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AIM-AP

Accurate Income Measurement for the Assessment of Public Policies

Specific Targeted Research or Innovation Project

Citizens and Governance in a Knowledge-based Society

Deliverable 1.2e Public education in Ireland

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AIM-AP

Project 1: Non-cash incomes

**Non-cash Incomes from
Publicly Provided Education:
National Report for Ireland**

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1. Introduction

This report examines the distributional impact of Ireland's educational expenditures, following the methods agreed in the AIM-AP project. By applying these agreed methods to Irish data, we derive results which can be compared with those in other participating countries. In this report we describe the main features of the Irish educational system (Section 2), in order to assist in interpreting the results. Section 3 describes the basic structure of Irish public expenditure on education. The main empirical results on the distributional implications of these public expenditure are contained in Section 4.

2. The Irish Educational System

The Irish educational system is organised into three levels, as shown in Chart 1.

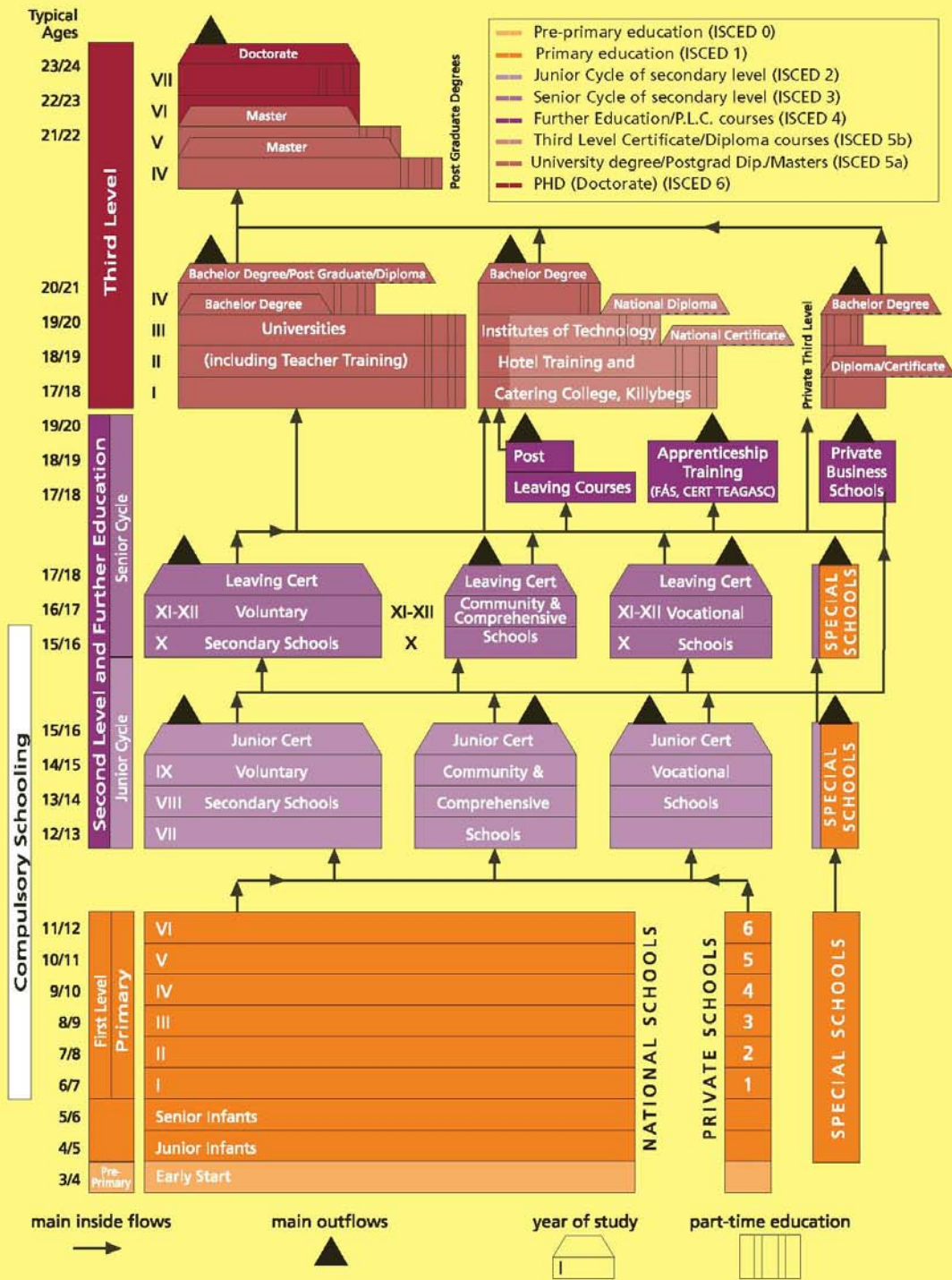
- Primary schooling operates on an eight-year cycle, typically from age 5 to age 12. Primary schooling is compulsory.¹
- Second level schooling is compulsory for three years (the “Junior Cycle” or lower secondary), with a “Senior Cycle” (upper secondary) typically taking a further three years.
- Third level education includes university primary degree courses (of 3 or 4 years duration), diploma courses of shorter duration, and postgraduate qualifications.²

We examine each of these levels in turn.

¹ Home schooling is possible, subject to assessment by the authorities.

² In recent years, the postgraduate sector has been called “fourth level”.

Education System in Ireland



Note that infant classes correspond to Pre-Primary in the International Standard Classification of Education

2.1 Primary Schooling

The “vast majority”³ of primary schools are State-funded, “all through” schools, catering for children from age 4 to age 12. Most are privately owned by the Roman Catholic church, with a smaller number owned by other religious denominations, and by Educate Together, an organisation mainly of parents promoting multidenominational education. Although most schools are privately owned, very few primary-level schools are fee-paying.

Primary schooling is compulsory from the age of 6, but entry as early as age 4 is possible and quite common. In many other countries this would be regarded as a “pre-school” age, and indeed the nomenclature of the Irish system makes it clear that pupils of this age are regarded differently: the first two years of the primary school system are referred to as Junior and Senior Infants. State funded schools follow a common national curriculum.

Pre-school care, for children aged under 5, has traditionally been privately organised and paid for. However, a cash benefit, termed an Early Childcare Subsidy was introduced in 2006 for those aged under 6. This is paid in respect of *all* children in this age category, with parents being left to decide on how this is best used – whether to assist in the purchase of childcare, or to support a parent undertaking childcare herself or himself.

2.2 Second-level education

Smyth and Hannan (2006) point to the Irish educational system as “a specific combination of a highly centralised, standardised system with a significant degree of discretion in policy and practice at the school level”. Curricula and examinations at the lower secondary (Junior Certificate) and upper secondary (Leaving Certificate) levels are nationally standardised. The Irish system is also “relatively undifferentiated, focusing on the provision of ‘general’ education rather than tailoring curricula to specific occupational niches”. (Smyth and Hannan, 2000, p. 110). While there has been some differentiation in recent years, with the introduction of Post Leaving Certificate vocational courses, and the Leaving Certificate Vocational and Applied programmes, the system is quite distinct from the highly differentiated systems of vocational education in Germany and the Netherlands. However, as Smyth and Hannan point out, “Educational outcomes are...highly differentiated hierarchically in terms of the stage at which young people leave school, the level of courses they take and

³ Department of Education and Science, 2007.

the grades they receive”. This has implications for the extent to which the children of different social groups benefit from state expenditures on education.

At second level there are three main types of school. *Secondary schools*, emphasising academic education, were established by religious (mainly Catholic) denominations from the nineteenth century onwards. Following the Vocational Education Act of 1930, local authorities established *vocational schools*, geared more towards technical and vocational subjects, and less towards academic subjects. *Community/comprehensive schools* were established in the 1960s onwards to try to bridge the gap between these two school types – but they remain a small proportion of Irish schools, rather than an attempt to “comprehensivize” the system. Smyth and Hannan (2006) point to evidence of a “remarkable degree of active selection of schools on the part of parents and pupils” tending to increase social segregation between schools.

At secondary level, there are small but significant numbers of fee-paying schools. Such schools remain in receipt of substantial state funding, with the salary costs being paid in respect of teachers based on pupil numbers. In 2004, for example, salary costs of €3m were paid, representing about 10% of the state’s salary bill for secondary school teachers.⁴

2.3 Third level education

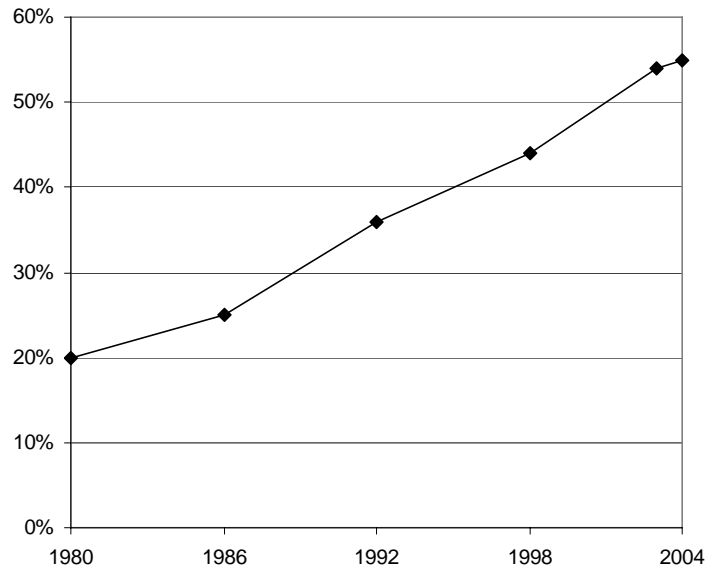
Third level education has changed markedly over the past 30 years or so. From the point of view of the distributional effect, there are three key features.

- First, participation in third level has been highly structured by social class of origin. Smyth and Hannan (2000) show that entry rates to third level have been highest for children whose parents are in the higher professional class, followed by lower professional and non-manual backgrounds. By contrast the lowest rates are for the children of manual workers, particularly the unskilled manual workers.
- Second, the participation rate has risen sharply over the past 30 years. Figure 1 shows that admission rates rose from 20% in 1980 to about 55% by 2004.

⁴ Fee paying schools comprised about 8 per cent of a total of 733 second level schools.

- Third, fees charged for undergraduate courses were abolished in the mid-1990s, with the state subsidy to third level education rising sharply in response.

Figure 1: Admission rates to higher education, 1980-2004



Source: O’Connell *et al.* (2006).

Note: The admission rate is calculated as the ratio of Irish-resident new entrants to higher education (universities, institutes of technology and teacher training colleges) to the cohort from which more than 75% of new entrants come.

The data analysed here relate to the year 2000, by which time admission rates to third level had risen to about 50%, and the “free fees initiative” was fully operational. This makes it of particular interest to examine the distributional impact of the state subsidy to third level education. Smyth and Hannan’s analysis (Table 1) finds that while admission rates rose, participation in third level remained much more likely for children of non-manual and professional parents. This could be expected to have a significant influence on the distributional impact of state expenditure in this area.

Table 1: Third level admission rates by social class, 1979 to 1997

<i>Class background:</i>	<i>1979</i>	<i>1985</i>	<i>1991</i>	<i>1997</i>
Higher professional	29.7	49.6	70.6	63.7
Lower professional	24.9	41.2	51.3	48.5
Non-manual	18.9	20.1	34.5	42.6
Skilled	8.5	16.6	22.9	23.9
Semi-skilled	7.2	13.7	20.5	23.4
Unskilled	5	4.8	7.7	17.2
Farmer	10.9	23	40.7	50.2

3. Public Expenditure on Education

The evolution of public expenditure per student in third level education is charted in Figure 2. The sharp increase in the 1995/1996 period arose as fees for undergraduate courses were abolished, and replaced by increased central government support to the third level institutions. The picture provided here of the distribution of third level expenditures takes account of this higher level of expenditure.

Figure 2: *Current public expenditure per student in third level education (constant 1995 prices)*

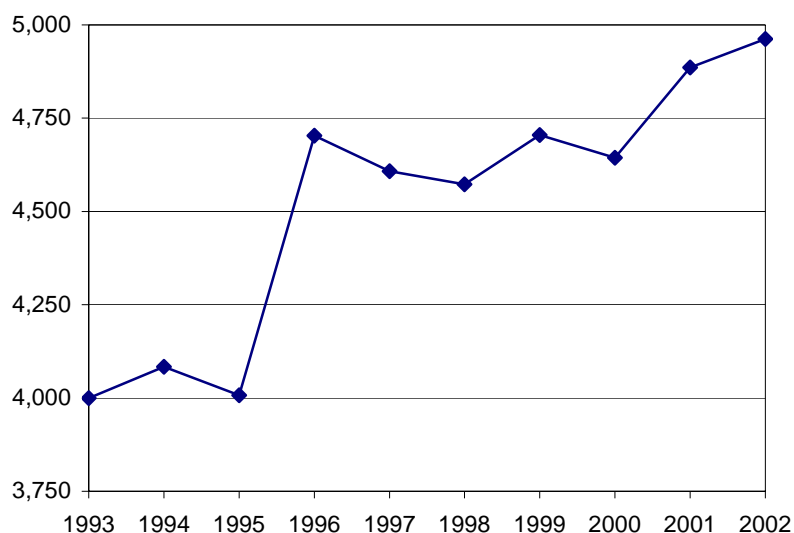


Table B shows national figures for expenditure on education, including both current expenditure and the average of investment expenditure (at 2001 prices) over the preceding 6 years. Spending at primary level was estimated at about €3,000 per annum; second level spending was about 50% higher, at about €4,500 per annum; and spending at third level was similar in both universities and institutes of technology at close to €9,000 per annum –

roughly twice the level second level or three times that of primary level. In order to maintain comparability, however, we use the OECD Education at a Glance figures in our analyses. These are rather similar to the estimates from national sources for primary and second level; but quite different at third level, where the spend per student is estimated by OECD to be similar to that for second level students, if expenditure on R&D is excluded, and no more than twice (rather than three times) the primary level if R&D expenditures are included.

4. Distributional Impact of Public Expenditure

The total expenditure on education, estimated using OECD figures for spending per student, comes to about 12 per cent of disposable income on average (Table C2 in appendix). How is this expenditure distributed?

For both primary level and second level education participation rates are very high. Compulsory education up to lower secondary level, and a high rate of transfer to the upper secondary level ensure that this is the case. As a result, the benefits of expenditure on these educational sectors flow in equal values to almost all children.⁵ Thus, Table C2 shows transfers per capita which are roughly equal in value across the first four quintiles of income – and somewhat lower for the top quintile, but only because it contains fewer children. An age-standardised analysis shows that, indeed, benefits flow equally to each quintile. Naturally this is of greater proportionate value to the lower income quintiles.

An important point is raised by Radner (1997) in terms of how such benefits should be accounted for when measuring the welfare of different groups. He notes that “Some types of noncash income have needs associated with them that are unmeasured in the usual equivalence scales”. Educational benefits are a clear-cut case in point. Equivalence scales are used to adjust the incomes of households to take account of their different needs. However the equivalence scales in use are not designed to take account of children’s needs for education – precisely because modern economies have a free, compulsory education system in place to deal with these needs. But to include the resources used in that system as part of income, without taking into account the needs which gave rise to it would not make sense. Equivalence scales generally in use, whether estimated on expenditure data, drawn from official sources, subjective questions or statistical procedures are simply not designed to do

⁵ Those who drop out after the junior cycle of secondary education do not, of course, benefit from the upper secondary system.

this job. Indeed, the adjustment required can be seen as a “flat rate” one, where the need for compulsory education precisely matches the expenditure on it.

For this reason, we pay particular attention to results concerning the non-compulsory part of the education system, where individuals exercise a choice over their participation. Table 2, below (drawn from Table D in the appendix) illustrates the importance of this point.

Table 2: Impact of compulsory and non-compulsory elements of the education system on indices of inequality and poverty.

Inequality and poverty indices	Proportional change in %		
	All expenditure	Compulsory	Non-compulsory
Gini	-9.6%	-7.9%	-1.7%
Atkinson 0.5	-16.8%	-14.2%	-3.2%
Atkinson 1.5	-11.6%	-91.1%	-1.9%
FGT0	-23.3%	-21.0%	-3.3%
FGT1	-15.7%	-14.6%	-3.4%
FGT2	-13.8%	-13.8%	-5.3%

The impact of including the value of the full system is strongly equalising, as measured by indices of inequality and relative income poverty. Each of these is reduced by between 10 and 20 per cent on its initial value. But given that there are needs for compulsory education which have not been taken into account, a focus on the impact of the non-compulsory elements of the system may be more appropriate. The impact here is equalising, but much more limited: a reduction of between 2 and 5 per cent in the indices is observed.

Bibliography

- Callan, T. (1992) “Who benefits from public expenditure on education?”, ESRI Working Paper No. 32.
- Department of Education and Science (2004) *A Brief Description of the Irish Education System*, Dublin: Department of Education and Science.
- Department of Education and Science (2006) *An Overview of Education Statistics and Statistical Reports of the Department of Education and Science*, Dublin: Department of Education and Science and www.education.ie

- O'Connell, P., D. Clancy and S. McCoy (2006) *Who Went to College in 2004? A National Survey of New Entrants to Higher Education*, Dublin: Higher Education Authority.
- OECD (2006) *Education at a Glance 2006*, Paris: OECD.
- Radner, D. (1997)., "Noncash Income, Equivalence Scales, and the Measurement of Economic Well-Being", *The Review of Income and Wealth*, 43(1), 71-88
- Smyth, E. and D. Hannan (2000) "Education and Inequality" in B. Nolan, P. O'Connell and C. T. Whelan (eds.) *Bust to Boom: The Irish Experience of Growth and Inequality*, Dublin: IPA and ESRI.

Appendix

Detailed tables on the distributional impact of educational expenditures

Table A. The structure of the Irish education system

• Primary education		
1. Basic education: Primary school Duration of studies: 8 years	Ages 4-12	Compulsory (from age 6)
• Secondary education		
1. Lower secondary education: Junior Cycle Duration of studies: 3 years	Ages 12-15	Compulsory
2. Upper secondary education: Senior Cycle Duration of studies : 2-3 years	Ages 16-18	Non- compulsory
Classification of Secondary Schools a. Secondary (56% of students) b. Vocational (29% of students) c. Community & Comprehensive (15% of students)		
• Tertiary education		
1. Higher Education Institutions : Universities Duration of studies : 4-6 years		
2. Institutes of Technology and other Technological Colleges Duration of studies : 2-4 years		
3. Others include Teacher Training Colleges and Religious Institutes		

Table B. Number of students and cost structure of the Irish education system, 2000-2001

	Students		Current Spending	Investment Spending	Total Spending	Average Spending per Student (€)	
	Students	%	€(millions)			Current	Total
Primary education							
All schools	444,782	100.0	1,281.7	74.6	1,350.6	2,881.6	3,049.3
Public schools	439,560	98.8					
Private schools	5,222	1.2					
Secondary education							
All schools	349,274	100.0	1,495.8	95.7	1,584.2	4,282.6	4,556.6
Public schools	346,403	99.2					
Private schools	1,729	0.5					
Third Level							
All institutions	126,300	100.0	1,037.2	95.0	1,125.0	8,212.2	8,964.2
Universities	69,254	54.8	585.1	35.5	618.0	8,449.2	8,962.0
Technological Institutes	48,360	38.3	362.3	59.5	417.3	7,492.5	8,722.6
Others	8,686	6.9	12.5	0.0	12.5	1,441.7	1,441.7

Notes: Investment Spending is average of the preceding 6 years in 2001 euro

Sources: *An Overview of Education Statistics and Statistical Reports of the Department of Education and Science*, www.education.ie

Table C1: Population shares of beneficiaries classified by quintile of disposable income

	Population share of beneficiaries					Beneficiaries as % of potential beneficiaries				
	A	B	C	D1	D2	E	F	G	H1	
	Primary	Secondary	Tertiary	All	Compulsory	Primary	Secondary	Tertiary	All	
1 (bottom)	21.2%	22.6%	8.9%	20.3%	21.4%	94%	84%	36%	83%	
2	24.9%	28.0%	23.5%	26.0%	26.3%	90%	86%	48%	81%	
3	23.5%	19.7%	19.7%	21.5%	22.0%	103%	74%	34%	75%	
4	19.0%	16.4%	28.6%	19.1%	18.2%	98%	71%	49%	75%	
5 (top)	11.3%	13.3%	19.3%	13.1%	12.1%	97%	92%	40%	76%	
	100.0%	100.0%	100.0%	100.0%	100.0%	96%	81%	42%	78%	

POPULATION SHARES OF BENEFICIARIES (Students)

A: Primary Education; B: Secondary Education; C: Tertiary Education; D1: All

D2: Compulsory (i.e., up to youngest age at which it is legal to leave school (school leaving age - SLA))

% POTENTIAL BENEFICIARIES

Actual beneficiaries / potential beneficiaries (all persons in particular age brackets)

E: Primary Education; F: Secondary Education; G: Tertiary Education; H1: All (use as many categories as possible)

H2: Compulsory (i.e., up to youngest age at which it is legal to leave school (school leaving age - SLA))

	Population share of beneficiaries, excluding					Beneficiaries as % of potential beneficiaries				
	A	B	C	D1	D2	E	F	G	H1	H2
	Primary	Secondary	Tertiary	All	Compulsory	Primary	Secondary	Tertiary	All	Compulsory
1 (bottom)	21.2%	22.0%	9.3%	20.3%	21.4%	94%	84%	33%	82%	94%
2	24.7%	28.4%	24.6%	26.2%	26.0%	90%	86%	43%	80%	95%
3	23.5%	19.9%	19.2%	21.6%	22.1%	103%	75%	29%	74%	100%
4	19.3%	16.4%	27.3%	18.9%	18.3%	98%	71%	41%	72%	97%
5 (top)	11.3%	13.3%	19.7%	13.0%	12.1%	97%	92%	36%	75%	103%
	100.0%	100.0%	100.0%	100.0%	100.0%	96%	81%	37%	77%	97%

Table C2: Income shares and increases in resources associated with inclusion of educational expenditures

TABLE C2 (excluding RD)

Decile	Income share		% Increase in resources					Mean transfer per capita (€ per month)				
	A	B	C	D	E	F1	F2	G	H	I	J1	J2
1 (bottom)	7.82	8.54	14.6%	17.2%	2.0%	33.7%	28.8%	156	184	21	362	309
2	12.88	14.1	8.4%	11.9%	3.5%	23.9%	17.9%	183	258	77	518	388
3	17.89	18.25	5.6%	5.8%	1.8%	13.2%	10.2%	167	173	54	394	303
4	23.57	23.34	3.5%	3.5%	1.8%	8.8%	6.4%	126	129	66	321	233
5 (top)	37.84	35.77	1.4%	1.8%	0.7%	3.9%	2.8%	73	94	36	203	148
All	100.0	100.0	4.7%	5.6%	1.7%	11.9%	9.1%	141	168	51	360	276

INCOME SHARES

A: Baseline distribution (equivalised disposable income per capita)

B: Distribution of equivalised (disposable income per capita + public education transfers)

% Increase in disposable income

total transfers / total disposable income (per decile and education level)

C: Primary Education; D: Secondary Education; E: Tertiary Education; F1: All F2: Compulsory

Mean transfer per capita

total transfers / total number of individuals (per decile and education level)

G: Primary Education; H: Secondary Education; I: Tertiary Education; J1: All J2: Compulsory

TABLE C2a (excluding students living away from their parent(s)) (excluding RD)

Decile	Income share		% Increase in resources					Mean transfer per capita (€ per month)				
	A	B	C	D	E	F1	F2	G	H	I	J1	J2
1 (bottom)	8.71	10.31	18.4%	23.2%	3.2%	44.9%	37.5%	265	334	46	646	539
2	13.82	15.01	9.6%	12.8%	4.0%	26.5%	20.2%	247	329	103	680	517
3	18.29	18.33	6.6%	6.8%	1.7%	15.1%	12.2%	213	219	54	486	392
4	23.13	22.76	4.6%	5.1%	2.1%	11.7%	8.5%	179	198	80	457	331
5 (top)	36.05	33.58	2.4%	2.8%	0.9%	6.0%	4.6%	130	155	48	334	257
All	100.0	100.0	6.2%	7.4%	2.0%	15.6%	12.2%	207	247	66	520	407

TABLE C2 (including RD)

Decile	Income share		% Increase in resources					Mean transfer per capita (€ per month)				
	A	B	C	D	E	F1	F2	G	H	I	J1	J2
Bottom	7.82	8.43	14.6%	17.2%	2.6%	34.3%	28.8%	156	184	27	368	309
2	12.88	14.20	8.4%	11.9%	4.6%	24.9%	17.9%	183	258	99	540	388
3	17.89	18.27	5.6%	5.8%	2.3%	13.7%	10.2%	167	173	69	409	303
4	23.57	23.36	3.5%	3.5%	2.3%	9.3%	6.4%	126	129	85	340	233
Top	37.84	35.74	1.4%	1.8%	0.9%	4.1%	2.8%	73	94	46	213	148
All	100.0	100.0	4.7%	5.6%	2.2%	12.4%	9.1%	141	168	65	374	276

INCOME SHARES

A: Baseline distribution (equivalised disposable income per capita)

B: Distribution of equivalised (disposable income per capita + public education transfers)

% Increase in disposable income

total transfers / total disposable income (per decile and education level)

C: Primary Education; D: Secondary Education; E: Tertiary Education; F1: All F2: Compulsory

Mean transfer per capita

total transfers / total number of individuals (per decile and education level)

G: Primary Education; H: Secondary Education; I: Tertiary Education; J1: All J2: Compulsory

TABLE C2 (excluding students living away from their parent(s), (including RD))

Decile	Income share		% Increase in resources					Mean transfer per capita (€ per month)				
	A	B	C	D	E	F1	F2	G	H	I	J1	J2
1 (bottom)	8.71	10.30	18.4%	23.2%	4.1%	45.8%	37.5%	265	334	60	659	539
2	13.82	15.04	9.6%	12.8%	5.2%	27.7%	20.2%	247	329	133	710	517
3	18.29	18.38	6.6%	6.8%	2.2%	15.6%	12.2%	213	219	70	502	392
4	23.13	22.76	4.6%	5.1%	2.7%	12.3%	8.5%	179	198	104	480	331
5 (top)	36.05	33.50	2.4%	2.8%	1.1%	6.3%	4.6%	130	155	63	348	257
All	100.0	100.0	6.2%	7.4%	2.6%	16.2%	12.2%	207	247	86	540	407

Table D

RD is excluded

Inequality and poverty indices	Value of the Index				Proportional change in %					
	A	B1	B2	B3	C	D	E	F1	F2	F3
	baseline	plus transf.	comp.	non-comp.	Primary	Secondary	Tertiary	(B1-A)/A	(B2-A)/A	(B3-A)/A
Gini	0.302	0.273	0.278	0.297	-4.6%	-5.0%	-0.7%	-9.6%	-7.9%	-1.7%
Atkinson 0.5	0.074	0.062	0.063	0.072	-8.3%	-9.1%	-1.1%	-16.8%	-14.2%	-3.2%
Atkinson 1.5	0.247	0.219	0.022	0.242	-6.5%	-6.4%	-0.4%	-11.6%	-91.1%	-1.9%
FGT0	0.219	0.168	0.173	0.212	-8.1%	-13.2%	-1.3%	-23.3%	-21.0%	-3.3%
FGT1	0.053	0.045	0.045	0.051	-10.2%	-11.2%	0.4%	-15.7%	-14.6%	-3.4%
FGT2	0.019	0.016	0.016	0.018	-12.2%	-12.2%	0.5%	-13.8%	-13.8%	-5.3%

Table D: RD is excluded & 3rd level student living away from home are excluded

Inequality and poverty indices	Value of the Index				Proportional change in %					
	A	B1	B2	B3	C	D	E	F1	F2	F3
	baseline	plus transf.	comp.	non-comp.	Primary	Secondary	Tertiary	(B1-A)/A	(B2-A)/A	(B3-A)/A
Gini	0.302	0.273	0.278	0.297	-4.6%	-5.0%	-0.7%	-9.6%	-7.9%	-1.7%
Atkinson 0.5	0.074	0.062	0.064	0.072	-8.4%	-9.2%	-1.2%	-16.9%	-14.3%	-3.2%
Atkinson 1.5	0.248	0.219	0.223	0.243	-6.5%	-6.3%	-0.5%	-11.6%	-10.1%	-2.0%
FGT0	0.220	0.169	0.174	0.210	-8.1%	-13.3%	-1.9%	-23.1%	-21.0%	-4.5%
FGT1	0.053	0.045	0.045	0.051	-10.4%	-11.7%	-0.4%	-15.8%	-14.7%	-4.2%
FGT2	0.019	0.016	0.016	0.018	-12.2%	-12.2%	-0.5%	-13.8%	-13.8%	-5.8%

Table D: RD is included

Inequality and poverty indices	Value of the Index				Proportional change in %					
	A	B1	B2	B3	C	D	E	F1	F2	F3
	baseline	plus transf.	comp.	non-comp.	Primary	Secondary	Tertiary	(B1-A)/A	(B2-A)/A	(B3-A)/A
Gini	0.302	0.273	0.278	0.296	-4.6%	-5.0%	-0.7%	-9.6%	-7.9%	-2.0%
Atkinson 0.5	0.074	0.061	0.063	0.071	-8.3%	-9.1%	-1.2%	-16.9%	-14.2%	-3.4%
Atkinson 1.5	0.247	0.219	0.022	0.243	-6.5%	-6.4%	-0.4%	-11.5%	-91.1%	-1.9%
FGT0	0.219	0.168	0.173	0.210	-8.1%	-13.2%	-1.7%	-23.3%	-21.0%	-4.1%
FGT1	0.053	0.044	0.045	0.051	-10.2%	-11.2%	-0.2%	-16.1%	-14.6%	-3.4%
FGT2	0.019	0.016	0.016	0.018	-12.2%	-12.2%	0.0%	-14.3%	-13.8%	-5.3%

Table D: RD is included & 3rd level students living away from home are excluded

Inequality and poverty indices	Value of the Index				Proportional change in %					
	A	B1	B2	B3	C	D	E	F1	F2	F3
	baseline	plus transf.	comp.	non-comp.	Primary	Secondary	Tertiary	(B1-A)/A	(B2-A)/A	(B3-A)/A
Gini	0.302	0.273	0.278	0.297	-4.6%	-5.0%	-0.7%	-9.6%	-7.9%	-1.7%
Atkinson 0.5	0.074	0.062	0.064	0.072	-8.4%	-9.2%	-1.3%	-17.0%	-14.3%	-3.4%
Atkinson 1.5	0.248	0.219	0.223	0.243	-6.5%	-6.3%	-0.4%	-11.6%	-10.1%	-1.9%
FGT0	0.220	0.169	0.174	0.211	-8.1%	-13.3%	-2.3%	-23.1%	-21.0%	-4.0%
FGT1	0.053	0.044	0.045	0.051	-10.4%	-11.7%	-0.8%	-16.2%	-14.7%	-4.0%
FGT2	0.019	0.016	0.016	0.018	-12.2%	-12.2%	-0.5%	-13.8%	-13.8%	-5.3%

Table E: R&D excluded, all students included

	A	B	C	D	E	F	G	H	I
	%	%	%	% change			% change	%	%
Household type									
Older person/couple	16.6	84	78	2.1	0.161	0.157	-2.5	17.0	20.2
Adult only	14.5	130	121	2.7	0.134	0.126	-6.0	12.4	14.2
Couple with child under 18	49.5	98	104	16.6	0.143	0.103	-28.0	45.1	39.5
Monoparental household	6.3	68	75	22.5	0.122	0.092	-24.6	4.9	4.5
Other types	13.1	111	103	2.6	0.164	0.158	-3.7	13.7	16.1
% within group inequality					0.146	0.122		93.1	94.5
% between group inequality					0.011	0.007		6.9	5.5
SEG of HOH									
Manual worker	26.3	100	101	11.5	0.096	0.069	-28.1	16.1	14.1
Non-manual worker	26.5	128	127	9.2	0.091	0.067	-26.4	15.4	13.8
Self-employed	18.9	106	108	12.1	0.240	0.190	-20.8	28.9	27.9
Unemployed	3.0	53	57	19.1	0.117	0.084	-28.2	2.2	2.0
Pensioner	12.1	82	76	2.7	0.147	0.142	-3.4	11.4	13.4
Other	13.1	62	64	12.8	0.144	0.133	-7.6	12.0	13.5
% within group inequality					0.135	0.109		86.0	84.6
% between group inequality					0.022	0.020		14.0	15.4
Education level of HOH									
Primary or less	35.2	78	78	10.1	0.133	0.116	-12.8	29.8	31.7
Lower secondary	28.0	94	96	12.0	0.114	0.088	-22.8	20.4	19.1
Upper secondary	18.9	104	105	11.4	0.119	0.084	-29.4	14.3	12.3
Tertiary	17.8	148	145	7.5	0.145	0.121	-16.6	16.5	16.7
% within group inequality					0.127	0.103		81.0	79.8
% between group inequality					0.030	0.026		19.0	20.2
Age category of household member									
Under 25	38.7	95	99	15.9	0.139	0.102	-26.6	34.2	30.6
25 thru 64	50.1	109	107	7.7	0.153	0.129	-15.7	48.8	50.1
65+	11.2	77	71	1.1	0.175	0.174	-0.6	12.5	15.2
% within group inequality					0.150	0.124		95.6	95.8
% between group inequality					0.007	0.005		4.4	4.2
All	100	100	100	10.2	0.157	0.129	-17.8	100	100

A: Population share

B, C: Mean equivalent income relative to national mean

D: % increase in mean equivalent income

E, F: Mean log deviation (2nd Theil index) for distributions A and B

G: % change in inequality

H, I: % contribution to aggregate inequality, distributions A and B

Table E: *R&D excluded, students living away from parental home excluded*

	A	B	C	D	E	F	G	H	I
	%	%	%	%	% change		% change	%	%
Household type									
Older person/couple	16.6	84	78	2.1	0.161	0.157	-2.5	17.1	20.1
Adult only	14.5	130	121	2.6	0.134	0.127	-5.2	12.3	14.1
Couple with child under 18	49.6	98	104	16.6	0.143	0.103	-28.0	45.2	39.3
Monoparental household	6.3	68	75	22.4	0.122	0.092	-24.6	4.9	4.4
Other types	13.0	111	103	2.4	0.166	0.160	-3.6	13.8	16.1
% within group inequality					0.146	0.122		93.2	94.0
% between group inequality					0.011	0.008		6.8	6.0
SEG of HOH									
Manual worker	26.4	100	101	11.5	0.096	0.069	-28.1	16.1	14.0
Non-manual worker	26.5	128	127	9.1	0.091	0.067	-26.4	15.3	13.6
Self-employed	19.0	106	108	12.0	0.240	0.190	-20.8	29.0	27.7
Unemployed	3.0	53	57	19.1	0.117	0.084	-28.2	2.2	1.9
Pensioner	12.2	82	76	2.7	0.147	0.142	-3.4	11.4	13.3
Other	13.0	62	63	12.5	0.144	0.132	-8.3	11.9	13.2
% within group inequality					0.135	0.109		86.0	83.8
% between group inequality					0.022	0.021		14.0	16.2
Education level of HOH									
Primary or less	35.3	78	78	10.1	0.133	0.116	-12.8	29.9	31.5
Lower secondary	28.1	94	96	12.0	0.114	0.089	-21.9	20.4	19.2
Upper secondary	19.0	104	105	11.4	0.118	0.084	-28.8	14.3	12.3
Tertiary	17.6	149	145	7.3	0.146	0.122	-16.4	16.4	16.5
% within group inequality					0.127	0.103		81.0	79.5
% between group inequality					0.030	0.027		19.0	20.5
Age category of household member									
Under 25	38.8	95	100	15.9	0.140	0.102	-27.1	34.6	30.4
25 thru 64	49.9	109	107	7.7	0.154	0.129	-16.2	49.0	49.6
65+	11.3	77	71	1.1	0.175	0.174	-0.6	12.6	15.1
% within group inequality					0.151	0.124		96.1	95.1
% between group inequality					0.006	0.006		3.9	4.9
All	100	100	100	10.1	0.157	0.130	-17.2	100	100

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Table E: *R&D included, all students included*

	A	B	C	D	E	F	G	H	I
Household type	%	%	%	% change			% change	%	%
Older person/couple	16.6	84	78	1.9	0.161	0.157	-2.5	17.0	20.2
Adult only	14.5	130	121	2.1	0.134	0.128	-4.5	12.4	14.4
Couple with child under 18	49.5	98	104	16.2	0.143	0.104	-27.3	45.1	39.9
Monoparental household	6.3	68	75	22.0	0.122	0.092	-24.6	4.9	4.5
Other types	13.1	111	103	2.3	0.164	0.158	-3.7	13.7	16.1
% within group inequality					0.146	0.123		93.1	95.1
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Manual worker	26.3	100	101	11.3	0.096	0.069	-28.1	16.1	14.1
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Self-employed	18.9	106	108	11.6	0.240	0.191	-20.4	28.9	28.0
Unemployed	3.0	53	57	18.7	0.117	0.082	-29.9	2.2	1.9
Pensioner	12.1	82	76	2.4	0.147	0.142	-3.4	11.4	13.4
Other	13.1	62	63	12.0	0.144	0.131	-9.0	12.0	13.3
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Upper secondary	18.9	104	105	11.0	0.119	0.084	-29.4	14.3	12.3
Tertiary	17.8	148	145	7.0	0.145	0.122	-15.9	16.5	16.9
% within group inequality					0.127	0.103		81.0	80.0
% between group inequality					0.030	0.026		19.0	20.0
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