but have not registered to vote.

Expected adult electoral participation is captured by the mean ICCS scale of students' responses to questions related to adult electoral participation. They include voting in local elections, voting in national elections and obtaining information about candidates before voting in an election.

Interpersonal trust is captured by the percentage of adults who believe that most people can be trusted. ESS 2008 provides this information.

Life satisfaction is captured by the percentage of adults who reported being satisfied with life. ESS 2008, GSS 2008 for Canada and New Zealand, KEDI's Lifelong Education Survey 2009 for Korea and EVS 2009 for Luxembourg provide this information.

Political interest is captured by the percentage of adults who say they are at least fairly interested in politics. ESS 2008, KEDI's Social Capital Survey 2008 and International Social Survey Programme (ISSP) 2004 and 2006 provide this information.

Self-reported health is captured by the percentage of adults who rate their health as at least "good" on a 4- or 5-point scale. ESS 2008, KEDI's Social Capital Survey 2008, GSS for Canada and New Zealand 2008 and National Health Interview Survey (NHIS) for the United States 2008 provide this information.

Supportive attitudes towards gender equality are captured by the mean ICCS scale of students' response to questions related to attitudes towards gender equality. They include, for example, questions that ask students if they support equal opportunities to take part in government.

Trust in civic institutions is captured by the mean ICCS scale of students' responses to questions related to trust in public institutions. They include students' self-perceived trust towards public institutions such as the national government, local government, police and political parties.

Volunteering is captured by the percentage of adults who reported volunteering during the previous month (or four weeks). ESS 2008 and GSS 2008 for New Zealand provide this information.

Methodology

The indicators presented in this chapter are based on developmental work jointly conducted by the INES Network on Labour Market, Economic and Social Outcomes of Learning (LSO) and the OECD Centre for Educational Research and Innovation (CERI). The conceptual framework for the indicators was developed by CERI's Social Outcomes of Learning project (OECD 2007c; OECD 2010e) and the empirical strategies were developed by the INES LSO Network. See Annex 3 at www.oecd.org/edu/eag2011 for details on the calculation of the indicators.

In this year's edition of *Education at a Glance* (EAG), we present six new indicators (Tables A11.1, A11.2 and A11.3) as well as updates of three indicators presented in *Education at a Glance 2009* and *2010* (Tables A11.4, A11.5 and A11.6) that can be found on line. Updated indicators are included since the primary data source, i.e. ESS 2008, recently released revised measures of educational attainment that are more comparable across countries. The new indicators were calculated using micro-data from the ESS 2008, GSS 2008 for Canada and New Zealand, EVS 2009 for Luxembourg, Lifelong Education Survey 2009 for Korea, CPS 2008 for the United States and the ICCS 2009. Updates of indicators presented in EAG 2009 and 2010 were calculated using the ESS 2008, ISSP 2006, GSS 2008 for Canada and New Zealand, KEDI Social Capital Survey for Korea 2008 and the NHIS 2008 for the United States. Surveys were selected on the basis of the following factors:

Age restriction: For surveys that cover adults (i.e. Tables A11.1, A11.3, A11.4, A11.5 and A11.6), data on adults aged 25 to 64 were used. For surveys that cover students (i.e. Tables A11.2 and A11.6), data on children enrolled in grade 8 (typically corresponding to ages 14-15) were used.

Comparability of educational attainment variables: The general principle is to use micro-data for which the distribution of educational attainment was within 10 percentage points of figures published for comparable years in *Education at a Glance*. A number of exceptions, however, were made with the recommendation of the country representatives of INES Working Party and/or INES LSO Network [i.e. Denmark (ESS), Ireland (ESS), New Zealand (ISSP), Norway (ESS) and the United Kingdom (ESS)].

Comparability of social outcomes variables: Surveys are selected on the basis of the comparability of social outcomes variables.

Country coverage: An important objective is to select surveys that represent a large number of OECD countries. This was the motivation to select the European Social Survey which covers a large number of European Union (EU) member countries and other countries for the adult population. For the ICCS, a large number of EU and other countries were included, including Austria, Belgium (Flanders), Chile, the Czech Republic, Denmark, Estonia, Finland, Greece, Indonesia, Ireland, Italy, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, the Russian Federation, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland and the United Kingdom (England).

Sample size: Surveys with a minimum sample of approximately 1 000 observations per country were used.

To calculate incremental differences, country-specific regression models were estimated to predict each dichotomous outcome variable (e.g. high versus low level of interest in politics) from individuals' educational attainment level, with and without control variables for age, gender and family income. In preliminary analyses, both probit and ordinary least squares (OLS) regressions were used, and were found to produce very similar estimates of incremental differences. Because OLS regression provides more readily interpretable coefficients, OLS was used for the final analysis to generate incremental differences (Tables A11.3 and A11.5).

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

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Lochner, L. and E. Moretti (2004), "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports", *The American Economic Review*, Vol. 94, No. 1, pp. 155-189, The American Economic Association.

OECD (2007c), *Understanding the Social Outcomes of Learning*, OECD, Paris.

OECD (2010e), *Improving Health and Social Cohesion through Education*, OECD, Paris.

Schulz, W., et al. (2010), *ICCS 2009 International Report: Civic knowledge, attitudes, and engagement among lower-secondary school students in 38 countries*, IEA, Amsterdam.

The following additional material relevant to this indicator is available on line:




- **Table A11.4. Proportion of adults with self-reported good health, political interest and interpersonal trust, by level of education (2008, updated Tables A9.1, A9.2 and A9.3 in EAG 2010)**
StatLink  <http://dx.doi.org/10.1787/888932463536>
- **Table A11.5. Incremental differences in adults' self-reported good health, political interest and interpersonal trust associated with an increase in the level of educational attainment (2008, updated Tables A9.4, A9.5 and A9.6 in EAG 2010)**
StatLink  <http://dx.doi.org/10.1787/888932463555>
- **Table A11.6. Relationship between 'returns to civic knowledge on trust' and 'perceptions of corruption' (2009)**
StatLink  <http://dx.doi.org/10.1787/888932463574>

Table A11.1. Proportion of adults voting, volunteering and satisfied with life, by level of education (2008)
 Percentage of 25-64 year-olds, by level of educational attainment

	Electoral participation			Volunteering			Life satisfaction			Data source
	Below upper secondary education	Upper secondary education	Tertiary education	Below upper secondary education	Upper secondary education	Tertiary education	Below upper secondary education	Upper secondary education	Tertiary education	
OECD										
Australia	m	m	m	m	m	m	m	m	m	-
Austria	75.4	77.6	88.5	17.9	25.7	34.3	63.4	73.2	75.3	ESS 2008
Belgium	93.0	96.6	97.2	13.4	16.7	26.0	64.0	73.6	84.6	ESS 2008
Chile	m	m	m	m	m	m	m	m	m	-
Canada	63.4	72.4	78.4	m	m	m	76.4	82.1	87.3	GSS 2008
Czech Republic	49.4	55.5	84.8	2.5	10.5	17.5	31.2	59.8	75.3	ESS 2008
Denmark	89.6	95.7	97.8	20.2	27.8	29.8	92.7	93.9	95.0	ESS 2008
Estonia	55.7	67.8	83.8	6.9	6.0	13.8	39.6	42.3	58.5	ESS 2008
Finland	76.1	77.4	90.3	13.8	11.4	12.1	83.0	88.4	90.4	ESS 2008
France	71.9	79.3	82.3	17.7	20.0	22.6	39.9	49.6	63.0	ESS 2008
Germany	77.1	82.4	95.2	10.4	20.4	27.5	49.5	61.8	77.2	ESS 2008
Greece	92.5	89.9	88.0	1.4	3.0	3.6	42.4	54.3	54.3	ESS 2008
Hungary	77.4	83.5	85.9	1.1	5.9	15.7	25.4	29.6	50.7	ESS 2008
Iceland	m	m	m	m	m	m	m	m	m	-
Ireland	83.2	88.8	84.6	15.7	18.7	24.3	63.5	65.0	68.6	ESS 2008
Israel	77.6	76.1	83.0	1.5	4.7	6.7	56.8	72.5	75.7	ESS 2008
Italy	m	m	m	m	m	m	m	m	m	-
Japan	m	m	m	m	m	m	m	m	m	-
Korea	82.0	69.0	69.0	m	m	m	34.0	44.0	53.0	KEDI 2009
Luxembourg	m	m	m	m	m	m	75.6	82.9	86.8	EVS 2009
Mexico	m	m	m	m	m	m	m	m	m	-
Netherlands	78.7	90.5	95.5	28.2	34.2	41.1	80.6	86.8	93.3	ESS 2008
New Zealand	79.6	85.6	91.4	24.9	32.2	40.5	79.4	83.4	88.6	GSS 2008
Norway	76.8	84.5	93.3	11.2	28.3	30.4	75.3	84.4	87.0	ESS 2008
Poland	62.1	72.6	89.1	2.3	5.1	15.1	48.4	63.4	74.0	ESS 2008
Portugal	72.9	79.8	82.7	2.0	2.1	8.9	38.2	51.7	56.3	ESS 2008
Slovak Republic	74.0	80.2	83.1	12.7	8.0	9.9	36.4	53.1	64.3	ESS 2008
Slovenia	74.7	71.1	84.0	11.9	19.8	24.0	46.0	61.3	81.4	ESS 2008
Spain	79.4	85.8	89.1	3.5	4.0	7.5	71.1	73.2	87.7	ESS 2008
Sweden	86.2	90.9	97.1	22.0	21.4	24.0	82.7	85.3	86.4	ESS 2008
Switzerland	55.1	61.8	82.9	6.8	16.0	21.3	68.4	84.2	88.7	ESS 2008
Turkey	91.5	89.7	87.8	1.9	3.9	4.0	36.4	50.8	59.1	ESS 2008
United Kingdom	61.2	69.3	81.0	10.1	12.4	19.2	62.7	65.6	76.8	ESS 2008
United States	42.4	69.6	87.5	m	m	m	m	m	m	CPS 2008
OECD average	74.0	79.4	87.2	10.8	14.9	20.0	57.9	67.3	75.5	-
EU21 average	75.3	80.8	88.4	11.2	14.4	19.8	55.8	64.8	74.4	-
Other G20										
Argentina	m	m	m	m	m	m	m	m	m	-
Brazil	m	m	m	m	m	m	m	m	m	-
China	m	m	m	m	m	m	m	m	m	-
India	m	m	m	m	m	m	m	m	m	-
Indonesia	m	m	m	m	m	m	m	m	m	-
Russian Federation	77.9	70.5	73.1	0.8	2.3	5.9	20.7	33.9	37.6	ESS 2008
Saudi Arabia	m	m	m	m	m	m	m	m	m	-
South Africa	m	m	m	m	m	m	m	m	m	-

Notes: Figures presented in the column "Below upper secondary education" describe the proportion of adults aged 25-64 who have attained below upper secondary education reporting: a) electoral participation; b) volunteering experience; and c) satisfaction in life. Likewise, figures presented in columns "Upper secondary education" and "Tertiary education" describe the proportion of adults who have attained upper secondary and tertiary education reporting: a) electoral participation; b) volunteering experience; and c) satisfaction in life. For electoral participation, the analysis is limited to adults who are eligible to vote. Countries with compulsory voting are included in the data, i.e. Belgium, Greece, Luxembourg and Turkey. For countries with a voting-registration requirement which is not enforced or automated (e.g. Ireland, the United Kingdom and the United States), the analysis includes those who are potentially eligible (e.g. are citizens of the country) but have not registered for voting.

Source: European Social Survey (ESS) 2008; General Social Survey (GSS) 2008 for Canada and New Zealand; KEDI's Lifelong Education Survey 2009 for Korea; Current Population Survey (CPS) 2008 for the United States. See Annex 3 for notes (www.oecd.org/edu/eag2011).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.


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Table A11.2. Civic engagement, by students' level of civic knowledge (2009)
Mean scale of civic engagement among 8th grade students, by level of civic knowledge (standard errors in parentheses)

	Expected adult electoral participation								Supportive attitudes towards gender equality								Trust in civic institutions							
	Below Level 1		Level 1		Level 2		Level 3		Below Level 1		Level 1		Level 2		Level 3		Below Level 1		Level 1		Level 2		Level 3	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
OECD																								
Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Austria	45.1	(0.5)	48.3	(0.5)	51.3	(0.4)	54.7	(0.4)	43.6	(0.5)	48.8	(0.5)	53.0	(0.5)	56.6	(0.4)	52.6	(0.6)	53.4	(0.4)	52.8	(0.4)	52.6	(0.3)
Belgium (Fl.)	41.8	(0.9)	43.0	(0.5)	45.4	(0.3)	48.9	(0.5)	45.3	(0.7)	49.2	(0.4)	52.6	(0.3)	56.0	(0.4)	49.6	(0.9)	49.1	(0.5)	49.5	(0.4)	49.6	(0.4)
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	47.4	(0.7)	48.7	(0.5)	50.2	(0.5)	53.0	(0.5)	43.3	(0.4)	48.7	(0.4)	53.8	(0.3)	57.0	(0.5)	52.2	(0.6)	50.9	(0.5)	49.5	(0.3)	48.2	(0.3)
Czech Republic	37.4	(0.6)	39.2	(0.4)	44.0	(0.3)	49.7	(0.4)	41.5	(0.3)	44.3	(0.3)	48.7	(0.3)	52.8	(0.3)	50.6	(0.6)	48.6	(0.4)	47.9	(0.3)	47.1	(0.3)
Denmark	41.3	(1.2)	43.2	(0.5)	47.1	(0.4)	51.7	(0.3)	45.8	(1.0)	49.0	(0.6)	52.2	(0.4)	56.9	(0.2)	45.4	(1.5)	49.3	(0.7)	50.9	(0.3)	53.7	(0.3)
Estonia	41.7	(0.7)	43.2	(0.5)	46.6	(0.3)	49.8	(0.4)	41.8	(0.5)	45.1	(0.4)	48.9	(0.3)	52.8	(0.4)	46.9	(0.9)	47.6	(0.5)	48.4	(0.4)	48.3	(0.4)
Finland	42.3	(1.8)	44.0	(0.7)	47.3	(0.3)	51.2	(0.3)	40.1	(1.7)	46.7	(0.9)	51.0	(0.6)	56.1	(0.3)	46.8	(1.9)	50.7	(0.8)	52.8	(0.3)	54.1	(0.2)
France	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Germany	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Greece	46.5	(0.7)	47.6	(0.5)	51.1	(0.4)	55.1	(0.5)	44.9	(0.8)	47.9	(0.7)	51.8	(0.5)	55.9	(0.4)	48.3	(0.5)	45.2	(0.5)	44.2	(0.5)	43.3	(0.4)
Hungary	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	45.1	(1.0)	47.6	(0.6)	51.8	(0.3)	55.9	(0.3)	45.5	(0.8)	50.5	(0.5)	54.4	(0.5)	57.9	(0.3)	49.2	(1.1)	49.6	(0.6)	49.1	(0.4)	49.1	(0.3)
Israel	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Italy	45.8	(0.8)	49.8	(0.4)	54.1	(0.3)	57.8	(0.3)	43.5	(0.7)	47.0	(0.4)	51.5	(0.3)	55.9	(0.3)	53.5	(1.1)	52.8	(0.5)	52.3	(0.3)	51.5	(0.3)
Japan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Korea	40.6	(1.0)	43.5	(0.5)	46.6	(0.3)	51.1	(0.2)	41.0	(0.6)	45.3	(0.4)	49.6	(0.3)	52.5	(0.2)	44.3	(1.6)	44.9	(0.5)	44.0	(0.3)	42.2	(0.2)
Luxembourg	43.8	(0.5)	45.0	(0.4)	48.2	(0.3)	53.8	(0.3)	44.6	(0.3)	49.9	(0.3)	54.3	(0.3)	57.5	(0.3)	51.5	(0.4)	50.7	(0.4)	51.1	(0.2)	51.6	(0.3)
Mexico	50.0	(0.3)	52.3	(0.2)	55.2	(0.3)	56.9	(0.3)	41.5	(0.2)	44.5	(0.2)	48.3	(0.2)	51.0	(0.4)	51.4	(0.4)	49.4	(0.3)	47.0	(0.3)	44.6	(0.5)
Netherlands	43.4	(1.4)	44.2	(0.8)	47.3	(0.6)	50.3	(0.6)	47.7	(1.5)	50.0	(0.9)	52.5	(0.6)	54.2	(1.0)	49.3	(0.9)	50.4	(0.6)	52.2	(0.5)	53.2	(0.5)
New Zealand	43.9	(0.7)	44.9	(0.5)	48.5	(0.5)	53.3	(0.4)	43.2	(0.6)	47.9	(0.6)	52.9	(0.5)	57.0	(0.3)	50.2	(0.6)	50.0	(0.4)	50.6	(0.3)	50.6	(0.3)
Norway	43.4	(0.9)	47.1	(0.7)	52.3	(0.4)	57.0	(0.3)	43.8	(0.7)	49.6	(0.5)	54.2	(0.4)	58.6	(0.3)	49.5	(0.8)	52.0	(0.7)	52.7	(0.4)	54.0	(0.4)
Poland	42.9	(0.9)	45.4	(0.6)	47.1	(0.4)	51.3	(0.3)	41.4	(0.4)	43.6	(0.3)	47.0	(0.4)	51.0	(0.4)	43.8	(0.9)	45.1	(0.5)	45.3	(0.4)	45.2	(0.3)
Portugal	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovak Republic	43.7	(0.9)	44.3	(0.6)	47.1	(0.4)	51.8	(0.4)	40.9	(0.6)	43.9	(0.4)	47.6	(0.3)	52.1	(0.3)	48.9	(1.3)	49.0	(0.6)	48.1	(0.4)	47.6	(0.5)
Slovenia	44.6	(0.8)	45.7	(0.5)	49.9	(0.3)	53.9	(0.4)	42.9	(0.8)	47.6	(0.4)	52.5	(0.4)	56.8	(0.3)	47.6	(1.1)	47.6	(0.5)	48.4	(0.4)	49.6	(0.3)
Spain	46.0	(0.8)	48.2	(0.5)	51.8	(0.3)	54.7	(0.4)	44.0	(0.7)	50.8	(0.4)	56.2	(0.3)	59.9	(0.3)	50.0	(0.8)	49.2	(0.5)	49.6	(0.3)	50.0	(0.3)
Sweden	42.4	(0.9)	44.8	(0.5)	48.3	(0.4)	52.8	(0.3)	44.6	(0.8)	50.6	(0.6)	55.6	(0.4)	59.3	(0.3)	48.9	(1.2)	51.0	(0.5)	51.9	(0.4)	53.5	(0.3)
Switzerland	42.1	(1.3)	43.3	(0.6)	47.2	(0.4)	51.4	(0.5)	44.0	(0.9)	48.0	(0.6)	52.2	(0.4)	56.3	(0.5)	48.7	(1.6)	49.3	(0.7)	51.0	(0.4)	52.4	(0.3)
Turkey	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
United Kingdom ¹	42.0	(0.6)	43.5	(0.6)	46.8	(0.5)	52.3	(0.5)	44.9	(0.6)	49.9	(0.6)	53.5	(0.5)	57.7	(0.3)	51.3	(0.7)	50.5	(0.4)	50.5	(0.3)	51.4	(0.4)
United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
OECD total	43.8	(0.2)	45.7	(0.1)	49.0	(0.1)	53.0	(0.1)	43.3	(0.2)	47.5	(0.1)	51.6	(0.1)	55.4	(0.1)	49.3	(0.2)	49.5	(0.1)	49.7	(0.1)	49.8	(0.1)
EU21 average	43.3	(0.2)	45.1	(0.1)	48.5	(0.1)	52.7	(0.1)	43.7	(0.2)	47.9	(0.1)	52.0	(0.1)	55.9	(0.1)	49.1	(0.2)	49.4	(0.1)	49.7	(0.1)	50.1	(0.1)
Other G20																								
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	50.7	(0.3)	52.5	(0.2)	55.4	(0.3)	57.5	(0.7)	40.0	(0.2)	42.0	(0.2)	45.3	(0.3)	48.1	(0.7)	59.5	(0.4)	59.7	(0.3)	58.0	(0.4)	54.6	(0.8)
Russian Federation	47.9	(0.7)	49.2	(0.3)	51.8	(0.3)	54.0	(0.4)	39.5	(0.3)	41.2	(0.3)	43.8	(0.2)	47.2	(0.3)	53.2	(0.7)	52.9	(0.3)	52.2	(0.3)	51.4	(0.4)
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Notes: Figures presented in the column “Below Level 1” describe the mean scales of 8th grade students’ civic and social engagement (i.e. expect to participate in elections, have supportive attitudes towards gender equality and display trust in civic institutions) among those who have scored “Below Level 1” in civic knowledge. Likewise, figures presented in the columns “Level 1”, “Level 2” and “Level 3” describe the mean scales of students’ civic and social engagement among those who have scored at “Level 1”, “Level 2” and “Level 3” in civic knowledge. EU21 average represents weighted average of EU member countries that are also OECD countries. They include Austria, Belgium (Flanders), the Czech Republic, Denmark, Finland, Greece, Ireland, Italy, Luxembourg, the Netherlands, Poland, the Slovak Republic, Slovenia, Spain, Sweden and the United Kingdom (England). Mean ICCS scales are based on Rasch Partial Credit Model, and the resulting weighted likelihood estimates (WLEs) were transformed into a metric with a mean of 50 and a standard deviation of 10. Definitions provide more details of the ICCS scale.

1. Data for the United Kingdom only refer to England.

Source: International Civic and Citizenship Education Study (ICCS), 2009. See Annex 3 for notes (www.oecd.org/edu/eag2011).

Please refer to the Reader’s Guide for information concerning the symbols replacing missing data.


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Table A11.3. Incremental differences in adult voting, volunteering and life satisfaction associated with an increase in the level of educational attainment (2008)
 (with and without adjustments for age, gender and income)


Percentage of 25-64 year-olds, by level of educational attainment

	Electoral participation						Volunteering						Life satisfaction						Data source
	Difference in outcome from below upper secondary to upper secondary			Difference in outcome from upper secondary to tertiary			Difference in outcome from below upper secondary to upper secondary			Difference in outcome from upper secondary to tertiary			Difference in outcome from below upper secondary to upper secondary			Difference in outcome from upper secondary to tertiary			
	No adjustments	Adjustments for age, gender	Adjustments for age, gender, income	No adjustments	Adjustments for age, gender	Adjustments for age, gender, income	No adjustments	Adjustments for age, gender	Adjustments for age, gender, income	No adjustments	Adjustments for age, gender	Adjustments for age, gender, income	No adjustments	Adjustments for age, gender	Adjustments for age, gender, income	No adjustments	Adjustments for age, gender	Adjustments for age, gender, income	
OECD																			
Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
Austria	2.1	7.8	7.8	11.0	11.1	-0.7	8.0	5.6	5.6	8.4	7.6	7.2	9.9	7.3	-6.7	2.1	1.9	0.6	ESS 2008
Belgium	3.6	4.3	3.0	0.7	0.6	5.7	3.3	3.6	2.8	9.3	10.3	9.8	9.6	10.3	7.3	11.0	10.1	5.8	ESS 2008
Canada	8.9	12.1	9.9	6.1	7.8	5.7	m	m	m	m	m	m	5.7	5.9	3.4	5.2	5.2	3.0	GSS 2008
Chile	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
Czech Republic	6.5	9.1	7.2	29.0	28.9	27.5	8.0	7.5	7.1	7.0	7.1	6.4	28.7	26.6	23.7	15.4	15.6	12.3	ESS 2008
Denmark	6.1	6.4	5.5	2.1	2.0	1.5	7.6	5.8	4.2	2.0	3.9	2.9	1.2	1.1	-0.8	1.1	1.7	0.6	ESS 2008
Estonia	11.7	11.4	9.0	19.7	19.3	17.1	-0.9	-1.4	-1.2	7.8	7.7	7.3	2.7	2.9	0.8	16.2	16.0	10.1	ESS 2008
Finland	1.3	7.9	7.5	12.9	13.5	11.2	-2.4	-1.4	-1.6	0.7	0.8	0.1	5.4	4.8	3.7	2.0	1.9	-1.2	ESS 2008
France	7.4	11.2	9.6	3.0	6.8	6.1	2.4	3.7	2.8	2.5	3.9	4.8	9.7	9.8	4.9	13.4	12.5	5.6	ESS 2008
Germany	5.0	5.1	5.0	12.7	12.4	9.5	9.9	9.8	9.5	7.1	7.0	5.4	12.3	12.8	11.3	15.4	16.0	10.4	ESS 2008
Greece	-2.6	-1.4	-2.4	-1.9	-1.7	-2.4	1.6	1.6	1.6	0.6	0.6	0.5	11.8	11.2	9.2	0.0	0.3	-1.1	ESS 2008
Hungary	6.1	7.1	6.5	2.4	3.0	3.8	4.8	4.5	4.4	9.9	10.3	10.2	4.2	3.9	0.2	21.0	18.3	13.1	ESS 2008
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
Ireland	5.6	8.2	7.6	-4.2	-0.1	-0.7	2.9	4.7	3.5	5.7	7.4	7.9	1.5	3.0	0.1	3.6	3.9	0.4	ESS 2008
Israel	-1.4	2.8	-1.5	6.8	6.1	4.9	3.2	4.2	3.2	2.1	2.2	1.7	15.7	13.5	4.6	3.2	4.2	0.4	ESS 2008
Italy	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
Japan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
Korea	-13.3	-1.1	-1.1	0.5	5.3	5.6	m	m	m	m	m	m	9.8	12.4	11.4	9.1	10.0	7.3	KEDI 2009
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m	7.3	8.4	5.1	3.9	4.3	0.9	EVS 2009
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
Netherlands	11.8	13.0	11.1	4.9	4.7	3.2	6.0	8.6	7.4	6.9	6.3	6.3	6.2	6.3	3.2	6.5	6.4	5.4	ESS 2008
New Zealand	6.0	8.2	7.5	5.8	5.4	4.3	7.3	8.7	8.3	8.3	8.2	7.6	4.1	4.2	2.8	5.1	5.1	3.6	GSS 2008
Norway	7.6	10.5	7.8	8.9	10.8	9.3	17.0	17.0	15.2	2.1	3.3	3.1	9.1	8.4	3.0	2.6	2.1	-0.4	ESS 2008
Poland	10.6	13.7	10.9	16.5	19.0	17.2	2.8	3.3	3.0	10.1	10.7	10.5	15.0	9.7	5.3	10.6	6.7	1.2	ESS 2008
Portugal	6.9	9.9	8.7	2.9	3.9	3.0	0.2	0.3	0.3	6.8	6.8	7.4	13.5	8.9	7.1	4.6	4.9	3.0	ESS 2008
Slovak Republic	6.2	8.7	8.7	3.1	4.3	4.3	6.1	8.6	8.6	2.7	4.0	4.0	16.7	14.5	14.5	11.2	9.6	9.6	ESS 2008
Slovenia	-3.5	0.9	-0.4	12.9	13.6	11.6	-2.0	2.3	1.1	12.6	13.4	11.1	15.3	10.6	6.6	20.0	20.5	16.2	ESS 2008
Spain	6.4	9.1	8.7	3.2	3.3	1.6	0.5	1.1	1.4	3.5	3.4	2.9	2.1	2.5	0.8	14.5	14.3	12.3	ESS 2008
Sweden	4.7	7.4	7.1	6.2	6.4	5.5	-0.6	0.7	0.5	2.5	3.1	3.4	2.6	3.7	2.4	1.1	1.0	-3.1	ESS 2008
Switzerland	6.7	10.4	8.7	21.1	20.4	18.3	9.2	9.3	10.0	5.4	4.8	5.3	15.8	15.9	12.7	4.5	5.4	1.9	ESS 2008
Turkey	-1.9	0.2	1.6	-1.9	0.1	-0.3	-1.9	0.2	1.6	-1.9	0.1	-0.3	14.4	18.1	17.0	8.3	10.3	4.7	ESS 2008
United Kingdom	8.1	10.4	8.9	11.7	12.0	10.9	2.3	3.0	2.3	6.9	6.8	5.4	2.9	3.0	-1.9	11.2	11.7	6.8	ESS 2008
United States	27.2	27.7	23.4	17.8	18.0	14.1	m	m	m	m	m	m	m	m	m	m	m	m	CPS 2008
OECD average	5.3	8.2	6.9	7.9	8.8	7.3	4.0	4.6	4.2	5.4	5.8	5.5	9.4	8.9	5.6	8.3	8.1	4.8	-
EU21 average	5.5	7.9	6.8	7.8	8.6	7.2	3.2	3.8	3.3	5.9	6.4	6.0	8.9	8.1	4.8	9.2	8.9	5.4	-
Other G20																			
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
Russian Federation	-7.4	-3.0	-1.9	2.6	2.9	2.3	1.5	1.6	1.9	3.6	3.7	3.6	13.2	11.1	8.0	3.7	3.0	1.2	ESS 2008
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	-

Notes: Calculations are based on ordinary least squares regressions among adults aged 25-64. Cells highlighted in grey are statistically significant and different from zero at the 5% level. Non-linear models (probit models) produce similar results.

Source: European Social Survey (ESS) 2008; General Social Survey (GSS) for Canada and New Zealand; KEDI's Lifelong Education Survey 2009 for Korea; Current Population Survey (CPS) 2008 for the United States. See Annex 3 for notes (www.oecd.org/edu/eag2011).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.

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Chapter

B

FINANCIAL AND HUMAN RESOURCES INVESTED IN EDUCATION



Classification of educational expenditure

Educational expenditure in this chapter is classified through three dimensions:

- The first dimension – represented by the horizontal axis in the diagram below – relates to the location where spending occurs. Spending on schools and universities, education ministries and other agencies directly involved in providing and supporting education is one component of this dimension. Spending on education outside these institutions is another.
- The second dimension – represented by the vertical axis in the diagram below – classifies the goods and services that are purchased. Not all expenditure on educational institutions can be classified as direct educational or instructional expenditure. Educational institutions in many OECD countries offer various ancillary services – such as meals, transport, housing, etc. – in addition to teaching services to support students and their families. At the tertiary level, spending on research and development can be significant. Not all spending on educational goods and services occurs within educational institutions. For example, families may purchase textbooks and materials themselves or seek private tutoring for their children.
- The third dimension – represented by the colours in the diagram below – distinguishes among the sources from which funding originates. These include the public sector and international agencies (indicated by light blue), and households and other private entities (indicated medium-blue). Where private expenditure on education is subsidised by public funds, this is indicated by cells in the grey colour.

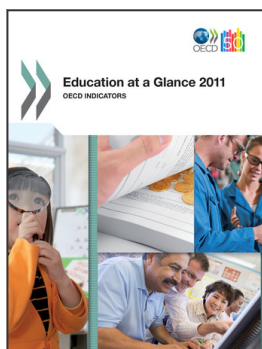
	Public sources of funds	Private sources of funds	Private funds publicly subsidised
	Spending on educational institutions (e.g. schools, universities, educational administration and student welfare services)		Spending on education outside educational institutions (e.g. private purchases of educational goods and services, including private tutoring)
Spending on core educational services	e.g. public spending on instructional services in educational institutions		e.g. subsidised private spending on books
	e.g. subsidised private spending on instructional services in educational institutions		e.g. private spending on books and other school materials or private tutoring
	e.g. private spending on tuition fees		
Spending on research and development	e.g. public spending on university research		
	e.g. funds from private industry for research and development in educational institutions		
Spending on educational services other than instruction	e.g. public spending on ancillary services such as meals, transport to schools, or housing on the campus		e.g. subsidised private spending on student living costs or reduced prices for transport
	e.g. private spending on fees for ancillary services		e.g. private spending on student living costs or transport

Coverage diagrams

For Indicators B1, B2 and B3

For Indicators B4 and B5

For Indicator B6



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