

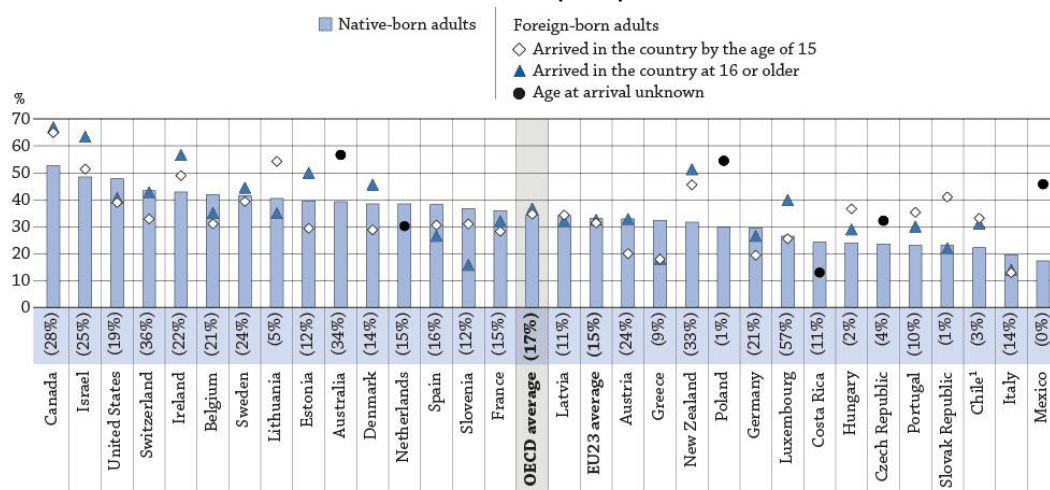
EDUCATION AT A GLANCE 2018

Education at a Glance: OECD Indicators is the authoritative source for information on the state of education around the world. It provides data on the structure, finances and performance of education systems in OECD and partner countries.

Luxembourg

- The share of **tertiary-educated foreign-born adults** is **high** in Luxembourg and they benefit from similar **level of earnings** as their **native-born peers**.
- The share of the population with a **tertiary qualification** has **increased over the past decade** and the proportion of adults with a **master's degree** is **twice as high** as the OECD average. However the earnings premium from a tertiary education is smaller in Luxembourg than on average across OECD countries.
- Enrolment in early childhood education has been stable in the past decade, **yet socio-economic background still impacts enrolment rates** in Luxembourg.
- Luxembourg devotes a significant share of **investment in tertiary education** to research and development: USD 7 002 per student, compared to USD 4 377¹ on average across OECD countries.
- **Teachers have the highest salaries across all OECD countries**, both in absolute terms and relative to other full-time tertiary-educated workers.

Figure 1. Percentage of tertiary-educated native- and foreign-born 25-64 year-olds, by age at arrival in the country (2017)




Note: The percentage in parentheses represents the share of foreign-born adults among 25-64 year-olds.

1. Year of reference differs from 2017. Refer to the source table for more details.

Countries are ranked in descending order of the percentage of tertiary-educated native-born adults.

Source: OECD (2018), Table A1.3. See *Source* section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

StatLink  <https://doi.org/10.1787/888933801696>

¹ Values reported in equivalent US dollars (USD) have been converted using purchasing power parities (PPPs) for GDP

Foreign-born adults in Luxembourg are highly educated and benefit from similar earning premiums to their native-born peers

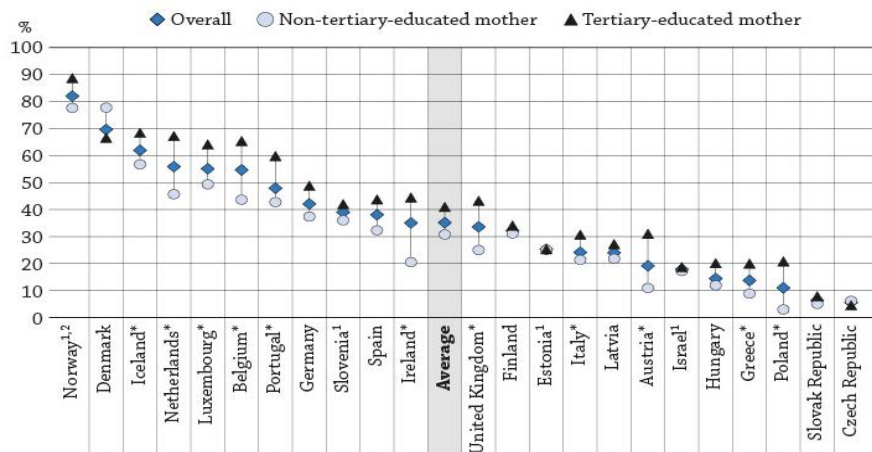
- Education plays a crucial role in reducing social inequalities through the economic and social benefits higher qualifications bring. The share of adults in Luxembourg with a master's degree or equivalent is 24% among 25-64 year-old adults and even higher among 25-34 year-olds, at 31%, twice the OECD average in both age groups.
- The share of 25-34 year-olds with a tertiary qualification has increased over the past decade in Luxembourg, from 36% in 2007 to 51% in 2017 (compared to 34% and 44% on average across OECD countries). The share of women with a tertiary qualification has also increased from 40% in 2007 to 55% in 2017. However, a larger than average gender gap remains at the doctoral level: women account for 38% of first-time entrants to doctoral programme, compared to 48% on average across OECD countries.
- In general, higher qualifications are associated with better labour market opportunities. The employment rate in Luxembourg is similar to the OECD average and increases with education level: 60% of adults with below upper secondary education are employed in Luxembourg, compared to 74% of those with an upper secondary qualification. For those with higher levels of education it ranges from 80% for adults with a post-secondary non-tertiary qualification, up to 89% for those with a master's degree. For a doctoral degree or equivalent the employment rate reaches 93%.
- Despite the employment advantages from education, earnings premiums are generally lower in Luxembourg than in other OECD countries. Compared to individuals with an upper secondary education, those with below upper secondary education in Luxembourg earn on average 23% less (OECD average: 22% less), whereas those with a bachelor's qualification earn on average 39% more (OECD average: 45%). The largest advantage is among master's degree holders, who earn 59% more, though significantly lower than the 91% premium expected on average across OECD countries.
- In Luxembourg, where more than half of the adult population is foreign born, equal participation in education is particularly important to ensure rapid integration into society. While foreign-born adults who arrived by the age of 15 have similar tertiary attainment rates as native-born adults in Luxembourg, 40% of foreign-born adults who arrived in the country after the age of 16 have a tertiary education, compared to an average of 37% on average across OECD countries (Figure 1). Tertiary-educated foreign-born adults also benefit from a similar earnings advantage as their native-born peers, reflecting a highly skilled migration group, potentially already educated in their home countries, and well matched with the labour market upon arrival. The earnings differences are greater among adults who have not attained tertiary education: foreign-born adults in this group earn 18- 25% less than their native-born peers in Luxembourg.

A high proportion of children in Luxembourg attend early childhood education, although socio-economic background still impacts their enrolment rate

- The enrolment of 3-5 year-olds in Early Childhood Education and Care (ECEC) settings has remained relatively stable between 2005 and 2016 in Luxembourg while it has progressed in a number of other countries. As a result, although more 3-5 year-olds participated in ECEC in Luxembourg than on average across the OECD in 2005, the enrolment rate of young children is just below the OECD average in 2016, with 85% of 3-5 year-olds enrolled compared to 86% across the OECD. Among younger children, 55% of those under the age of 3 are enrolled compared to 33% on average across OECD countries. Enrolment increases sharply at the age of 4 to 93%. By the age of 5, 95% of children in Luxembourg are enrolled in 2016.
- Early childhood education is a means to overcome social barriers by building a strong foundation for later schooling. However, participation in early childhood education often follows a social gradient where children from a more affluent socio-economic background are more likely to attend in the early years. In Luxembourg the enrolment rate for children under 3 is 64% for children with a tertiary-educated mother, 15 percentage points higher than for children whose mothers did not attain tertiary education, and more than the average 10 percentage points difference across countries with available data (Figure 2).
- The majority of the children enrolled in early childhood education and care in Luxembourg attend a public institution: more than 89% compared to 68% on average across OECD countries.

- The children-to-staff ratio is often used as an indicator of educational quality in the early years. In Luxembourg, there are 11 children for each teaching staff member in pre-primary education compared to 14 children on average across OECD countries.
- Total expenditure on early childhood education and care is 0.6% of gross domestic product (GDP), somewhat lower than the OECD average of 0.8%. This is a similar share of spending to Australia, Mexico and the Slovak Republic, although less than half the share spent in Iceland, Norway and Sweden.

Figure 2. Participation rates of children under the age of 3, by mother's educational attainment (2014)



Note: For most European countries, data refer to the 2014 wave of EU-SILC survey led by Eurostat. EU-SILC data are based on surveys and may as a result be affected by sample size and sample selection issues. The EU-SILC survey includes unregulated paid childminders' services. Differences in enrolment rates across groups are not statistically significant at $p < 0.05$ for a few countries. In countries with an *, differences in enrolment rates across groups are statistically significant at $p < 0.05$.

1. 2016 data, provided by the country. No sampling, therefore, no p-value reported. In Norway, data are based on children aged 1 and 2 years old.

2. Data provided by the country only for ISCED 0.

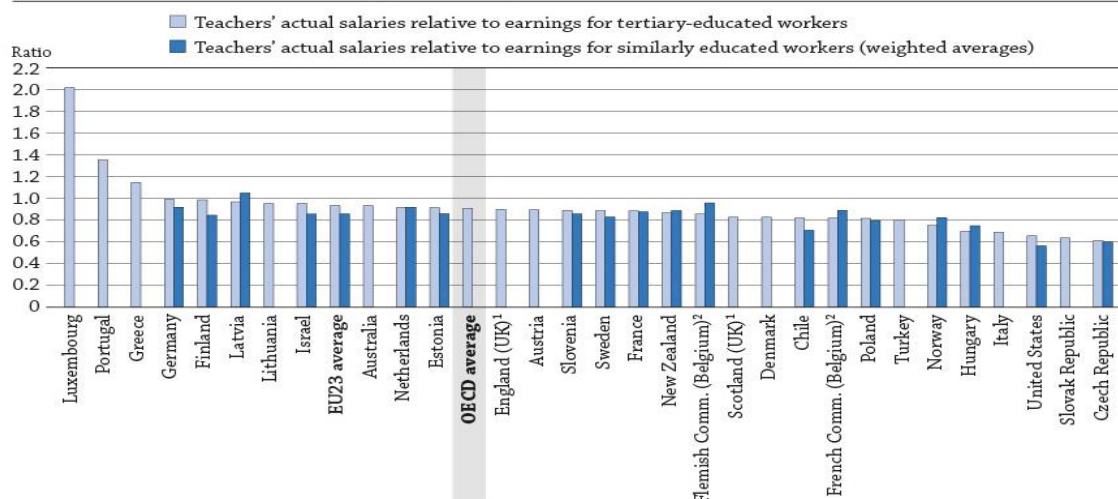
Countries are ranked in descending order of the overall enrolment rates of children under the age of 3.

Source: OECD (2018), Table B2.1.c, available on line, and OECD Family Database. See *Source* section at the end of this indicator for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

StatLink <https://doi.org/10.1787/888933803235>

Teachers' salaries in Luxembourg are the highest among OECD countries

- Total expenditure on primary, secondary and post-secondary non-tertiary educational institutions amounted to 2.9% of GDP in 2015, slightly lower than the 3.5% invested on average across OECD countries. Total expenditure on tertiary institutions in Luxembourg amounted to 0.5% of GDP, about a third the average expenditure across OECD countries at this level. Luxembourg devotes a significant share of its tertiary education spending to research and development (R&D): it spent USD 7 002 per student on R&D in 2015, compared to USD 4 377 on average across OECD countries.
- Teacher compensation represents 76% of total expenditure in public institutions in Luxembourg, higher than the OECD average of 60%. Teachers' statutory salaries in Luxembourg are consistently the highest across OECD countries from pre-primary to upper secondary education, and throughout a teacher's career. For example, lower secondary teachers in a public institution can expect to earn USD 79 551 at the start of their careers and USD 138 279 at the top of the scale, more than double the average starting salary of USD 33 126 and top-of-scale salary of USD 55 846 across OECD countries.
- Relative to other tertiary-educated workers, actual teachers' salaries in Luxembourg are also the highest across OECD countries (Figure 3). A lower secondary teacher can expect to earn twice as much as other full-time tertiary-educated workers, compared to 91% on average across OECD countries.
- The higher statutory salaries impact the annual salary cost of teachers per student which is more than three times as high in Luxembourg as on average across OECD countries at all levels of education. As an example, the salary cost per student at lower secondary level is USD 11 560 compared to USD 3 604 on average across OECD countries, and the above-average teacher salaries contribute an additional USD 6 150 to the annual salary cost of teachers per student in Luxembourg compared to the OECD average. The lower estimated class size also tends to push the salary cost of teachers per student up, contributing an additional USD 2 903 as compared to the OECD average.

Figure 3. Lower secondary teachers' salaries relative to earnings for tertiary-educated workers (2017)

1. Data on earnings for full-time, full-year workers with tertiary education refer to the United Kingdom.

2. Data on earnings for full-time, full-year workers with tertiary education refer to Belgium.

Countries and economies are ranked in descending order of the ratio of teachers' salaries to earnings for full-time, full-year tertiary-educated workers aged 25-64.

Source: OECD (2018), Table D3.2a. See Source section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

StatLink <https://doi.org/10.1787/888933805458>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Note regarding data from Israel

The statistical data for Israel are supplied by and are 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.

Lithuania was not an OECD member at the time of preparation of Education at a Glance and is therefore not included in the zone aggregates mentioned in the publication. However this country note, produced at a later stage, includes updated figures for the OECD and EU averages including Lithuania and therefore may differ from the figures mentioned in Education at a Glance.

References

OECD (2018), *Education at a Glance 2018: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2018-en>.

For more information on Education at a Glance 2018 and to access the full set of Indicators, visit www.oecd.org/education/education-at-a-glance-19991487.htm.

Updated data can be found on line at <http://dx.doi.org/10.1787/eag-data-en> and by following the StatLinks under the tables and charts in the publication.

Explore, compare and visualise more data and analysis using:



<http://gpseducation.oecd.org/CountryProfile?primaryCountry=LUX&threshol=10&topic=EO>.

Questions can be directed to:

Marie-Helene Doumet
Directorate for Education and Skills
marie-helene.doumet@oecd.org

Country note author:

Kristina Sonmark
Directorate for Education and Skills
kristina.sonmark@oecd.org

Key Facts for Luxembourg in Education at a Glance 2018

Source	Main topics in <i>Education at a Glance</i>	Luxembourg		OECD average		EU23 average	
	Equity						
	Educational attainment of 25-34 year-olds by gender	2017					
Table A1.2		% Men	% Women	% Men	% Women	% Men	% Women
	Below upper secondary	14%	12%	17%	14%	16%	12%
	Upper secondary or post-secondary non-tertiary	39%	33%	46%	37%	48%	39%
	Tertiary	47%	55%	38%	50%	36%	49%
	Percentage of 15-29 year-olds NEETs by country of birth	2017					
Table A2.3	Native-born	6%		13%		12%	
	Foreign-born	11%		18%		19%	
	Employment rates of native- and foreign-born 25-64 year-olds, by educational attainment	2017					
Table A3.4		Native-born	Foreign-born	Native-born	Foreign-born	Native-born	Foreign-born
	Below upper secondary	52%	65%	56%	60%	55%	57%
	Upper secondary or post-secondary non-tertiary	76%	74%	76%	72%	76%	71%
	Tertiary	89%	85%	87%	79%	87%	78%
	Earnings of 25-64 women relative to men, by educational attainment	2016					
Table A4.3	Below upper secondary	83%		78%		79%	
	Upper secondary or post-secondary non-tertiary	81%		78%		79%	
	Tertiary	81%		74%		75%	
	Share of girls among repeaters in secondary general programmes	2016					
Table B1.3	Lower secondary	46%		39%		38%	
	Upper secondary	43%		42%		42%	
	Percentage of women and men entering doctoral programmes by field of study	2016					
Table B4.1		% Men	% Women	% Men	% Women	% Men	% Women
	Natural sciences, mathematics and statistics	20%	22%	22%	20%	20%	19%
	Engineering, manufacturing and construction	18%	14%	22%	10%	23%	11%
	Health and welfare	**	**	12%	19%	11%	18%
	First-time tertiary graduates	2016					
Table B5.1	Share of female first-time tertiary graduates	53%		57%		58%	
	Participation of 25-64 year-olds in formal and/or non-formal education	2012 ¹					
Table A7.1	Participation of native-born adults and foreign-born adults who arrived in the country by the age of 25	**		49%		n.a.	
	Participation of foreign-born adults who arrived in the country at 26 or older	**		48%		n.a.	
	Early childhood education and care (ECEC)						
	Enrolment rates in ECEC at age 3	2016					
Table B2.1a	ECEC services (ISCED 0) and other registered ECEC services	67%		76%		82%	
	Share of children enrolled in pre-primary education (ISCED 02), by type of institution	2016					
Table B2.2	Public institutions	89%		68%		75%	
	Private institutions	11%		32%		25%	
	Expenditure on pre-primary level (ISCED 02)	2015					
Table B2.3a	Annual expenditure per child in USD (converted to PPPs)	USD 20 495		USD 8 426		USD 8 163	
	Vocational education and training (VET)						
	Percentage of upper secondary students enrolled in vocational education, by programme orientation	2016					
Table B1.3	All vocational programmes	61%		44%		47%	
	Combined school- and work-based programmes	13%		11%		11%	
	Share of women among upper secondary graduates, by programme orientation	2016					
Figure B3.1	General programmes	54%		54%		55%	
	Vocational programmes	51%		46%		45%	
	Total expenditure on upper secondary educational institutions per full-time equivalent student, by programme orientation	2015					
Table C1.1	General programmes	USD 18 580		USD 8 981		USD 9 235	
	Vocational programmes	USD 20 587		USD 10 831		USD 11 115	
	Tertiary education						
	Share of international or foreign students, by education level ²	2016					
Table B6.1	Bachelor's or equivalent	27%		4%		6%	
	Master's or equivalent	73%		12%		13%	
	Doctoral or equivalent	85%		26%		23%	
	All tertiary levels of education	47%		6%		9%	
	Share of first-time tertiary graduates by education level	2016					
Table B5.1	Short-cycle tertiary	12%		14%		10%	
	Bachelor's or equivalent	52%		75%		76%	
	Master's or equivalent	36%		10%		14%	
	Employment rate of 25-64 year-olds, by educational attainment	2017					
Table A3.1	Short-cycle tertiary	82%		81%		82%	
	Bachelor's or equivalent	81%		84%		83%	
	Master's or equivalent	89%		88%		88%	
	Doctoral or equivalent	93%		92%		92%	
	All tertiary levels of education	86%		85%		85%	
	Relative earnings of full-time full-year 25-64 year-old workers, by educational attainment (upper secondary education = 100)	2016					
Table A4.1	Short-cycle tertiary	122		123		125	
	Bachelor's or equivalent	139		145		137	
	Master's, doctoral or equivalent	159		191		175	
	All tertiary levels of education	148		155		152	

Luxembourg - Country Note - Education at a Glance 2018: OECD Indicators

Source	Main topics in <i>Education at a Glance</i>	Luxembourg		OECD average		EU23 average	
	Financial resources invested in education						
	Total expenditure on educational institutions per full-time equivalent student, by level of education (in equivalent USD, using PPPs)	2015					
Table C1.1	Primary	USD 20 892		USD 8 539		USD 8 512	
	Secondary	USD 20 413		USD 9 868		USD 9 882	
	Tertiary (excluding R&D activities)	USD 41 905		USD 11 049		USD 10 919	
	Total expenditure on primary to tertiary educational institutions	2015					
Table C2.1	As a percentage of GDP	3.5%		5.0%		4.6%	
	Share of expenditure on tertiary educational institutions by source of funds ³	2015					
Figure C3.1	Public expenditure	96%		73%		76%	
	Private expenditure	4%		21%		19%	
	Public to private transfers	1%		6%		4%	
	Total public expenditure on primary to tertiary education	2015					
Table C4.1	As a percentage of total government expenditure	8.1%		11.1%		9.6%	
	Teachers, the learning environment and the organisation of schools						
	Actual salaries of teachers and school heads in public institutions relative to earnings of full-time, full-year workers with tertiary education	2016					
		Teachers	School heads	Teachers	School heads	Teachers	School heads
Table D3.2a	Pre-primary	1.8	**	0.82	**	0.83	1.1
	Primary	1.8	**	0.86	1.21	0.88	1.21
	Lower secondary (general programmes)	2.02	2.43	0.91	1.34	0.93	1.37
	Upper secondary (general programmes)	2.02	2.43	0.96	1.42	1	1.45
	Annual statutory salaries of teachers in public institutions, based on most prevalent qualifications, at different points in teachers' careers (in equivalent USD, using PPPs)	2017					
		Starting salary	Salary after 15 years of experience	Starting salary	Salary after 15 years of experience	Starting salary	Salary after 15 years of experience
Table D3.1a	Pre-primary	USD 70 192	USD 102 505	USD 30 229	USD 40 436	USD 29 096	USD 39 371
	Primary	USD 70 192	USD 102 505	USD 31 919	USD 44 281	USD 31 206	USD 43 486
	Lower secondary (general programmes)	USD 79 551	USD 109 734	USD 33 126	USD 46 007	USD 32 495	USD 45 472
	Upper secondary (general programmes)	USD 79 551	USD 109 734	USD 34 534	USD 47 869	USD 33 205	USD 47 615
	Organisation of teachers' working time in public institutions over the school year	2017					
		Net teaching time	Total statutory working time	Net teaching time	Total statutory working time	Net teaching time	Total statutory working time
Table D4.1	Pre-primary	**	**	1 029 hours	1 628 hours	1 068 hours	1 569 hours
	Primary	**	**	778 hours	1 620 hours	754 hours	1 553 hours
	Lower secondary (general programmes)	**	**	701 hours	1 642 hours	665 hours	1 585 hours
	Upper secondary (general programmes)	**	**	655 hours	1 638 hours	633 hours	1 572 hours
	Percentage of teachers who are 50 years old or over	2016					
Table D5.1	Primary to upper secondary	22%		35%		38%	
	Share of female teachers, in public and private institutions	2016					
Table D5.2	Primary	76%		83%		86%	
	Lower secondary	54%		69%		71%	
	Upper secondary	54%		60%		63%	
	Tertiary	35%		43%		44%	
	Average class size by level of education	2016					
Table D2.1	Primary	21		21		21	
	Lower secondary	22		23		23	

The reference year is the year cited or the latest year for which data are available.

1. OECD average includes some countries with 2015 data.

2. For some countries, data on foreign students are provided instead of international students.

3. International expenditure is aggregated with public expenditure

** Please refer to the source table for details on these data.

Cut-off date for the data: 18 July 2018. Any updates on data can be found on line at <http://dx.doi.org/10.1787/eag-data-en>.



From:

Education at a Glance 2018

OECD Indicators

Access the complete publication at:

<https://doi.org/10.1787/eag-2018-en>

Please cite this chapter as:

OECD (2018), “Luxembourg”, in *Education at a Glance 2018: OECD Indicators*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/eag-2018-57-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.