ANNEX 3: SOURCES, METHODS AND TECHNICAL NOTES

Education at a Glance 2015

Description: This document is intended to provide guidance as to the methodology used during the data collection for each Indicator, the references to the sources and the specific notes for each country.

How to read this document: Annex 3 is organised by chapters. Click on each link below in order to be redirected to the Indicator and the information related to it.

Table 1: Specific notes by country in the different indicators

	B1			B2	B3	B4	B5	B6	B7	C2
	Coverage	Methodology	Interpretation	Coverage	Coverage	Coverage	Methodology	Coverage Sources	Methodology	Coverage
Australia			AUS	AUS						AUS
Austria	AUT	AUT	AUT							
Belgium			BEL	BEL	BEL		BFL			
Brazil										
Canada										
Chile										
Czech Republic	CZE			CZE						
Denmark				DNK		DNK				DNK
Estonia										
Finland				FIN						
France					FRA		FRA			
Germany				DEU						
Greece										
Hungary				HUN			HUN	HUN		
Iceland										
Ireland						IRE	IRL	IRL		
Israel				ISR				ISR,ISR		
Italy	ITA									
Japan			JPN	JPN	JPN		JPN			
Korea	KOR						KOR			
Luxembourg	LUX			LUX						
Mexico	MEX									
Netherlands			NLD							
New Zealand	NZL								NZL	NZL
Norway	NOR			NOR			NOR	NOR		
Poland	POL			POL						
Portugal	PRT			PRT						
Russian Federation		RUS								
Slovak Republic							SVK			
Slovenia	SVN									
Spain	ESP									
Sweden	SWE						SWE	SWE		
Switzerland			CHE				CHE			
Turkey	TUR			TUR		TUR	TUR			
United Kingdom			UKM				UKM			
United States		USA					USA			

Chapter B: FINANCIAL AND HUMAN RESOURCES INVESTED IN EDUCATION

Changes in the coverage of all indicators introduced in Education at a Glance 2015

Data published in the 2015 edition are based on ISCED 2011, and not on ISCED 97 as in previous editions. For more information on the change in the classification see "About the new ISCED 2011 classification". Indicators B1, B2, B3, B4 and B6 cover all ISCED levels except ISCED 0. In these indicators, only total for ISCED 1 to 6 is included (including/excluding programmes not distributed by ISCED level). Data on ISCED 0 have been included in Chapter C, Indicator C2 (notes related to data on expenditure on ISCED 0 are included in this annex).

Australia: Expenditure from the Building the Education Revolution (BER) economic stimulus package was beginning to wind down in 2011 and consequently there has been an overall drop in expenditure between 2010 and 2011 for primary and secondary institutions. In 2009 the Australian Government announced a $16.2 billion BER spending program over four years to build or upgrade large scale infrastructure, such as libraries and halls in primary and secondary schools throughout Australia. The initiative was partially in response to the global recession and the Government's commitment to support jobs through the downturn in private spending. Public and private schools received valuable new capital spending, while employment in the building and construction industry was partly protected from the downturn. BER funding was sourced from the Commonwealth Government and directed through the state and territory governments.

France : Expenditure on education is estimated every year with methods, concepts and a coverage which evolve periodically. Estimates of expenditure from households and local authorities measures have been reviewed in 2012. The change to the 2010 basis for National Accounts data, including Mayotte in the scope, has also been implemented. Back to main table for this Indicator

Norway: Due to the high impact of oil prices on the GDP, the figures published in the publication can be significantly different if the mainland GDP or GDP deflator are used in Indicators B1, B2, B3 and B4 (and for trend indicators shown in these indicators). The tables published in Education at a Glance **are based on** mainland GDP and GDP deflator to better describe real changes in expenditure. Back to main table for this Indicator

INDICATOR B1: How much is spent per student?

See also notes on Indicator B2. Back to main table for this Indicator

General notes

Expenditure reported in *Education at a Glance* are collected by source of funds, type of transaction, and level of education (Indicators B2, B3, and B4) or by type of institutions (Indicators B1 and B6).

The number of students is adjusted to the financial year in the methodology to calculate expenditure per student.

Methodology

Reference period

As data collected for expenditure on education is usually based on the financial reference year and data on students is based on the reference shool year, adjustments were made for countries in which the financial year and the school year do not coincide in order to compute expenditure per student.

In order to match the enrolment data with the financial year 2012, a weighted average of the enrolment data for the academic years 2011/12 and 2012/13 was calculated. The data were weighted in accordance with the proportion of each school year that fell within the financial year 2012 (see Annex 2). Back to main table for this Indicator

Research & Development (R&D) data:

Within the OECD Secretariat, two data collections include expenditure on Research and Development in tertiary institutions: the UOE data collection used for the preparation of indicators published in *Education at a Glance* and the data collected by the National Experts on Science and Technology Indicators (NESTI).

Since 2004, work towards better convergence of R&D expenditure data from both sources led to progress in the comparability of R&D expenditure from these two sources, even if some differences can exist between the two data collections as a result of the different scope of data collections.

To improve the understanding of data on R&D expenditure, the table below show expenditure on Research and Development collected in these two data collections and explain, when there are significant differences between both values, the reasons for these differences.

In indicators using R&D data and published in *Education at a Glance 2015*, values reported in the UOE data collection have been used. When the value for a country is not available in the UOE data collection, the value from the NESTI data collection has been used instead, further to agreement with the relevant country.

		UOE data collection	DSTI data collection	comments on reasons for significant differences between UOE and DSTI data collections
		2012	2012	
OECD				
Australia	Australian Dollar, millions	9,610	9,610	
Austria	Euro, millions	1,395	2,280	Difference in sources of information
Belgium	Euro, millions	1,871	1,897	Difference in sources of information (UOE: administrative sources; STI: surveys)
Canada	Canadian Dollar, millions	11,469	12,099	Historically there has been a very small amount of hospital HERD expenditures that are not included in the UOE data. UOE data submission is for 2011, including the R&D data; whereas the DSTI R&D data are for 2012.
Chile	Chilean Peso, millions	148,027	161,292	Difference in sources of information (Budget data for UOE and survey data for DSTI)
Czech Republic	Czech Koruna, millions	19,879	19,879	Difference in sources of information. Different definitions of Higher education sector (university hospitals are included in higher education sector in STI-Database)
Denmark	Danish Krone, millions	m	17,808	
Estonia	Euro, millions	122	122	
Finland	Euro, millions	1,475	1,475	
France	Euro, millions	9,730	9,730	
Germany	Euro, millions	13,980	13,980	
Hungary	Forint, millions	66,958	66,958	
Iceland	Iceland Krona, millions	m	m	
Ireland	Euro, millions	529	630	
Israel	New Israeli Sheqel, millions	included in total	6,047	
Italy	Euro, millions	5,396	5,748	Differences between definitions used in the two data collections.
Japan	Yen, millions	included in total	2,121,442	In the education statistics, "teaching" and "research" are not reported separately. For this reason, the figures on the R&D expenditures are not separated in the UOE data.
Korea	Won, millions	5,248,362	5,276,928	Different definitions for the scope of R&D activity.
Luxembourg	Euro, millions	61	78	
Mexico	Mexican Peso, millions	37,340	m	
Netherlands	Euro, millions	3,953	3,953	
New Zealand	New Zealand Dollar, millions	844	m	Different sources of information
Norway	Norwegian Krone, millions	14,260	15,039	
Poland	Zloty, millions	4,932	4,942	
Portugal	Euro, millions	846	846	
Slovak Republic	Euro, millions	235	199	Discrepancy in these figures is due to inconsistencies between data reported by educational institutions within the UOE data collection and data reported for the Statistical Office.
Slovenia	Euro, millions	72	103	Difference in the coverage of the data collections (in the UOE data, own founds of higher education institutions for R&D are not included).
Spain	Euro, millions	3,613	3,716	
Sweden	Swedish Krona, millions	32,703	32,787	Difference in the coverage of data collections (One research institute is included in the R&D statistics, but not in the UOE data collection)
Switzerland	Swiss Franc, millions	4,049	5,210	Difference in defintions (the breakdown into sources of funds / expenditure categories) and coverage (DSTI data include some R&D institutions that are not included in UOE data).
Turkey	Turkish Lira, millions	m	5,734	
United Kingdom	Pound Sterling, millions	6,979	7,212	Difference in the way data are extrzacted from a similar source
United States	US Dollar, millions	47,095	62,723	Difference in sources of information
Partners				
Argentina			m	
Brazil		3,162		
China				
Colombia	Colombian Peso, millions			
India	Indian Rupee, millions			
Indonesia	Rupiah, millions			
Latvia	Euro, millions	51		
Russian Federation	Russian Ruble, millions	74594		
Saudi Arabia				
South Africa	Rand, millions			

Austria: Expenditure on R&D in the tertiary sector is partially excluded. Some expenditure by public institutions other than the Federal Ministry for Science, Research and Economy is excluded (social insurance bodies, chambers of trade and crafts, and federal funds – *Sozialversicherungsträger*, *Kammern*, *Bundesfonds*). Back to main table for this Indicator

Russian federation: The low value of R&D expenditure per student is explained by specific organisational structure of the research sector in the Russian Federation. The substantial part of research, especially theoretical ones, is carried out by the institutes of Academy of Science rather than in the higher education sector. Back to main table for this Indicator

United States: Funds for major federal R&D centres administered by universities are excluded. Back to main table for this Indicator

Trend data collection (financial years 1995, 2000, 2005, 2008, 2009, 2010, 2011 and 2012)

The trend data on expenditure were obtained by a special survey in 2015 to ensure the consistency of data over years using ISCED 2011. OECD countries were asked to revise trend data for the financial years 1995, 2000, 2005, 2008, 2009, 2010, 2011 and 2012 according to the definitions and the coverage of the UOE 2014 data collection and then consistently with 2012 data.

All expenditure data, as well as the GDP for 1995, 2000, 2005, 2008, 2009, 2010, 2011 and 2012 are adjusted to 2012 prices using the GDP price deflator. Back to main table for this Indicator

Notes on specific countries

Coverage

See also notes on Indicator B2.

Czech Republic: Since *Education at a Glance 2015*, the implementation of ISCED 2011 resulted in a large increase in expenditure per student in Short cycle tertiary programmes (ISCED 5) compared to previous years for which ISCED 97 was implemented. Level 5 in ISCED 2011 includes only students of conservatoires, and these programmes, whereas in ISCED 97, level 5 also included students of higher professional schools whose educational programmes are usually less expensive. Back to main table for this Indicator

Italy: Short-cycle tertiary education is practically negligible compared to total tertiary level (less than 3000 students, or 0.16% of tertiary level in the reference year 2013/14). Therefore, values for total tertiary level are not substantially affected by missing values for short-cycle programmes. Back to main table for this Indicator

Korea: Expenditure on some educational programmes provided by ministries other than the Ministry of Education is excluded (police college, polytechnic college, military academy, etc.). Since fiscal year 2010, ''Edufine System'', which is the revised Korean financial data collection system, has been applied to elementary and secondary education. Therefore, the UOE financial data collection survey method has been modified. Back to main table for this Indicator

Luxembourg: The small difference between general and vocational programmes (see also Indicator C1) is due to the fact that expenditure occurring during the time spent in class is included. All other expenditure (for example expenditure of private enterprises) is not included in the calculation so that the costs of vocational programmes (especially dual programmes) are underestimated.

Expenditure of central level of government (i.e. for development of curricula, psychological aid or academic/professional guidance, or part of transport services); have been attributed to public institutions only, even if student from private institutions benefit from part of these services. As a consequence, expenditure on private institutions is underestimated. Back to main table for this Indicator

Mexico: Only public expenditure on separately funded or separately budgeted research is included. Back to main table for this Indicator

New Zealand: Compared to data published in *Education at a Glance 2010* and earlier, there have been some significant changes in expenditure per student. Changes at other levels than pre-primary reflect, in part, real growth, and in part, changes in methodology. Improvements were made to the methods used to distribute expenditure across levels. Some items incorrectly excluded or allocated in previous returns were revised for this edition. Schools also shifted to International Financial reporting standards and this is the first year of reporting under these reporting standards. This affected the definition and scope of private expenditure. At post-secondary levels there were some moderate real increases in government expenditure, including increases in student support (loans and grants) and inflation-adjustments to subsidies and fees, as well as some volume growth due to the impacts of the recession. Back to main table for this Indicator

Norway: Public spending on educational core services is included for all ISCED-levels as well as public spending on university research. Public spending on ancillary services is partly covered in tertiary education only. Public spending on private enterprises to cover the cost of apprenticeship training in upper secondary level (ISCED3) is included (as public expenditures). Private spending covers tuition fees in short cycle tertiary programmes (ISCED 5) only.

Expenditure data are adjusted to constant prices using the GDP Mainland price deflator. Due to the high impact of oil prices on the GDP deflator for Norway, the GDP deflator used for trend indicators on finance data is the Mainland GDP Deflator, so as to describe real changes in expenditure. Trend data on expenditure on education are converted to equivalent USD using PPPs for GDP (and not the PPPs for GDP mainland, as these were not available). Back to main table for this Indicator

Poland: Expenditure, particularly private expenditure, is underestimated. Back to main table for this Indicator

Portugal: Compared to data published in *Education at a Glance 2010*, expenditure per student at tertiary level of education excluding R&D activities decreased significantly as the amount of R&D increased by 50% compared to last year.

Since data published in *Education at a Glance 2008*, at the tertiary level, data from private institutions are reported, namely: i) expenditure with the teachers and other pedagogical, administrative and professional personnel; ii) expenditure of households (private expenditure) – payments to independent private institutions. However data from some of them, such as *Universidade Católica*, and the institutions belonging to *Fundação Minerva* and *Fundação Fernando Pessoa* are not included. Back to main table for this Indicator

Slovenia: Since data published in *Education at a Glance 2013* (2010 data), expenditure for/of basic education is divided (based on estimation) between expenditure for/of primary level (ISCED 1) and expenditure for/of lower secondary level (ISCED 2). For previous years, all expenditure for basic education (primary and lower secondary together) was shown under lower secondary education. Expenditure per student in lower secondary education was thus expenditure per student in basic (primary and lower secondary) education.

Until reference year 2011 expenditure for/of upper secondary education also included expenditure for/of units of short cycle tertiary education organized within some upper secondary schools. Consequently expenditure per student for/of upper secondary education was slightly overestimated and expenditure per student for tertiary education slightly underestimated. Since reference year 2012 expenditure for/of these units has been (based on estimation) deducted from expenditure for/of upper secondary education and added to expenditure for/of tertiary education.. Back to main table for this Indicator

Spain: Expenditure for retirement of personnel other than teachers in public institutions is not included.

In table B1.2, expenditure on ancillary services at the tertiary level are overestimated, as part of this expenditure is not addressed directly to universities themselves, but to institutions providing these services to university students. However, this does not affect the total level of expenditure at the tertiary level. Back to main table for this Indicator

Sweden: Some components of the cost estimates for post-secondary non tertiary education and short-cycle tertiary programmes are based on rough assumptions, which are likely to underestimate the total cost at these levels. Back to main table for this Indicator

Turkey: Data on public expenditure includes central government expenditure only. Regional and local direct expenditure on educational institutions is not included. Transfers are also not included.

Since data published in *Education at a Glance 2014* (2011 data), in addition to public expenditure, for pre-primary to upper secondary levels (ISCED 0-3), household expenditure on education is also included. Back to main table for this Indicator

Interpretation

Changes in expenditure per student over years.

Australia: Expenditure from the Building the Education Revolution (BER) economic stimulus package was beginning to wind down in 2011 and consequently there has been an overall drop in expenditure between 2010 and 2011 for primary and secondary institutions. In 2009 the Australian Government announced a $16.2 billion BER spending program over four years to build or upgrade large scale infrastructure, such as libraries and halls in primary and secondary schools throughout Australia. The initiative was partially in response to the global recession and the Government's commitment to support jobs through the downturn in private spending. Public and private schools received valuable new capital spending, while employment in the building and construction industry was partly protected from the downturn. BER funding was sourced from the Commonwealth Government and directed through the state and territory governments. Back to main table for this Indicator

Austria: Owing to different reporting standards between the UOE questionnaire and Austrian accounting systems, figures on expenditure per student as published in *Education at a Glance* differ considerably from expenditure per student as calculated and published in Austria. Back to main table for this Indicator

Belgium: Data on the German speaking Community are not included in the indicator. Data on independent private institutions are not integrated in the UOE data collection for both the Flemish Community and the French Community. Back to main table for this Indicator

Flemish Community of Belgium: Data on average theoretical duration for lower and upper secondary education do not take into account post-secondary non-tertiary level (ISCED 4) while in the expenditure data – on which the expenditure per student is based – post-secondary non-tertiary level is included in the total expenditure for all secondary education. Data on independent private institutions are not integrated in the UOE data collection.

In Table B1.7, the information on 'not allocated by level' refers to part-time art education. The pupils enrolled in part-time art education are not included in the tables on student enrolment of the data collection (double counting with other programmes) which explains the difference in the two columns referring to 'not allocated by level' . Back to main table for this Indicator

Japan: Since data were published in *Education at a Glance 2008*, calculation methods used for private expenditure were modified.

Previously national universities were positioned as a part of the government organisation and thus classified as "public institutions". Since April 2004, national universities have been incorporated, given corporation status and autonomous management is ensured. However, some authority relating to important administrative matters remains with the Minister of Education, Culture, Sports, Science and Technology, such as the appointment of the president of each national university, approving medium-term plans, approving issues of university bonds, and dismissal of university directors who have voting rights on important items regarding the administration of the university. Therefore national university corporations are still classified as "public institutions". Back to main table for this Indicator

Netherlands: Between 2000 and 2005 expenditure on educational institutions per student decreased in the Netherlands: expenditure did not keep up with expanding enrolments at this level, as R&D expenditure did not follow the increase in student enrolment. Back to main table for this Indicator

Switzerland: Expenditure per student at the university level is very high. This is mainly due to the structure of the university system: a large number of universities in relation to the size of the country (partly due to the three language regions), the small size of some universities, a wide range of provision at each university, and relatively low student-to-teaching staff ratios. Furthermore, teachers' salaries at the university level are comparatively high. Advanced research programmes are included in tertiary education. In addition to this Switzerland has a high level of R&D spending. Spending on education per student would be considerably lower if the R&D component were excluded. Back to main table for this Indicator

United Kingdom:.Compared to data published in *Education at a Glance 2014*, the method to classify public expenditure on education based on its destination has changed. Public expenditure are split between direct expenditure for education institutions and transfers and payments for education to the non-educational private sector (individuals or other private sector organisations). In *Education at a Glance 2014* (2011 data), this resulted in a large amount of government expenditure classified as a transfer rather than money channelled directly to institutions. In particular, in 2011 data, the £7bn grant from the government used to fund universities was being classified as a transfer, as it was recorded in the UK Treasury data as a transfer to the Higher Education Funding Council (HEFC) – a government-funded agency outside of the Ministry that transferred the funds to universities. As this money is actually transferred directly by the HEFC to the universities, the grant has been classified as direct expenditure for education institutions in 2012 data. As a consequence, the share of public funding of tertiary institutions increased significantly in *Education at a Glance 2015*. As data for previous years are not based on a similar methodology, only 2012 data are published in Table B3.2b presenting trend data. Back to main table for this Indicator

INDICATOR B2: What proportion of national wealth is spent on education?

Methodology

The "domestic" approach (reference to GDP) is preferred to the "national" one (reference to GNP) in the calculation of Indicator B2 because it is consistent with other concepts used in education statistics and in the UOE data collection. Thus, educational programmes and providers and student mobility are considered in the UOE data collection from the domestic point of view. For example, funds from international agencies and other foreign sources are included in the educational expenditure requested (see the *OECD Handbook*, 4.6.2 and 4.6.3); the coverage of the statistics on enrolments or on the activities of education institutions is made on a domestic basis, *i.e.* the host country must report enrolments of foreign students and the educational activities of foreign institutions. However, by taking GNP instead of GDP as reference, expenditure as a percentage of GNP would be more than 5% higher or lower than expenditure as a percentage of GDP in Chile, the Czech Republic, Estonia and Hungary and would be more than 15% higher in Iceland, Ireland, Luxembourg and Norway (see Table 1).

Table 2: Differences between gross domestic product and gross national product (reference period: calendar year 2012, current prices)

	Gross Domestic Product	Gross National Income	% Change
OECD			
Australia	1,520,944	1,482,604	3
Austria	317,213	320,154	-1
Belgium	388,254	396,307	-2
Canada 1	1,770,014	1,737,660	2
Chile 2	129,600,791	131,699,208	-2
Czech Republic	4,047,675	3,788,158	6
Denmark	1,866,779	1,909,692	-2
Estonia	17,637	16,932	4
Finland	199,793	200,836	-1
France	2,091,059	2,116,528	-1
Germany	2,749,900	2,820,408	-3
Greece	194,204	195,430	-1
Hungary	28,548,800	27,331,575	4
Iceland	1,774,001	1,602,301	10
Ireland	172,755	142,620	17
Israel	991,762	966,680	3
Italy	1,628,004	1,611,767	1
Japan	475,110,400	490,164,800	-3
Korea	1,377,456,700	1,391,595,500	-1
Luxembourg	43,812	30,309	31
Mexico	15,561,472	15,277,854	2
Netherlands	640,644	658,450	-3
New Zealand	211,632	206,222	3
Norway	2,295,395	2,989,604	-30
Poland	1,615,895	1,558,924	4
Portugal	169,668	164,317	3
Slovak Republic	72,185	70,707	2
Slovenia	36,006	35,737	1
Spain	1,055,158	1,046,296	1
Sweden	3,684,800	3,799,510	-3
Switzerland	624,592	637,756	-2
Turkey	1,416,798	M	M
United Kingdom	1,655,384	1,650,124	0
United States	16,163,150	16,596,084	-3
Partners			
Argentina	2,744,829	2,707,710	1
Brazil	4,402,537	M	m
China	51,947,010	51,821,500	0
Colombia	665,441,000	639,149,000	4
India	M	M	m
Indonesia 2	9,524,736,500	M	m
Latvia	15,492	M	m
Russian Federation	62,218,378	M	m
Saudi Arabia 2	M	2,831,633	m
South Africa	3,138,980	3,174,209	-1

1. Year of reference 2011
2. Year of reference 2013

Source: OECD Analytical Database, October 2015.

GDP data

The theoretical framework underpinning the calculation of GDP has been provided for many years by the United Nations' publication, *A System of National Accounts*, which was released in 1968. Updated versions were released in 1993 and 2008 (commonly referred to as SNA93 and SNA2008).

Statistics on educational expenditure relate to the financial year 2012. For countries in which GDP is not reported for the same reference period as data on educational funding, GDP is estimated as: w_{t-1} (GDP_{t-1}) + w_t (GDP_t), where w_t and w_{t-1} are the weights for the respective portions of the two reference periods for GDP that fall within the educational financial year. Adjustments were made for **Australia**, **Japan**, the **United Kingdom** and the **United States** (see Annex 2)**.** Back to main table for this Indicator

Norway: From *Education at a Glance 2011* educational expenditures are reported as percent of Mainland GDP (excluding off-shore oil and international shipping). Comparisons with earlier editions are inadvisable as the total GDP was used before 2011. Back to main table for this Indicator

Notes on specific countries

Coverage

Australia: As of *Education at a Glance* 2012 the finance methodology was revised to include capital expenditure that was not captured in previous years. Comparisons with previous publications are inadvisable. For more information, see the notes on the coverage of all indicators.

Most of the Higher Education Contribution Scheme (HECS) payments made to universities are funded in the first instance by the government. In 2005 for example, of about AUD 2.3 billion in HECS charges paid to universities, only about AUD 396 million was paid up front by students. These students received a 20% subsidy (about AUD 99 million from the government), which was paid directly to universities on their behalf, Most of the balance represented HECS loans from the government paid directly to universities. In the indicator, the AUD 99 million in HECS subsidies for those who paid up front and the HECS loans are treated as transfers from the government. Subsequently, all of the AUD 2.3 billion in HECS is counted as private final expenditure on universities.

The contribution of households to funding educational institutions is also overstated by indicators B2 and B3 because the results are also affected by the inclusion of fees paid by a substantial numbers of foreign students (about AUD 2 billion), and the lack of recognition in the indicators of HECS interest subsidies and HECS debts that are never repaid. Back to main table for this Indicator

Belgium: Data on the German-speaking Community are not integrated into the data for Belgium in the 2014 UOE data collection.

In Table B2.3 private expenditure is underestimated since payments to independent private institutions are not integrated. Back to main table for this Indicator

Czech Republic: Data from the Ministries of Justice, Defence and Internal Affairs are not included. Back to main table for this Indicator

Denmark: The allocation of expenditure on primary and lower secondary education is estimated on the basis of the corresponding enrolments. Back to main table for this Indicator

Finland: Government transfers and payments to private entities, except financial aid to students, are excluded. Back to main table for this Indicator

Germany: Expenditure for instruction by enterprises in the "so-called dual system" (*i.e.* programme that combines school- and work-based instruction) is included in this indicator and in Indicator B1. Back to main table for this Indicator

Hungary: Up to 2011 data do not include the private expenditure of private educational institutions. Back to main table for this Indicator

Israel: Scholarships and other grants to students include the gross amount of student loans. Expenditure by non-profit institutions of own sources is not included. Back to main table for this Indicator

Japan: Expenditure on specialised training colleges, "miscellaneous schools" and educational administration are not allocated by level. Free tuition fee at public high schools / High school enrollment support fund" have commenced in April 2010. Under these systems, tuition fees are not charged at public high schools. And students at private high schools receive fixed financial support corresponding to those at public schools for tuition payment. In a case of financial difficulty, students at private high schools receive more financial support depending on their situations. Back to main table for this Indicator

Luxembourg: At the tertiary level, Luxembourg spends about half of public budget to fund Luxembourgish students studying abroad. As public funds devoted to students abroad is not taken into account in chapter B, expenditure on tertiary education as a percentage of GDP and of total public expenditure is largely underestimated. Back to main table for this Indicator

Poland: 1995 data cover public expenditure only. Back to main table for this Indicator

Portugal: Regional and local transfers to the private sector are not included. Local direct expenditure on educational institutions is not included. Back to main table for this Indicator

Turkey: Data on public expenditure includes central government expenditure only. Regional and local direct expenditure on educational institutions is not included. Transfers are also not included. In addition to public expenditure, for pre-primary to upper secondary levels of education (ISCED 0 to 3), household expenditure on education (which could not be reported in the previous years) is also included in the data for the financial year 2012. Back to main table for this Indicator

INDICATOR B3: How much public and private investment in education is there?

Methodology

Calculation of the index in Indicator B3

Tables B3.2a (columns 7 to 16), B3.2b (columns 87 to 16) show the changes in expenditure on educational institutions from public and private sources between 2000 and 2012. All expenditure reported was expressed in 2005 constant USD, adjusted to the 2005 price level using the GDP deflator (see Annex 2). The data on expenditure for 2000 to 2011 were obtained by a survey updated in 2015. Back to main table for this Indicator

Box B3.2. Expenditure by private entities other than households on tertiary education

The box B23.2 is based on a survey launched in 2015 to better analyse expenditures of private enterprises. This survey has been filled in by 14 countries (excluding Brazil, which reports only public expenditure in financial indicators). Details on the coverage of expenditure of private entreprises in the UOE raw data used for the indciators, and as reported in this survey are displayed by country in the table below.

Coverage of expenditure of private entities other than households, at tertiary level

	Type of expenditure						
	Payments to educational institutions (E5)	of E5: Payments of private enterprises for specif. educational activities	of E5: Fees paid to institutions for ancillary services	of E5: Payments of other private entities for R&D expenditure	**Subsidies to households and students (E12)**		
					Total	Scholarships and other grants to households and students	Student loans
OECD countries							
Australia	partially	not	not	partially	not	not	not
Belgium (Flemish Community)	partially	not	not	fully	a	a	a
Canada	fully	fully	fully	fully	not	not	not
Chile	m	m	m	m	m	m	m
Finland	fully	a	a	fully	fully	a	fully
Germany	m	m	m	m	m	m	m
Hungary	fully	fully	fully	fully	fully	fully	fully
Israel	partially	fully	a	a	a	a	a
Netherlands	fully	fully	a	fully	fully	fully	a
New Zealand	partially	partially	partially	partially	not	not	not
Portugal	partially	partially	partially	partially	partially	not	partially
Sweden	partially	not	a	fully	not	not	a
Switzerland	partially	partially	partially	fully	fully	fully	fully
United Kingdom	partially	not	fully	fully	partially	partially	not
United States	partially	fully	fully	fully	fully	fully	fully

'fully' means fully covered. "partially" means partially covered. "not" means not covered. "a" means non-applicable.

Notes on specific countries

See notes on Indicators B1 and B2. Back to main table for this Indicator

Coverage

Belgium: Tables B3.2b and B3.3 only include expenditure charged by institutions. As of 2004 data, the survey on private expenditure on educational institutions does not allow for a breakdown of private expenditure between that imposed by institutions and that not imposed by institutions. Therefore a large part of expenditure imposed by institutions is included in total private expenditure. The private expenditure taken into account in Tables B3.2b and B3.3 is therefore underestimated. Back to main table for this Indicator

Private expenditure is underestimated since data on payments to independent private institutions are not collected/not available.

In the Flemish Community the distinction between private expenditure imposed by institutions and not imposed by institutions can be made. For Flanders the data are fully integrated. Back to main table for this Indicator

France: Private expenditure on education is not fully covered. For example, expenditure on the cost of in-house training in enterprises is not covered.. Back to main table for this Indicator

Japan: Free tuition fee at public high schools / High school enrolment support fund" have commenced in April 2010. Under these systems, tuition fees are not charged at public high schools. And students at private high schools receive fixed financial support corresponding to those at public schools for tuition payment. In a case of financial difficulty, students at private high schools receive more financial support depending on their situations. Back to main table for this Indicator

INDICATOR B4: What is the total public spending on education?

Data on total public expenditure

The theoretical framework underpinning the calculation of total public expenditure has been provided for many years by the United Nations' publication *A System of National Accounts*, which was released in 1968. Updated versions were released in 1993 and 2008 (commonly referred to as SNA93 and SNA2008).

Notes on specific countries

Coverage

Total public expenditure on all services, excluding education, includes the expenditure on debt servicing (*i.e.* interest payments) that is not included in public expenditure on education. The reason for this exclusion is that some countries cannot separate interest payment outlays for education from those for other services. This means that public expenditure on education as a percentage of total public expenditure may be underestimated in countries in which interest payments represent a large proportion of total public expenditure on all services.

See notes on Indicator B2. Back to main table for this Indicator

Denmark: The drop in *public expenditure on education* to *total public spending* is explained by the huge increase in *total public spending* between 2007 and 2008 (5% increase). Back to main table for this Indicator

Ireland: In 2010, the Irish government made large-scale capital transfers to Irish banks, which had a very big impact on government net lending figures. Back to main table for this Indicator

Turkey: Regional and local (except regional government expenditure for primary education) direct expenditure on educational institutions is not included. Back to main table for this Indicator

INDICATOR B5: How much do tertiary students pay and what public support do they receive?

Methodology

Data on tuition fees charged by educational institutions were collected through a survey in 2015 and refer to the academic year 2013/14. The figures represent the weighted average of the main tertiary programmes and do not cover all educational institutions. The figures reported can be considered as good proxies and show the difference among countries in terms of tuition fees charged by the main educational institutions and for the majority of students.

Compared to data published in *Education at a Glance 2014*, data on students loans have not been taken into account in the methodology to estimate net present value. For more information, please see Indicator A7.

Notes on specific countries

See notes on Indicator B2.

Flemish Community of Belgium: In short-cycle tertiary programmes for adult education, a tuition fee of EUR 1.50 per teaching period is charged to student. Some students pay a lower fee per teaching period (for example unemployed students who do follow a training not recognized by the Flemish Employment and Vocational Training Service (VDAB)) or pay no tuition fee (for example asylum seekers, people receiving a living wage, students following a training recognized by the Flemish Employment and Vocational Training Service , ...). A maximum tuition fee per school year is set to EUR 575.

For the students in associate degree - nursing programmes there is no tuition fee charged by the institutions. 'Back to main table for this Indicator

France: Registration fees: There is no registration fees for some training (public STS or CPGE). In public universities, the registration fees are defined by a ministerial decree. Thus, for educational institutions depending from the Ministry of Higher Education, fees amount to USD 216 for a Bachelor's, USD 300 for a Masters, USD 458 for a doctorate and USD 715 for an engineer diploma (values converted to USD using Purpaching power parities). In the other public educational institutions, registration fees greatly vary from one institution to the other and they are usually much higher than those set for universities (public institutions) and can reach up to USD 11 800. In any case, the average fees reported in the tables do not take account of the registration fees exemption or adjustments awarded to students who are granted scholarships or to students based on their socio-economic background.

Regarding private educational institutions, there is no official sources on the amounts of the registration fees; the fees shown are rough estimates with no statistical or regulatory nature.

Scholarships holders: Only scholarships based on socio-economic conditions and granted to students in educational institutions depending from the Ministry of Higher Education are taken into account. The percentage of students benefiting from a scholarship is calculated based on the total student population and not based on the number of students entitled to receive a scholarship/grant. Back to main table for this Indicator

Hungary: Student loan data come from the Student Loan Centre Ltd. In Hungary, students are either fully financed through a state scholarship; partially financed through a state scholarship (50% of the cost of studies), or pay the full cost of studies. The financial contribution of students can be called "cost-refunding" or "tuition fee" which is charged by the institutions and is different by institutions and by fields of training.

In Hungary, the student loan scheme is considered to be private because the funds are raised on the money market and there are no direct subsidies, although it has characteristics of a public scheme as well (universal access, state regulation, state-owned company, relatively preferential rate).

In Table B5.4, the average annual gross amount of loan available to each students refers to the maximum available amount for every student eligible for the loan every semester. The interest rate is variable with a half-yearly interest rate period. This rate is not subsidised by the state budget and has three elements: cost of funding, risk premium and operation premium, but no profit margin. The loan scheme was launched in 2001, the repayments started in 2003, thus as a result of the lack of historic data, only expectations on the duration

of typical amortisation period can be indicated. A tied-use loan ("Diákhitel2") has been available to eligible students for study-related expenses since academic year 2012/2013, in addition of the existing free-use loan ("Diákhitel1"). Back to main table for this Indicator

Ireland: Students in tertiary education benefit from subsidised bus and rail travel (systems owned and funded by the state). The expenditure involved in this subsidy is currently unknown. Students in tertiary colleges and universities can make use of limited on-campus medical facilities funded both from central (exchequer) grants and from the registration fees paid by students. The level of government funding in this area is not known. Back to main table for this Indicator

Japan: The Japan's data refers to only public loan of student support system subsided by the central government through scholarship loans implemented by Japan Students Services Organization. Back to main table for this Indicator

Korea: Students in bachelor, master, doctorate or equivalent programme can benefit either from an Income Contingent Student Loans (covering fully the tuition fees – no maximum limit for the loan – with a stipend of 3 million won a year); or a General Instalment Student Loans (varying between 40 and 60 million Won for undergraduates, between 60 and 90 million Won for graduates; with a stipend of 2 million won a year).

Eligibility rules for student loans (Undergraduate students whose universities or colleges have signed to a convention with the secretary of Ministry of Education or the head director of Korea Student Aid Foundation) vary according to the type of loans. For an Income Contingent Student Loan, they include: 35 years old or younger people, within the 7th income decile or below, and who took 12 credits or more and gained 70 points or higher (maximum 100 points). For a General Instalment Student Loan they include: 55 years old or younger people, within the 8th income decile or above, who took 12 credits or more, and gained 70 points or higher (maximum 100 points). Income level condition is not applied to graduate students.

In table B5.5: conditions for remission also includes an interest relief of stipend loan of Income Contingent Student Loans until the debtor has 3th income level or below. Back to main table for this Indicator

Norway: Students who do not benefit from either loans or grants include both students that do not apply for support and those who no longer are entitled to student support due to academic delay, etc. Students who just benefit from grants are those who choose to apply for grants only. Back to main table for this Indicator

Slovak Republic: Students, who are simultaneously enrolled in one academic year in two or more study programmes offered by a public university in the same level, are required to pay annual tuition fees for the second and the other study programs in the academic year. Students studying longer than the standard duration of study are required to pay annual tuition for each additional year of study. Back to main table for this Indicator

Sweden: All national students are entitled to government grants and loans to finance their studies. The continued entitlement is conditional upon their pass in their previous studies. There is also an income threshold. Back to main table for this Indicator

Switzerland: Fees for health insurance are publicly subsidised for students from low-income backgrounds. These subsidies amount to several tens of millions of CHF but are excluded. Back to main table for this Indicator

Turkey: Data on students receiving scholarships/grants include only those receiving scholarships/grants from public institutions. Since scholarships provided by private institutions are not captured in the figures, percentage of students that receive scholarships/grants is underestimated. Back to main table for this Indicator

United Kingdom: Data on tuition fees in Tables B5.1a, b, c, d and e refer to England only. Back to main table for this Indicator

United States: Differences in tuition fees by field of education are a result of differences in tuition charged at different institutions, not differences in tuition fees charged within an institution for different fields of education. Generally, within an institution the charge for tuition fees is the same for all fields of education at an ISCED level.

In the United States tuition and fees are only about half the cost of attendance to tertiary studies. Living costs are another major factor. Books and supplies are significant as well. Living costs and costs related to books and supplies can also affect decisions to enrol in tertiary programmes.

Tution fees: If tuition is charged on a per-credit-hour basis, the average full-time credit hour load for an entire academic year is used to estimate average tuition. Required fees include all fixed sum charges that are required of such a large proportion of all students that the student who does not pay the charges is an exception. Tuition data are from a 2011-12 national survey - these are the most recent survey data the U.S. is able to provide.

Student loans: The United States has several models for loan repayment, one of which allows students whose loans represent a significant portion of or exceeds their annual income to switch from a standard repayment plan (10 years) to an income-based repayment plan. Back to main table for this Indicator

INDICATOR B6: On what services and resources is education funding spent?

See also notes on Indicators B1 and B2.

Sources

See Indicator B1

Notes on specific countries

Coverage of ancillary services

Expenditure by educational institutions on ancillary services, such as student meals, room and board on campus and student transport, should include fees paid by students and families for those services. However, countries' coverage of private spending on ancillary services is uneven. While a number of countries exclude private spending on ancillary services, Australia, France, Hungary, Norway, Spain, Turkey and the United States provide information on private spending on ancillary services. Back to main table for this Indicator

Hungary: The expenditure on primary to upper secondary levels (ISCED levels 1 to 3) is estimated on the basis of the number of students at each level. Back to main table for this Indicator

Ireland: Ancillary services at the primary to post-secondary non-tertiary level include only school transport. Back to main table for this Indicator

Israel: Ancillary services are included in total expenditure on educational institutions. Back to main table for this Indicator

Norway: Expenditure on ancillary services includes welfare services, preparation of studies abroad and contributions to housing on campus in tertiary education. No ancillary services are estimated for primary, secondary and post-secondary non-tertiary levels (ISCED 1-4). Back to main table for this Indicator

R&D coverage (see Indicator B1)

Notes on distribution of current and capital expenditure

Israel: Total personnel compensation includes taxes on employment. Current expenditure other than compensation of personnel includes other expenditures and consumption of fixed capital. Back to main table for this Indicator

Sweden: School and university buildings are rented. Rent payments are included in current expenditure. Back to main table for this Indicator

INDICATOR B7: What factors influence the level of expenditure on education?

Methodology

Contribution of various factors to salary cost per student

Method: This table shows the salary cost per student at the upper secondary level of education, as a percentage of GDP per capita, the difference from the OECD average and the contribution of various factors to the difference from the OECD average. The salary cost per student is calculated as the teacher's salary multiplied by annual instruction time for the student, divided by the annual amount of teaching time of teachers and the average class size.

$$CCS = SAL \times instT \times \frac{1}{teachT} \times \frac{1}{ClassSize} = \frac{SAL}{Ratiostud\ /\ teacher}$$

Data used refer *to Education at a Glance*: salaries (SAL) refer to statutory salaries of teachers with 15 years of experience and minimum training (Indicator D3); instruction time (instT) refers intended instruction time for 15-year-olds (Indicator D1); teaching time (teachT) refers to net teaching time (Indicator D4); and class size (ClassSize) has been estimated based on the ratio of students to teaching staff, teaching time and instruction time (see Box D2.1 in Indicator D2). Some estimation has been made for missing data.

For explanation of the method used, see Bulletins 29 and 31 available in "statistics" section on http://www.meq.gouv.qc.ca. Back to main table for this Indicator

Contribution of various factors to explain the difference between two variables

The analysis of the contribution of various factors to a difference between two variables is assessed, based on an assumption relating to the mathematical relationship between these variables and the explanatory factors (based on method shown in Education Statistics Bulletin (n°29 and 31 and further explanations from Marius Demers (Ministère de l'Education, du Loisir et du Sport, Québec, Canada).

For example, for two countries (Country 1 and Country 2):

$$\mathbf{X_1 \equiv Q_1 \times R_1 \times S_1 \times T_1}$$
$$\mathbf{X_2 \equiv Q_2 \times R_2 \times S_2 \times T_2}$$

then:

$$\frac{\mathbf{X_2}}{\mathbf{X_1}} = \frac{\mathbf{Q_2 \times R_2 \times S_2 \times T_2}}{\mathbf{Q_1 \times R_1 \times S1 \times T_1}}$$

and,

$$1 + \frac{X_2 - X_1}{X_1} = \left(1 + \frac{Q_2 - Q_1}{Q_1}\right) \times \left(1 + \frac{R_2 - R_1}{R_1}\right) \times \left(1 + \frac{S_2 - S_1}{S_1}\right) \times \left(1 + \frac{T_2 - T_1}{T_1}\right)$$

Which can also be written as:

$$1 + V = (1 + U) \times (1 + W) \times (1 + Y) \times (1 + Z)$$

where:

$$V = \frac{X_2 - X_1}{X_1}, \quad U = \frac{Q_2 - Q_1}{Q_1}, \quad W = \frac{R_2 - R_1}{R_1}, \quad Y = \frac{S_2 - S_1}{S_1}, \quad Z = \frac{T_2 - T_1}{T_1}$$

The right part of the equation can also be written as:

$$V = U + W + Y + Z + UW + UY + UZ + WY + WZ + YZ + UWY + UWZ + UYZ + WYZ + UWYZ$$

where, « V » is the relative variation between X_2 and X_1 ($V = (X_2 - X_1)/X_1$).

Then, the contribution of the different explanatory factors to the relative variation between X_2 and X_1 is:

i) for factor « Q »:

$$U + \frac{UW}{2} + \frac{UY}{2} + \frac{UZ}{2} + \frac{UWY}{3} + \frac{UWZ}{3} + \frac{UYZ}{3} + \frac{UWYZ}{4} = A$$

ii) for factor « R »:

$$W + \frac{UW}{2} + \frac{WY}{2} + \frac{WZ}{2} + \frac{UWY}{3} + \frac{UWZ}{3} + \frac{WYZ}{3} + \frac{UWYZ}{4} = B$$

iii) for factor « S »:

$$Y + \frac{UY}{2} + \frac{WY}{2} + \frac{YZ}{2} + \frac{UWY}{3} + \frac{UYZ}{3} + \frac{WYZ}{3} + \frac{UWYZ}{4} = C$$

iv) for factor « T »:

$$Z + \frac{UZ}{2} + \frac{WZ}{2} + \frac{YZ}{2} + \frac{UWZ}{3} + \frac{UYZ}{3} + \frac{WYZ}{3} + \frac{UWYZ}{4} = D$$

where: $A + B + C + D = V$

With this method, we measure the direct and indirect contribution of each factor to the variation of the variable between the two countries. For example, if a worker receives a 10% increase of the hourly wage and increases the number of hours of work from 20%, his earnings will increase from 32%, resulting from the direct contribution of each of these variations (0.1 +0.2) and the indirect contribution of these variations due to the combination for these two factors (0.1*0.2).

The contribution of explanatory factors to the absolute difference between the two variables (X_2 - X_1) is:

i) factor « U »:

$$\frac{A}{V} \times (X_2 - X_1) = AX_1 = a$$

ii) factor « R »:

$$\frac{B}{V} \times (X_2 - X_1) = BX_1 = b$$

iii) factor « S »:

$$\frac{C}{V} \times (X_2 - X_1) = CX_1 = c$$

iv) factor « T »:

$$\frac{D}{V} \times (X_2 - X_1) = DX_1 = d$$

with

$$a + b + c + d = X_2 - X_1$$

Back to main table for this Indicator

Notes on specific countries

New Zealand: The salary cost of teachers per student at upper secondary level (ISCED 3) is computed based on salaries and teaching time data relating to general upper secondary programmes. However, the ratio of student to teaching staff used for the computation refers to all programmes at upper secondary level, as the ratio for general programme only is not available in Indicator D2. This may lead to some bias in the computation, especially for countries with large differences in the ratio of student to teaching staff between general and vocational programmes. Back to main table for this Indicator

INDICATOR C2: Expenditure on early childhood educational institutions

Notes on specific countries

Coverage

Australia: The 2011 reference year represents a break in the series for pre-primary level reporting. For 2011, new data sources enabled the coverage of pre-primary education data to be expanded to include preschool programmes delivered within long day care settings. These programmes are typically privately operated, however preschool programme fees are heavily subsidised by the Commonwealth Government. Back to main table for this Indicator

Denmark: Since *Education at a Glance 2011*, the change in public and private expenditure at the pre-primary level has resulted from a change in coverage. Expenditure on pre-primary education includes some expenditure on day care. Day care activities are fully integrated into the school day and not carried out separately. It is debatable whether this expenditure should be classified as educational or not. Back to main table for this Indicator

New Zealand: The majority of the increase at pre-primary level reflects a real increase due to the introduction of a new government policy in 2007 to provide free Early Childhood Education (ECE) for up to 20 hours a week for those aged 3 and over. Back to main table for this Indicator