

The Expansion of Third level education and Intergenerational Transmission of educational attainment in high-income EU countries

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Since 1992, and taking population growth into consideration, every high-income EU member markedly increased the share of the working age adult population with third level qualifications



Executive Summary

With the exceptions of Germany, the Netherlands and Sweden, the absolute number of working age adults (20-64) with tertiary education in high-income EU countries is at least twice what it was in the nineties, though the absolute increase was second largest in Germany (from 9 to almost 14 million).

Since 1992, and taking population growth into consideration, every high-income EU member markedly increased the share of the working age adult population with third level qualifications. Germany is the only country where male graduates outnumber female graduates. For the most part this was not the case in 1992 or 1997, with the exceptions of Portugal, France and Sweden. Increasing numbers of female graduates in every country since the nineties have outpaced the growing numbers of male graduates, often markedly so. In Italy for instance, the number of female graduates increased by 2.9 million between 1992 and 2019 but only 1.6 million for males.

The share of highly educated Irish, Finish and UK women increased by approximately 30 percentage points and these are now among the countries where women are most likely to be highly educated (47.9%, 49.2% and 45.5%). Swedish women in 1997 were most likely to have third level qualifications at 26.8% and the share has subsequently increased to 48.5%. This is has the second highest share of tertiary educated females of working age in 2019, behind Finland.

Every country in the sample (13 countries) has considerably higher shares of tertiary graduates among adults under 35 in 2019 than they did in the 1990s; over 3 times as many in Italy, almost 3 times as many in Denmark, Ireland and Spain and over twice as many in Portugal and the UK. Even when controlling for population we find a strong trend upwards in every country.

The share of tertiary graduates in Italy among young people is the lowest at 22.2%, with Germany slightly higher at 25.9%. According to the Labour Force Survey (LFS) data they are the only two countries with shares below 30% in the sample. Gender gaps in tertiary education attainment persist in the younger group with higher rates for females in every country. Young Italian men are least likely to have attained a third level education at 17.4%. While females already had higher rates of third level education for under 35s at the beginning of the time series in most countries (except the UK and Germany), the gap has since widened considerably with the partial exception of Germany, where the gap has only widened marginally.

By social origin (Father's education level) the Survey on Income and Living Conditions (SILC) data show similar trends almost across the board. In line with LFS data, Ireland has the highest share of third level graduates in the core working age adult population and this applies across all three broad categories of father's education. In every country, adults whose fathers were in the ISCED 0,1,2 (relatively low levels of formal educational attainment) and ISCED 3,4 (mid-range of formal educational attainment) categories

were more likely to have attained some kind of third level qualification in 2019, than in 2005. As such, there has been a narrowing of the gap in third level education between those coming from households with fathers in the third-level category and both other categories with the exceptions of Germany and Austria. Growth in the share of third level graduates whose fathers were also highly educated has been slower, (from a higher base) with the exception of Sweden where the share fell slightly (63.0 to 61.4%). In Belgium, the estimates are broadly equal in 2005 and 2019 (79.4 v 79.5%).

In every country, in all three years, the likeliness of having a third level qualification is highest for those with a father in the same bracket, second most likely for those whose father was in the 'middle skill/education' bracket and least likely for those whose fathers' highest level of formal education was in ISCED 0,1 or 2.

The third level educational gap between adults with fathers in the lowest relative to the highest brackets of formal education narrowed most in 14 years in Ireland (19.0 pp), France (13.2 pp) and Sweden (9.7 pp), increasing by 9.9 percentage points in Austria and 0.4 in Portugal. In Ireland for instance, an estimated 24% of adults (25-59) whose fathers were in the low bracket of formal education had third level qualifications. By 2019, this was 46.5%.

The Irish data show the generational transmission of educational advantage to be highest in the sample in 2005, 2011 and 2019; in 2019 85.8% of Irish adults with highly educated parents have attained some kind of tertiary qualification compared to 82.3% in 2005. In 2019, Belgium, the Netherlands, Spain, France and Portugal also had high relative shares of transmission of educational advantage (79.4%, 76.7%, 76.5%, 75.8% and 75.3%). The latest available data for the UK (2011) shows a similar share (75.5%).

Transmission of educational disadvantage (from father's in the low attainment bracket to adults currently in the low attainment bracket) is highest in 2019 in Portugal (52.5%), Spain (44.8%), Italy (42.7%) though all have improved since 2005 (notably in Portugal, where in 2005 if an individual adult's father had a low level of education, there was a 75% chance their adult child would have too, an improvement of 22.5 pp).

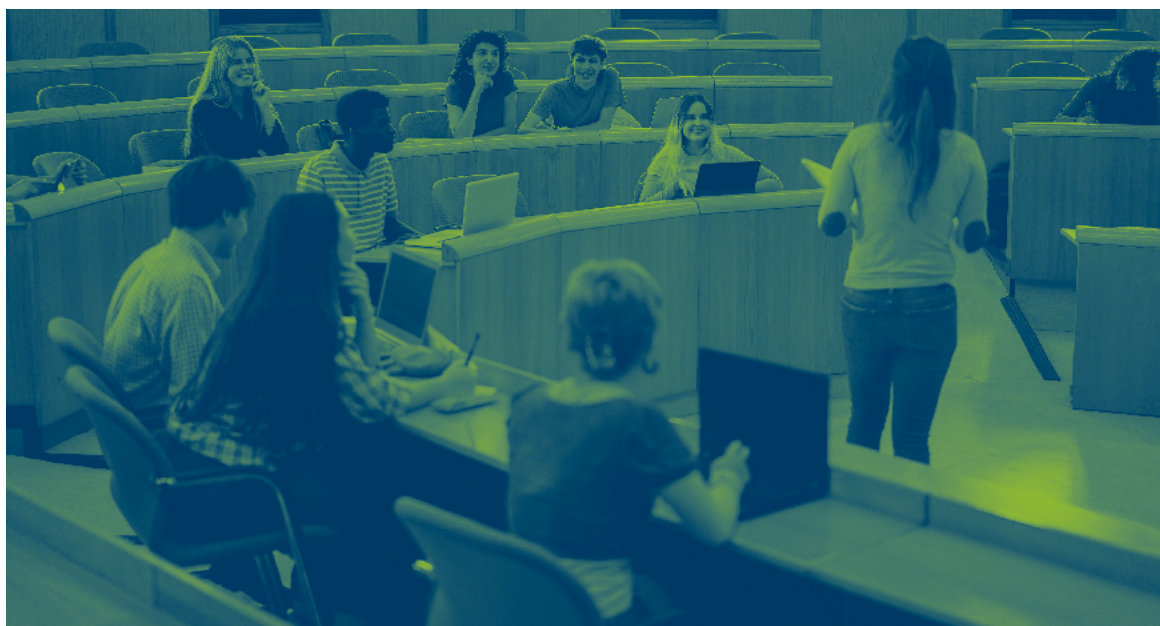


Introduction

The expansion of third level education is considered by some a policy goal in itself with inherent value that goes beyond narrow considerations related to work and material living standards. From an economic perspective, workers with higher education levels have higher earnings potential and contribute to higher productivity in firms. On a macro level, more highly-educated workers are associated with higher value-added activities, productivity, competitiveness and growth. Third level educational attainment is also considered an equaliser of opportunities between individuals of different social backgrounds and an important vehicle for social mobility. That these are achievable goals is important for social cohesion in unequal societies where narratives around meritocracy legitimise unequal outcomes.



In this report I examine trends in the expansion of third level education and third level attainment by social origin (proxied by father's education level) in 13 high-income EU member states with GDP per capita above €20,000 in 2019 and with a population of 1 million or more who became members in or before 1995; Belgium, Denmark, Germany, Ireland, Spain, France, Italy, Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom. For educational expansion I have taken the data from the EU Labour Force Survey ([lfsa_pgaed](#)). In addition, ad-hoc modules of the Survey on Income and Living Conditions (SILC) in 2005, 2011 and 2019 provide detail on intergenerational transmission of educational attainment. The analysis continues with trends in third level educational attainment by Father's education between 2005 and 2019.



The International Standard Classification of Education (ISCED) is designed by UNESCO for cross country comparison of education levels and qualifications. Although there are eight categories in the current breakdown, time series analysis is often conducted by grouping into three wider categories, not least to take account of a revision to the categories in 2011¹. Early childhood, primary and lower secondary attainment (ISCED 0-2) require the least amount of training in years, upper secondary and post-secondary non-tertiary education (ISCED 3-4) are considered ‘middle-skill/educated’ and short-cycle tertiary education through to doctoral level (ISCED 5-8) are in the ‘high-skill/high-education’ category (for additional note see appendix) and generally speaking are minimum entry requirements for occupations with the highest potential productivity and relative earnings potential. On a national level higher rates of highly skilled workers are associated with higher productivity, higher growth and higher living standards.

It is this last group that I consider here. Programmes at ISCED level 5 (short-cycle), 6 (Bachelor’s) or 7 (Master’s) require completion of an ISCED level 3 that give direct access to first tertiary education programmes. Access to ISCED level 5+ programmes may also be possible through attainment of an ISCED level 4. In addition to qualification requirements, entry into education programmes at these levels may depend on subject choice and/or grades achieved at ISCED level 3 or 4. It may also be necessary to take and succeed in entrance examinations.

¹ ISCED-11
 0. Early childhood education
 1. Primary education
 2. Lower secondary education
 3. Upper secondary education
 4. Post-secondary non-tertiary education
 5. Short-cycle tertiary education
 6. Bachelor’s or equivalent level
 7. Master’s or equivalent level
 8. Doctoral or equivalent level

Tertiary Education in high-income EU countries, (ISCED 5–8)

All data referred to in this section is from the EU Labour Force Survey, the largest sample survey of European households. Other than in Germany, the Netherlands and Sweden, the number of working age adults (20-64) with tertiary education is at least double what it was in the nineties. The absolute increase was second largest in Germany (in the region of an additional 5 million between 1992 and 2019 to a total of almost 14 million) (Table 1). France had the largest absolute increase (almost 8 million since 1997). In Ireland, the number of tertiary graduates is four times what it was in 1992 (316,000 vs 1.3 million). Spain, Italy and Portugal have all trebled their number. The number of third level graduates in the UK is also almost 3 times what it was in 1992, marking an increase of over 10 million to 16.5 million.

Since 1992, and taking population growth into consideration, every high-income EU member meaningfully increased the share of the working age adult population with third level qualifications (Table 4). The Liberal economies of Ireland and the UK saw the largest relative gains respectively (from 16.9% to 44.0% and 17.4% to 43.2%) and in 2019 had the highest overall shares. Numbers in Finland also increased strongly (from 19.0% in 1997 to 42.1%) and along with Sweden (41.3%) Finland has among the highest shares of graduates in the working age population. Italy has by a large margin the lowest share of tertiary graduates at 18.8% in 2019, with Portugal (25.9%) and Germany (28.0%) also relatively low. In Portugal, Sweden and the UK, over half this growth has occurred since 2007.

Germany is the only country where male graduates outnumber female graduates, with a large gap of approximately 20%, while the numbers for the genders in Austria are effectively equal (Tables 2, 3). In 1992/1997, this was however not the case for the most part, with the exceptions of Portugal, France and Sweden. The increasing numbers of female graduates since the nineties have outpaced the growing numbers of male graduates in every country, often markedly so. In Italy for instance, the number of female graduates increased by 2.9 million between 1992 and 2019, whereas it was only 1.6 million for men. In every country other than Austria, which also had relative parity between genders in 1997, the number of female graduates grew 30% or more ahead of the number of males over the same period. The expansion of third level education in Spain (which experienced one of the largest increases albeit from a low base of 12.6% in 1992 to 37.4% in 2019) was also driven disproportionately by female graduates.

In 2019, there was an almost 30 ppt difference in the share of highly educated adult women (11.6% to 40.3%), amounting to an absolute increase from 1.3 million to 5.7 million (now 10.7 million in total in Spain) (Table 4). The share of highly educated Irish, Finish and UK women also increased by approximately 30 pp and are now also among the countries where women are most likely to be highly educated (47.9%, 49.2% and 45.5%). Swedish women in 1997 were most likely to have third level qualifications at 26.8% and with growth of 20 pp to 48.5%, has the second highest share of tertiary educated females of working age in 2019, behind Finland.

Table 1 Population by educational attainment level, Tertiary (levels 5–8), 20–64, '000

	1992	1997	2002	2007	2012	2019
Belgium	1214.5	1501.7	1669.7	1969.8	2262.2	2630.9
Denmark	528.9	739.7	872.5	904.1	1001.8	1213
Germany	8810.7	10251.3	9981	11036.8	12677.1	13855.1
Ireland	316.4	464.4	564.3	880.3	1066.1	1274.2
Spain	2876	4619	6347.7	8188.7	9258.4	10671.5
France		6032.1	8117.1	9554.1	10995.9	13708.7
Italy	2109.3	2579.4	3394.1	4620.4	5436.9	6693.9
Netherlands		2126.9	2288.8	2771.3	3104	3797
Austria		372	779.4	804.6	949.1	18002
Portugal	557.2	606.8	569.9	841.5	1160.7	1568.7
Finland		586.3	933.2	1049.7	1149.3	1313.4
Sweden		1291.9	1286.5	1570.2	1831.4	2408.4
UK	5858.6	7551.2	8693.2	10775.7	13695.8	16549.4

Table 2 Population by educational attainment level, Tertiary (levels 5–8), 20–64, '000, M

	1992	1997	2002	2007	2012	2019
Belgium	613.7	726.7	809.7	929.2	1042.1	1175
Denmark	265.2	371.7	411.7	417.9	428.5	528.4
Germany	5647.9	6419.5	5991.4	6291.8	6818.5	7529.5
Ireland	164.2	230.5	265	405.5	478.9	576.6
Spain	1539.8	2345	3156.4	3993.3	4382.1	4914.5
France	:	2899.3	3807.4	4396.8	5040.2	6161.4
Italy	1184	1353.1	1703.8	2079.8	2357.2	2825.1
Netherlands	:	1193.8	1260.6	1457.3	1586.2	1856.9
Austria	:	210.8	414.2	461	508.5	900.5
Portugal	241.8	254.7	210.4	323.9	461.9	610.4
Finland	:	298.3	417.4	450.8	482.9	557.1
Sweden	:	612.1	562.5	677.8	781.8	1024.9
UK	3245.6	4104.4	4477	5397.9	6583	7764.1

2 At this level of aggregation data are considered as comparable over time for all available countries (i.e. no significant level shift breaks) except Austria and Estonia:

The level shift break in Austria is due to the reclassification of a programme spanning levels: the qualification acquired upon successful completion of higher technical and vocational colleges is allocated in ISCED 2011 to ISCED level 5; under ISCED 1997 the same qualification was reported on ISCED level 4, but earmarked as equivalent to tertiary education.

Table 3 Population by educational attainment level, Tertiary (levels 5–8), 20–64, '000, F

	1992	1997	2002	2007	2012	2019
Belgium	600.8	775	860	1040.6	1220.2	1455.8
Denmark	263.7	368	460.8	486.2	573.3	684.6
Germany	3162.8	3831.8	3989.5	4745	5858.6	6325.6
Ireland	152.1	233.9	299.2	474.8	587.1	697.6
Spain	1336.2	2274	3191.2	4195.3	4876.3	5757
France		3132.8	4309.7	5157.3	5955.8	7547.2
Italy	925.3	1226.3	1690.4	2540.7	3079.7	3868.8
Netherlands		933.1	1028.2	1314	1517.8	1940.2
Austria		161.3	365.2	343.6	440.6	899.5
Portugal	315.4	352.1	359.5	517.6	698.8	958.3
Finland		288.1	515.8	598.9	666.4	756.3
Sweden		679.8	724	892.4	1049.5	1383.5
UK	2613	3446.8	4216.3	5377.7	7112.8	8785.3

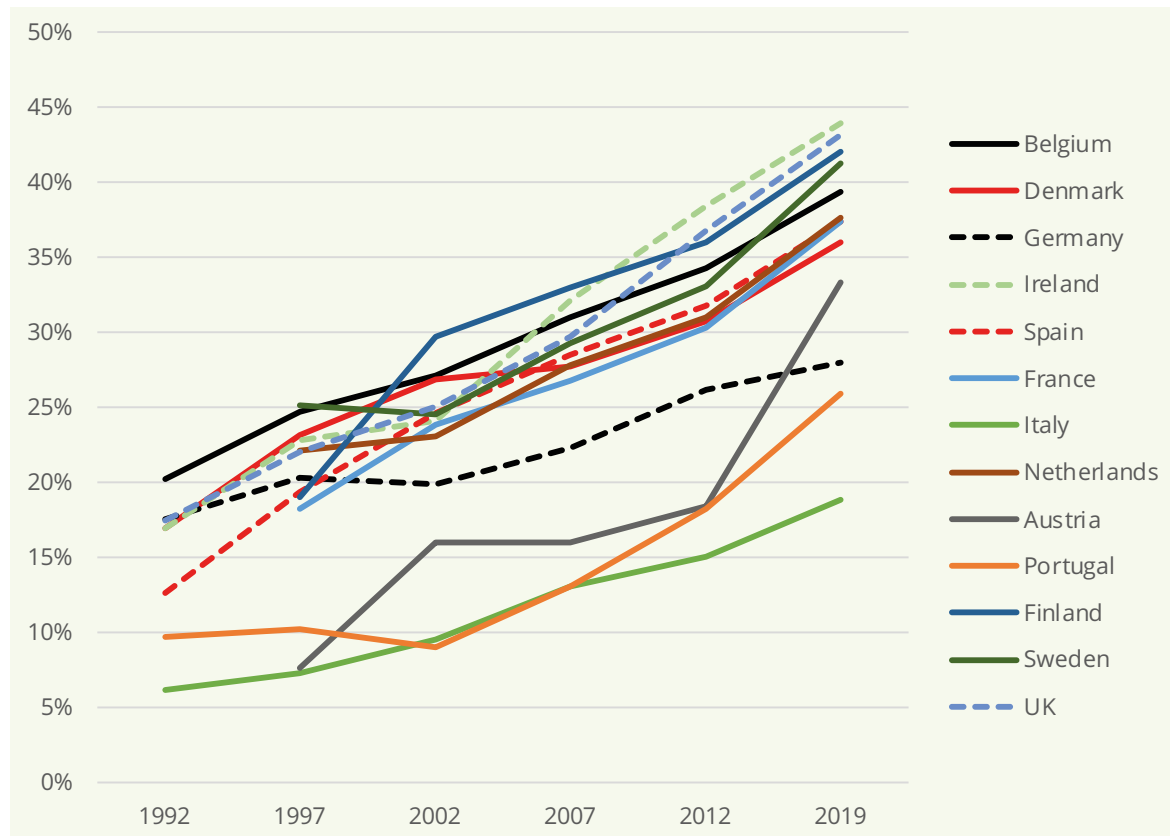
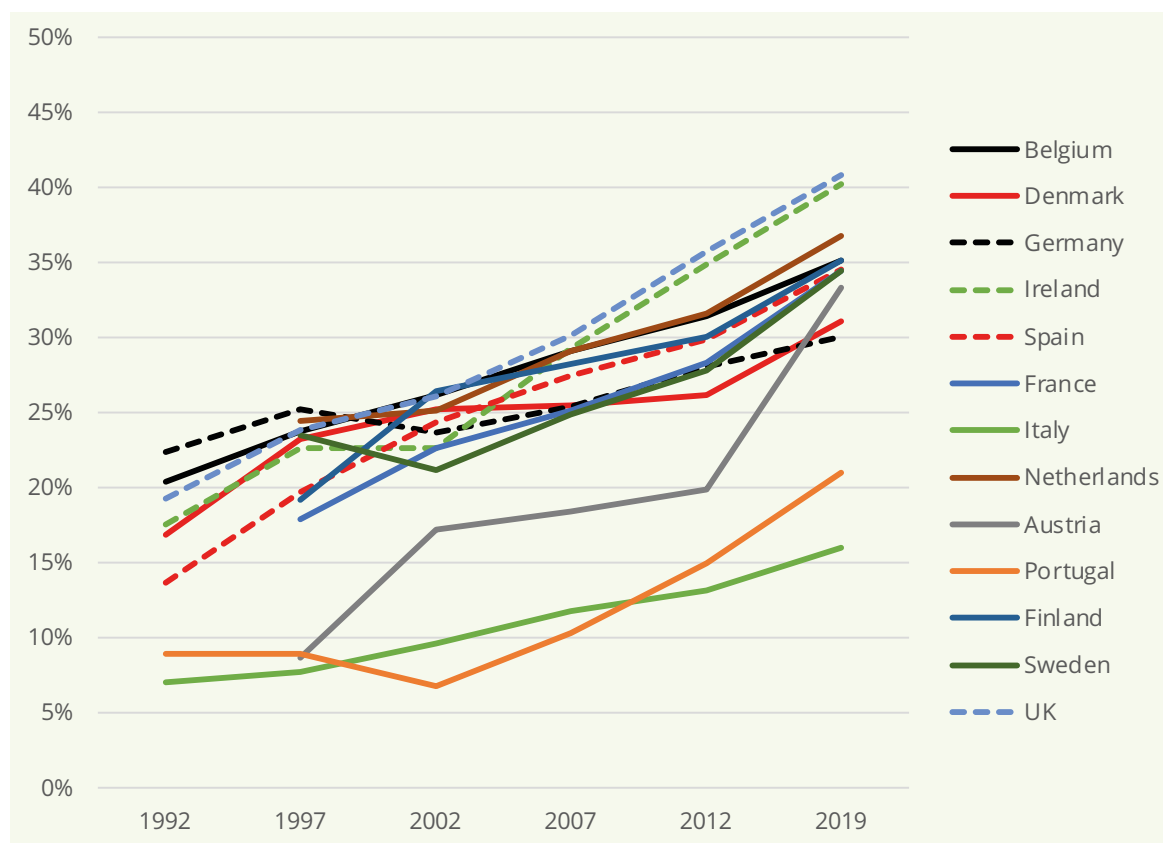
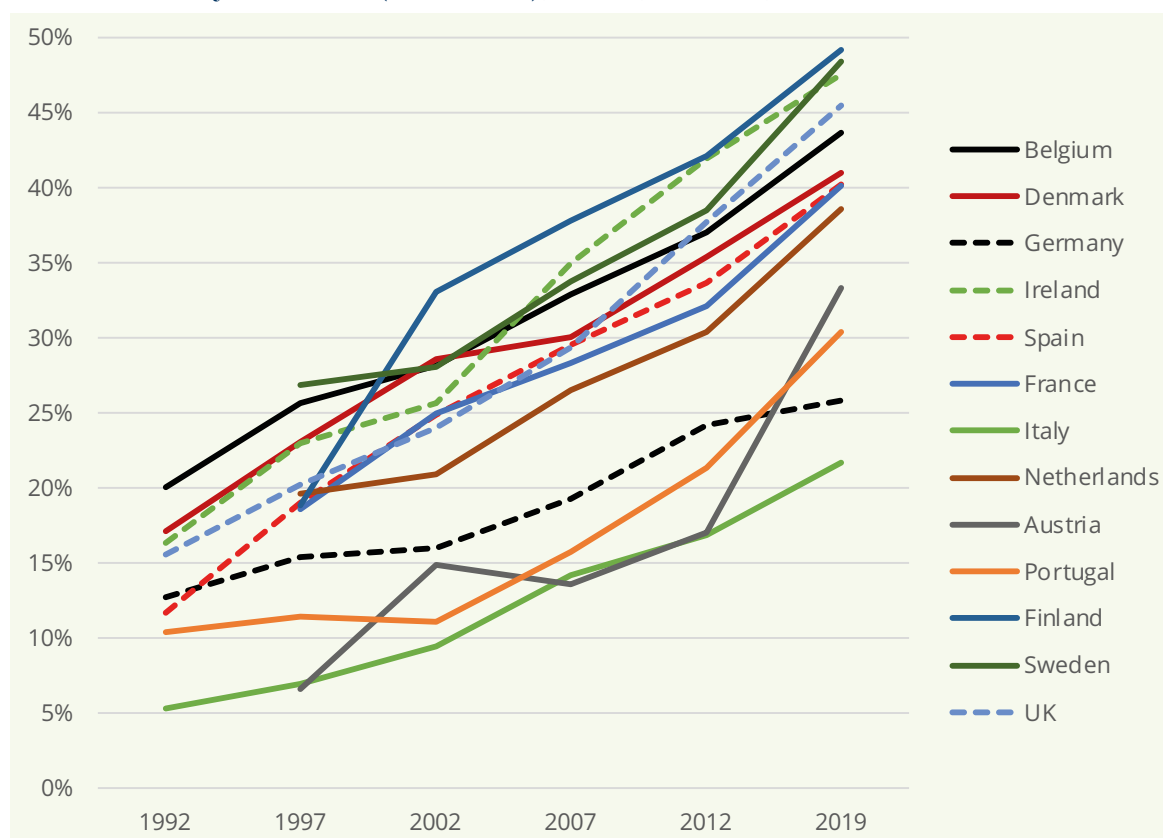
Chart 1 Tertiary Education (ISCED 5–8), 20–64, %

Chart 2 Tertiary Education (ISCED 5-8), 20-64, Males, %**Chart 3 Tertiary Education (ISCED 5-8), 20-64, Females, %**

Tertiary Education of younger adults

Table 4 Population by educational attainment level, Tertiary education (levels 5–8), 20–34, ‘000

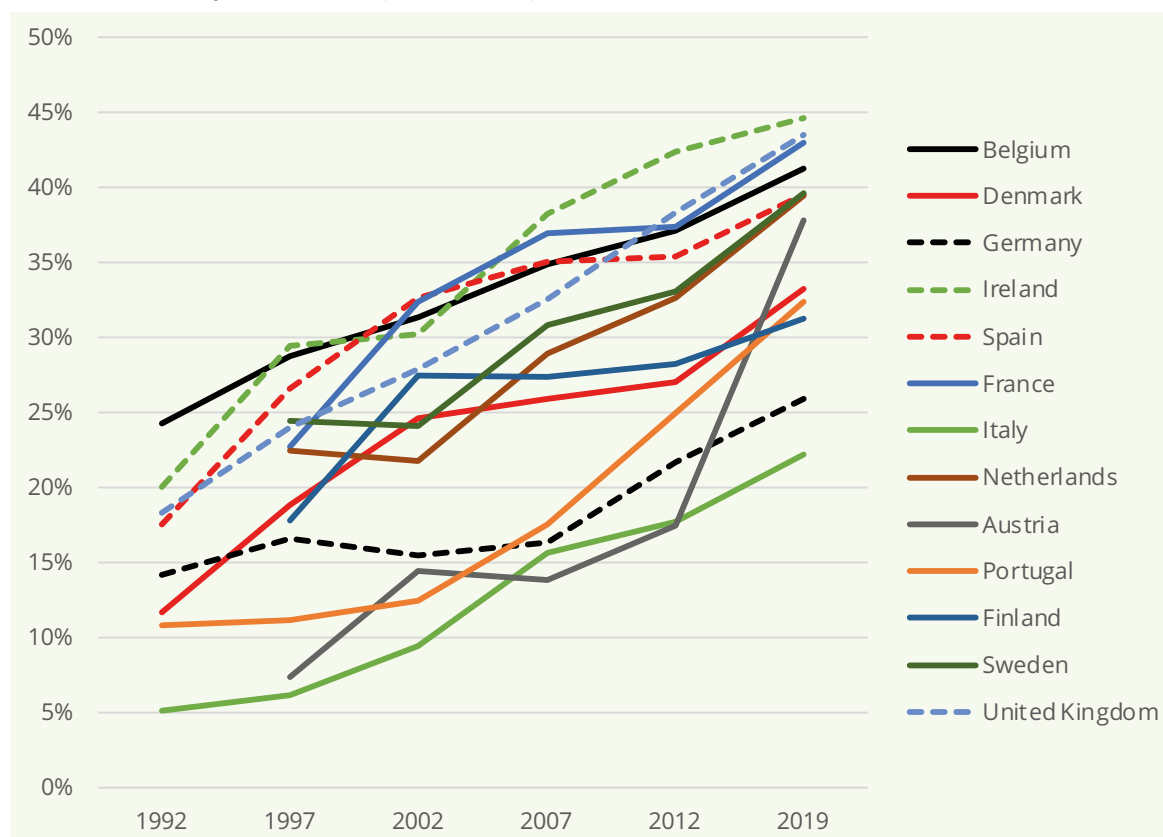
	1992	1997	2002	2007	2012	2019
Belgium	555.2	627.5	641.6	698.8	785.2	881
Denmark	134.7	215.6	253.3	253.9	269.3	376.7
Germany	2586.8	2788	2283.5	2346	3098.4	3818.2
Ireland	153.9	242.7	285.5	434.6	431.3	410
Spain	1621.1	2564	3322	3686	3251.5	3003.2
France		2686.9	3761.2	4233.1	4250.3	4842.4
Italy	666.1	813	1164.9	1726.8	1802.7	2114.9
Netherlands		807.4	720.6	864.8	994.5	1287.3
Austria		135.9	231.7	217.8	279.2	6383
Portugal	225.7	225.8	293.1	389.8	481.2	535
Finland		179.2	263.8	266.2	285.8	316.6
Sweden		444.7	411.2	520.1	611.1	805.7
UK	2442.9	3059.2	3260	3861.1	4833.7	5600.8

Every country in the sample has considerably more tertiary graduates under 35 in absolute terms in 2019 than they did in the nineteen nineties; over 3 times as many in Italy, almost 3 times as many in Denmark, Ireland and Spain and over twice as many in Portugal and the UK (Table 4). Surprisingly, there are considerably fewer in absolute terms than in 2007 in Ireland and Spain (600,000 in Spain's case or 19% and 25,000 or 6% in the case of Ireland).

Controlling for population there has been a strong trend upwards in every country. The share of tertiary graduates in Italy among young people remains the lowest at 22.2%, with Germany slightly higher at 25.9%. According to LFS data they are the only two countries with shares below 30% in the sample. Portugal have increased their share of young graduates by over 20 pp to 32.3% with the majority (almost 15 pp) coming since 2007. Ireland, the UK, France and Belgium have the highest rates of tertiary attainment among young people at 44.6%, 43.5%, 43.0% and 41.2%.

³ At this level of aggregation data are considered as comparable over time for all available countries (i.e. no significant level shift breaks) except Austria and Estonia:

The level shift break in Austria is due to the reclassification of a programme spanning levels: the qualification acquired upon successful completion of higher technical and vocational colleges is allocated in ISCED 2011 to ISCED level 5; under ISCED 1997 the same qualification was reported on ISCED level 4, but earmarked as equivalent to tertiary education.

Chart 4 Tertiary Education (ISCED 5-8), 20-34, %

Gender gaps in tertiary education attainment persist in the younger group with higher rates for females in every country. Young Italian men are least likely to have attained a third level education at 17.4%. Surprisingly, Finland with one of the highest rates among adults has one of the lowest rates for young men in 2019 (25.1%), though it has increased since 2012. While females already had higher rates of third level education for under 35s at the beginning of the time series in most countries (except the UK and Germany) the gap has since widened considerably with the partial exception of Germany, where the gap has widened albeit marginally. In Portugal for instance, there is a gap of 14.4 pp (39.5% vs 25.1%), in Belgium 13.8 pp (48.1% vs 34.4%) and Sweden 13.5 pp (46.6% vs 33.1%).

Gender gaps in tertiary education attainment persist in the younger group with higher rates for females in every country

Table 5 Population by educational attainment level, Tertiary education (levels 5-8), 20-34, '000, Males

	1992	1997	2002	2007	2012	2019
Belgium	250.7	271.8	277.3	299.3	326.5	368.3
Denmark	64.7	103.6	104	113.9	106.8	159.7
Germany	1379.1	1557	1198.2	1115.1	1401.5	1884.7
Ireland	74.4	114.3	125.6	185.6	180	186.9
Spain	760.2	1150.8	1501.8	1638.2	1395.3	1306.4
France		1187.7	1687.6	1839.4	1870.6	2135.9
Italy	329.3	369	508.4	673.7	692.8	846.6
Netherlands		407.2	335	390.7	444.8	573.7
Austria		64.1	101.9	105.5	123.5	288.3
Portugal	82.4	82.9	97.8	133.7	188.1	206.9
Finland		81	104.6	103.9	110.4	131.1
Sweden		213.5	183.6	224.2	266.2	347.7
UK	1305	1624.7	1579.9	1820.8	2265.3	2617.4

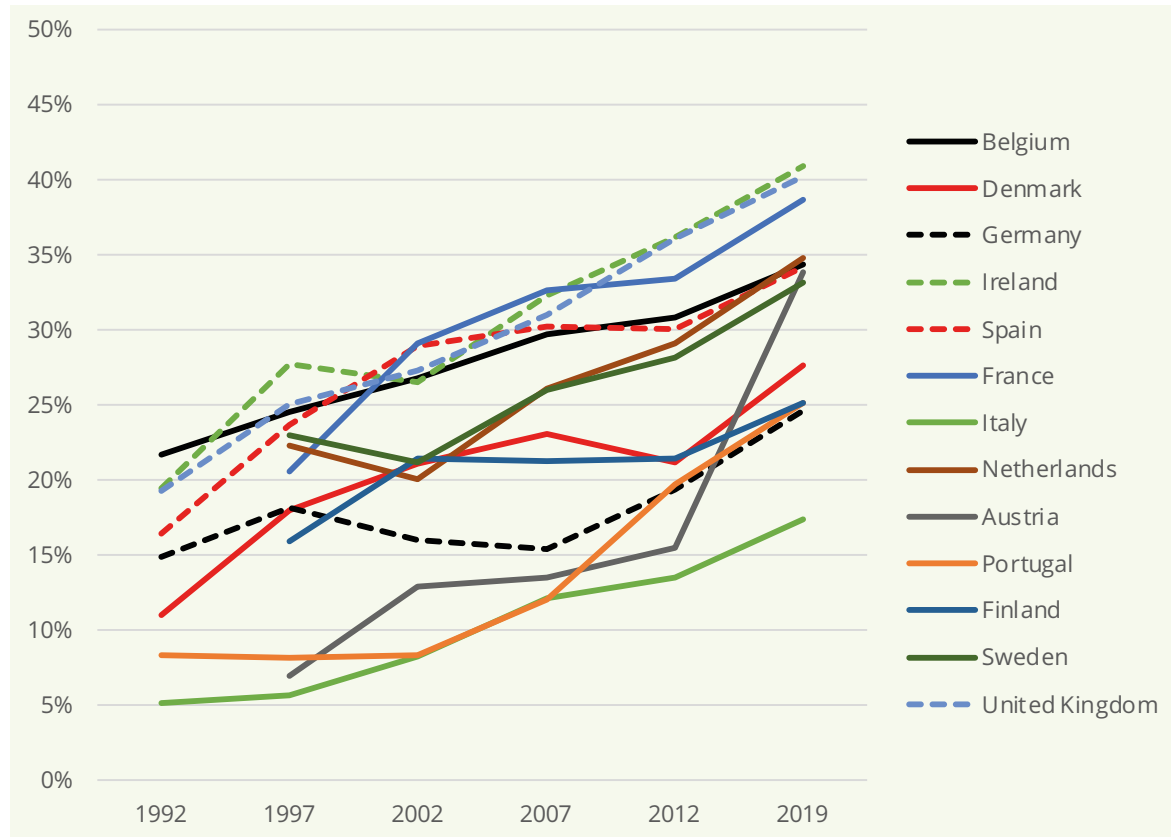
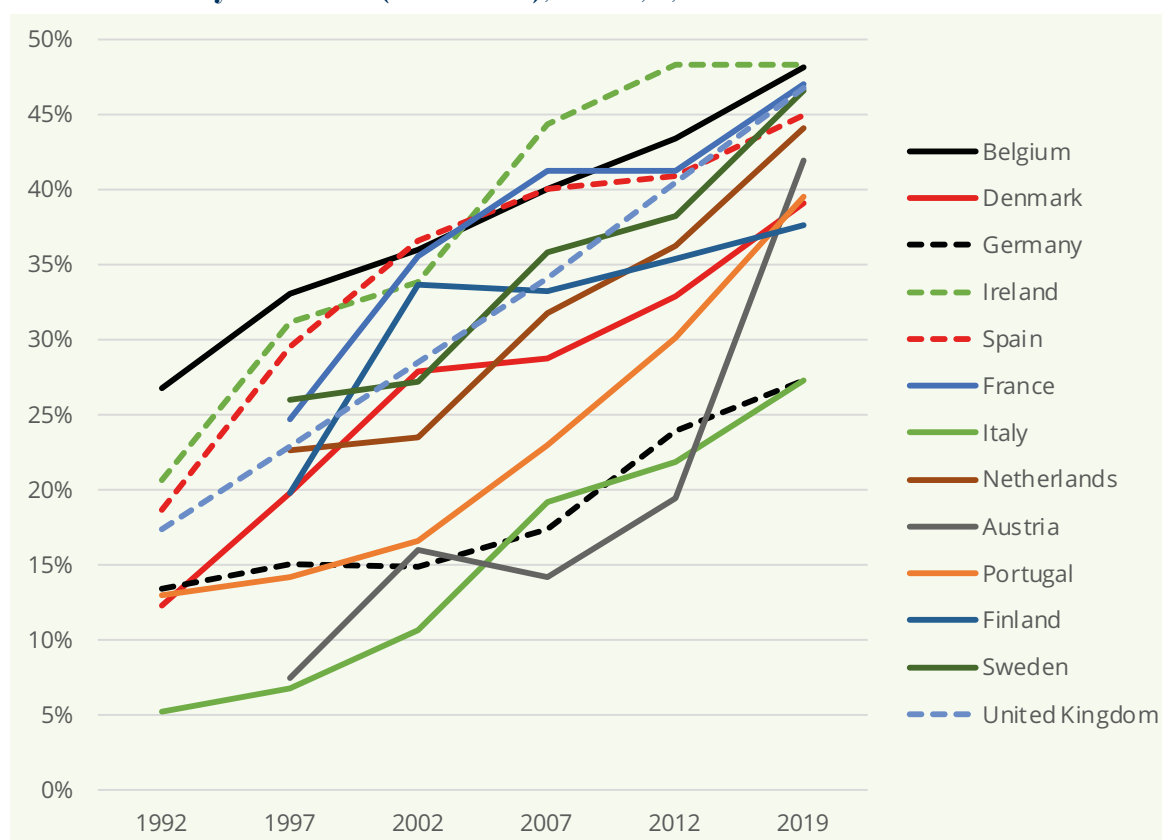
Chart 5 Tertiary Education (ISCED 5-8), 20-34, Males, %

Table 6 Population by educational attainment level, Tertiary education (levels 5-8), 20-34, '000, Females

	1992	1997	2002	2007	2012	2019
Belgium	304.5	355.6	364.3	399.4	458.8	512.7
Denmark	69.9	112	149.3	140	162.5	217
Germany	1207.7	1230.9	1085.3	1230.9	1696.8	1933.6
Ireland	79.6	128.5	159.8	249.2	251.4	223.1
Spain	860.9	1413.3	1820.2	2047.8	1856.2	1696.8
France		1499.1	2073.6	2393.8	2379.7	2706.6
Italy	336.9	444	656.5	1053.1	1109.8	1268.3
Netherlands		400.1	385.7	474.1	549.7	713.6
Austria		68.5	129.8	112.3	155.6	349.8
Portugal	143.4	142.9	195.3	256	293.1	328
Finland		98.3	159.3	160.5	175.4	185.5
Sweden		231.3	227.5	296	344.9	458
UK	1138	1434.5	1680.1	2040.3	2568.5	2983.4

Chart 6 Tertiary Education (ISCED 5-8), 20-34, F, %

Educational attainment by social origin (Father's Education); evidence from the Survey on Income and Living Conditions

In this section, I consider trends in higher education by social origin, proxied by father's education, using ad-hoc modules in the EU Survey on Income and Living Conditions in 2005, 2011 and 2019. Educational attainment is split into three broad levels; ISCED 0,1,2 are at the low end with ISCED 5+ (short term tertiary education up to doctorate), in the high education category. Theoretically this latter group should qualify for entry into employment in one of the top three ISCO categories.⁴

Father's education is also split into the same three categories but only asked of respondents between the ages of 25 and 59.

Table 7 Comparing Estimates of Tertiary share; LFS V SILC

EU LFS 2019, % (25-59)		EU SILC 2019, % (25-59)	
Italy	20.0	Italy	21.0
Portugal	27.7	Portugal	25.8
Germany	30.1	Germany	31.5
Austria	34.5	Austria	36.7
France	39.9	Sweden	39.2
Spain	40.3	Spain	39.7
Belgium	40.6	France	41.0
Denmark	42.0	Finland	44.1
Netherlands	42.7	Belgium	46.0
Sweden	45.5	Netherlands	46.1
Finland	47.9	Denmark	46.3
Ireland	49.2	Ireland	58.6

Similar to the LFS data, the SILC shows increasing levels of third level education between 2005 and 2019 in every country in the sample (Charts 7-19), except in the case of Germany where the SILC estimate of the share of third level graduates is considerably

⁴ It's important to note some data issues at this stage. Although most of the estimates for the breakdown of third level education between the LFS and SILC (to which we now turn) are satisfactorily close, with the relative shares of third level in the adult populations ranked similarly, the estimates for three countries are sufficiently different to note. In Belgium, the estimate of the share of 25-59 year olds in 2019 with third level education in SILC was 6 pp above the LFS estimate (46% v 40%). In Sweden, the estimates were also approximately 6 pp apart, though the SILC underestimates relative to the LFS (45.5% v 39.2%). The Irish estimates have the largest discrepancy at over 9 pp, with a SILC estimate of 58.6% and an LFS estimate of 49.2%. In Germany, though not provided here, the estimate of third level education in the adult population for 2005 in SILC is approximately 15 pp higher than in the LFS.

higher in 2005 than in the LFS. This trend is primarily driven by declining numbers in the lowest formal education bracket in every country (ISCED 0, 1, 2), though in Austria in particular it has coincided with a decrease in the share of adults in the 'middle skill' category as it did in Ireland on a smaller scale.

Average third level attainment for the 25-59-year-old group across the sample of 13 countries in 2019 (excluding the UK) was 39.6%, this was up from an average of 31.8% in 2011 and 28.7% in 2005. When controlling for adults whose fathers are in the category with relatively low levels of formal education, the average increased from 21.2% in 2005 to 23.8% in 2011 to 29.9% in 2019, and from 43.5% in 2005 for those whose father was in the middle category of formal educational attainment to 49.1% in 2019. Those from households where their father had third level education were also more likely to have attained the same level themselves in 2019 (70.5%) than in 2005 (66.6%).

In line with LFS data, Ireland has the highest share of third level graduates in the core working age adult population and this applies across all three broad categories of father's education (2019).

When examined by father's educational attainment background the data show similar trends almost across the board. In every country, adults whose fathers were in the ISCED 0,1,2 and ISCED 3,4 categories were more likely to have attained some kind of third level qualification in 2019, than in 2005. As such, there has been a narrowing of the gap in third level education between those coming from households with fathers in the third-level category and both of the other categories, with some exceptions in Germany, Austria and Sweden. Growth in the share of third level graduates whose fathers were also highly educated has been slower, (from a higher base) with the exception of Sweden where the share fell slightly (63.0 to 61.4%). In Belgium, the estimates are broadly equal in 2005 and 2019 (79.4 v 79.5%).

In every country, in all three years, the likeliness of having a third level qualification is highest for those with a father in the same bracket, second most likely for those whose father was in the 'middle skill/education' bracket and least likely for those whose fathers' highest level of formal education was in ISCED 0,1 or 2.

The unweighted average percentage point gap in third level attainment between the top and bottom groups by fathers' level of education in 2019 was 40.6pp down from 45.0 pp in 2005. The largest percentage point gaps in attainment between the two groups in 2019 were in Italy (12.3% v 68.1%) and Portugal (21.0% v 76.3%) at approximately 55 pp each with the lowest gaps in attainment in Finland (34.2% v 61.4%) at 27.1 pp, Sweden (32.1% v 61.4%) at 29.3 pp and Denmark (36.3% vs 66.6%) at 30.3 pp. The average percentage point difference in the educational attainment gap by background of third level attainment between 2005 and 2019 (excluding the UK) narrowed by 4.8 pp, with Austria and Portugal the only exceptions in which the gap actually widened. In Austria this was driven by a 15 ppt increase in the share of those with fathers in the high education bracket qualifying with tertiary education compared to just 5 pp for the lowest. The third level educational

gap between adults with fathers in the lowest relative to the highest brackets of formal education narrowed most in 14 years in Ireland (19.0 pp), France (13.2 pp) and Sweden (9.7 pp), increasing by 9.9 points in Austria and 0.4 in Portugal.

The Irish data show the intergenerational transmission of educational advantage to be highest in the sample in 2005, 2011 and 2019; in 2019 85.8% of Irish adults with highly educated parents have attained some kind of tertiary qualification compared to 82.3% in 2005. In 2019, Belgium, the Netherlands, Spain, France and Portugal also have high relative shares of transmission of educational advantage (79.4%, 76.7%, 76.5%, 75.8% and 75.3%). The latest available data for the UK (2011) shows a similar share (75.5%).

In Germany, at the other end only 52.7% of those with fathers in the group of highest levels of formal education have gone on to complete third level, though this is still twice the share of those whose father were 'middle skilled/educated' (27.6%). In Finland and Sweden, the figures are just over 60%.

Transmission of educational disadvantage (from father's in the low attainment bracket to adults currently in the low attainment bracket) is highest in 2019 in Portugal (52.5%), Spain (44.8%), Italy (42.7%) though all have improved since 2005 (notably in Portugal, where in 2005 if an individual adult's father had a low level of education, there was a 75% chance their adult child would also have a low level of education).

Chart 7 Educational Attainment by Father's Education, Austria, 2019

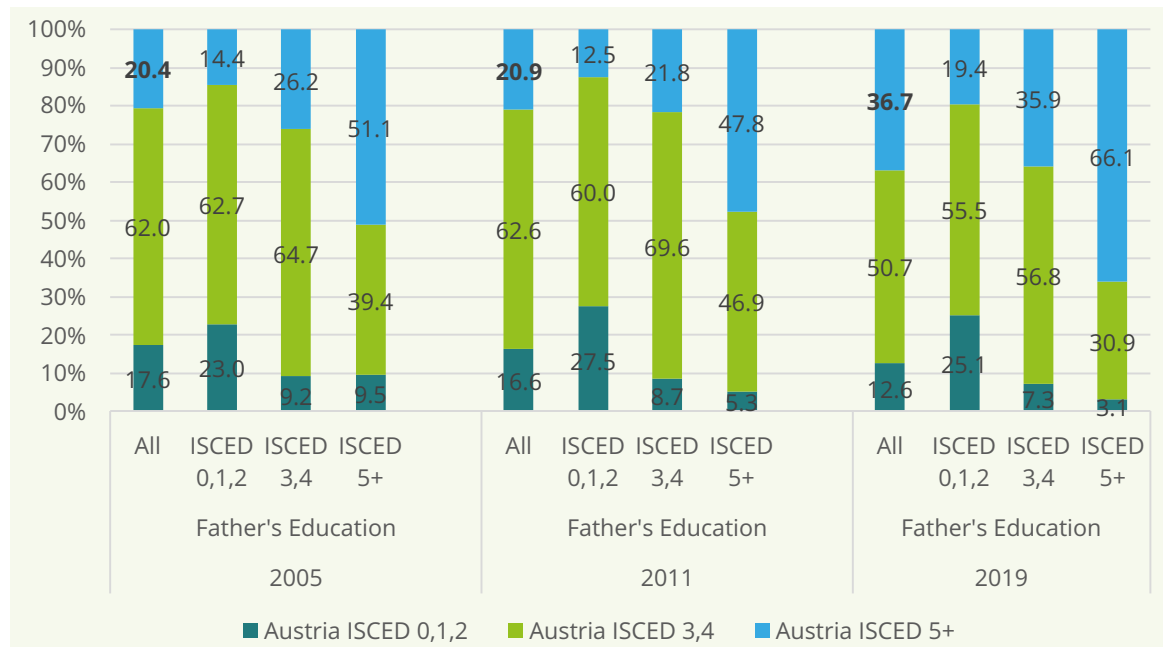


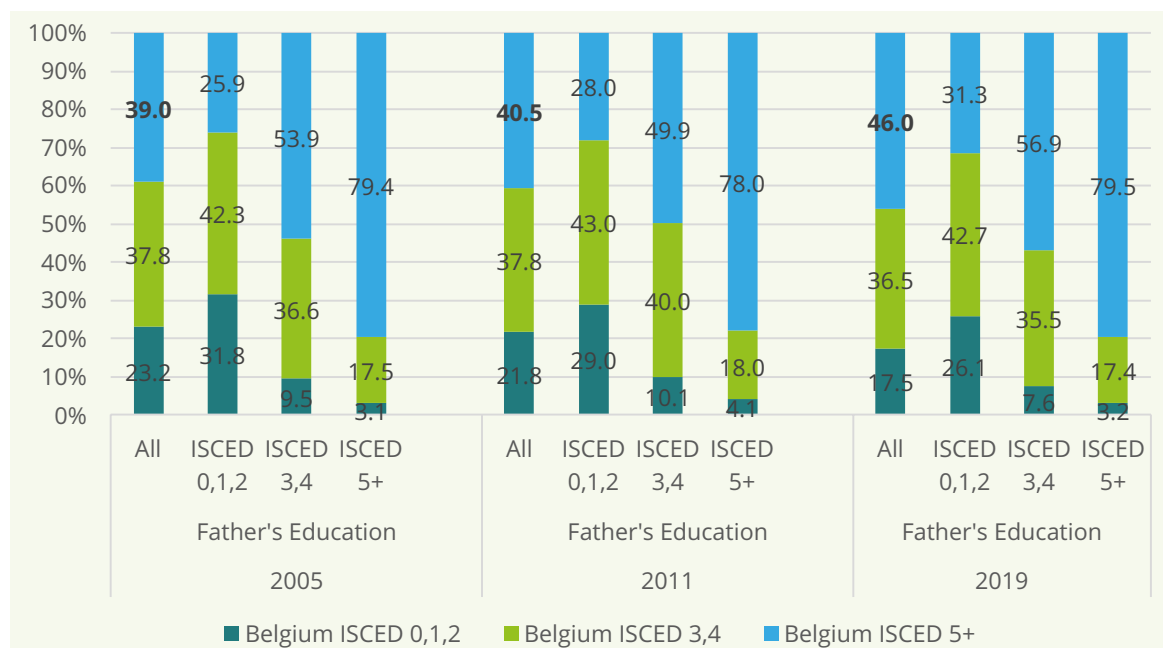
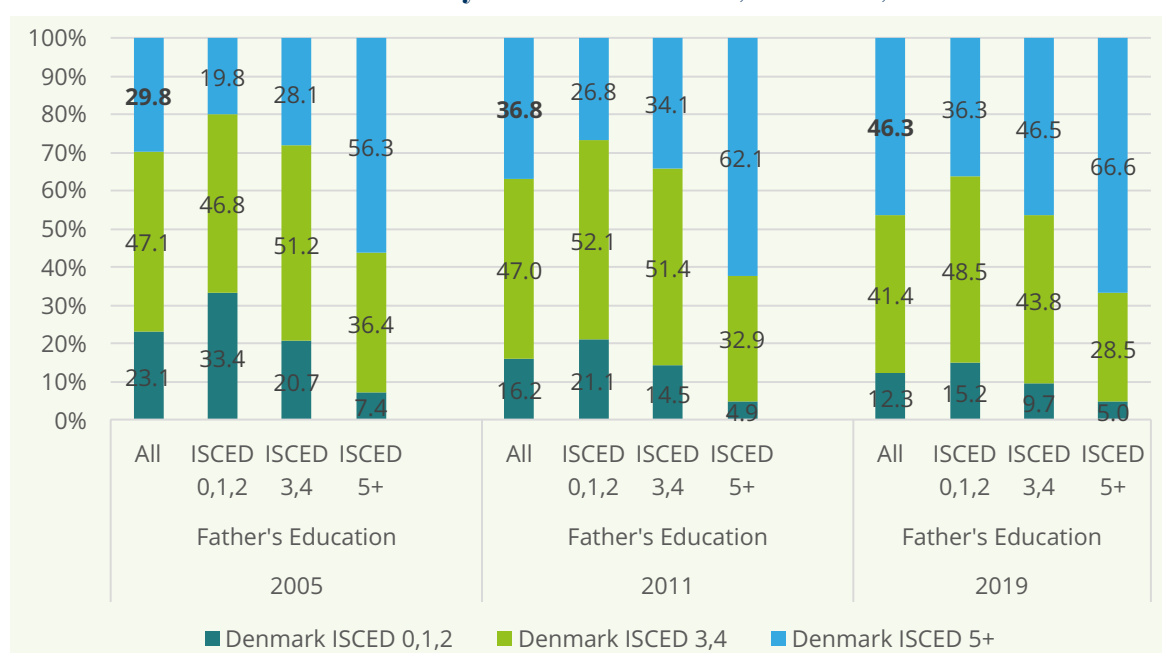
Chart 8 Educational Attainment by Father's Education, Belgium, 2019**Chart 9 Educational Attainment by Father's Education, Denmark, 2019**

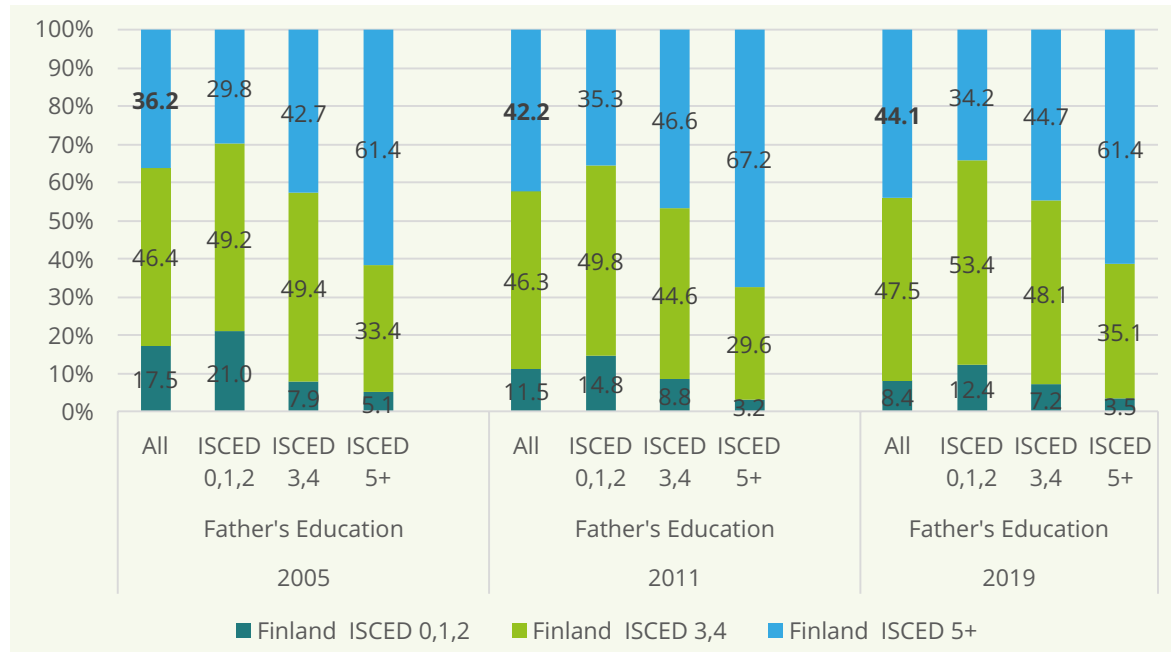
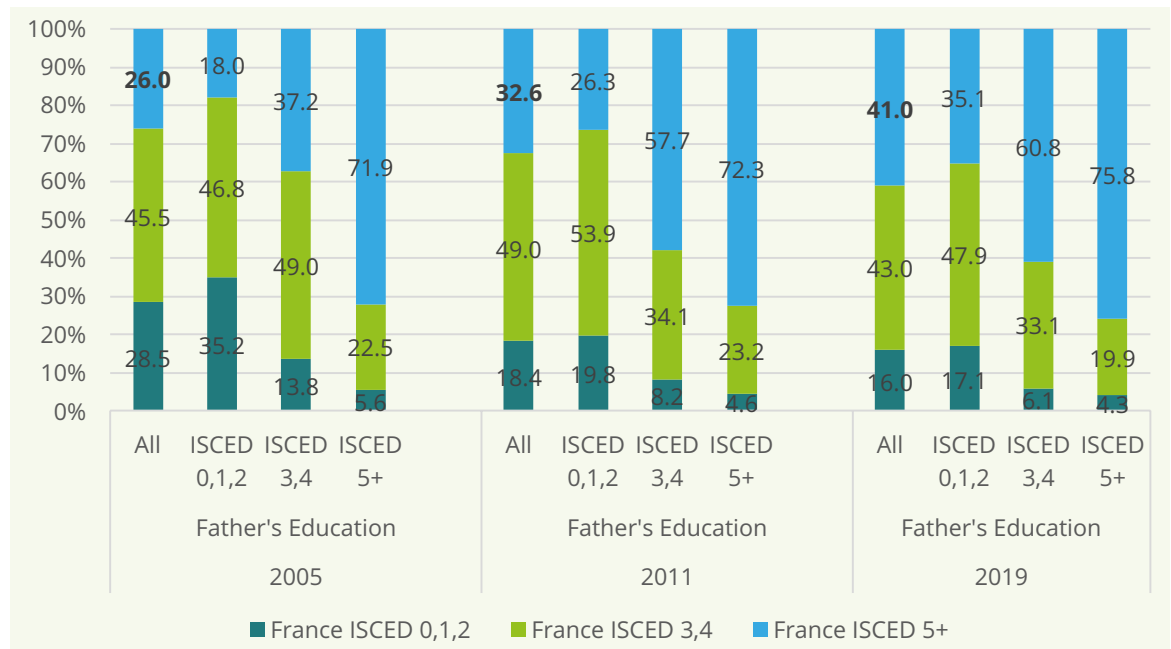
Chart 10 Educational Attainment by Father's Education, Finland, 2019**Chart 11 Educational Attainment by Father's Education, France, 2019**

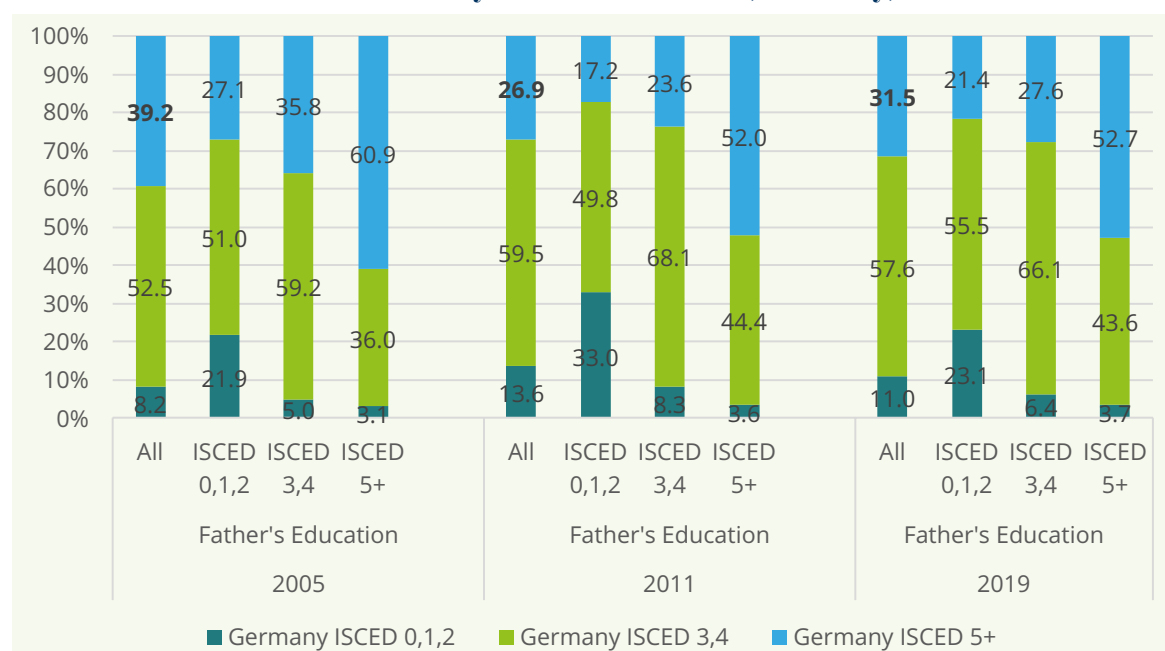
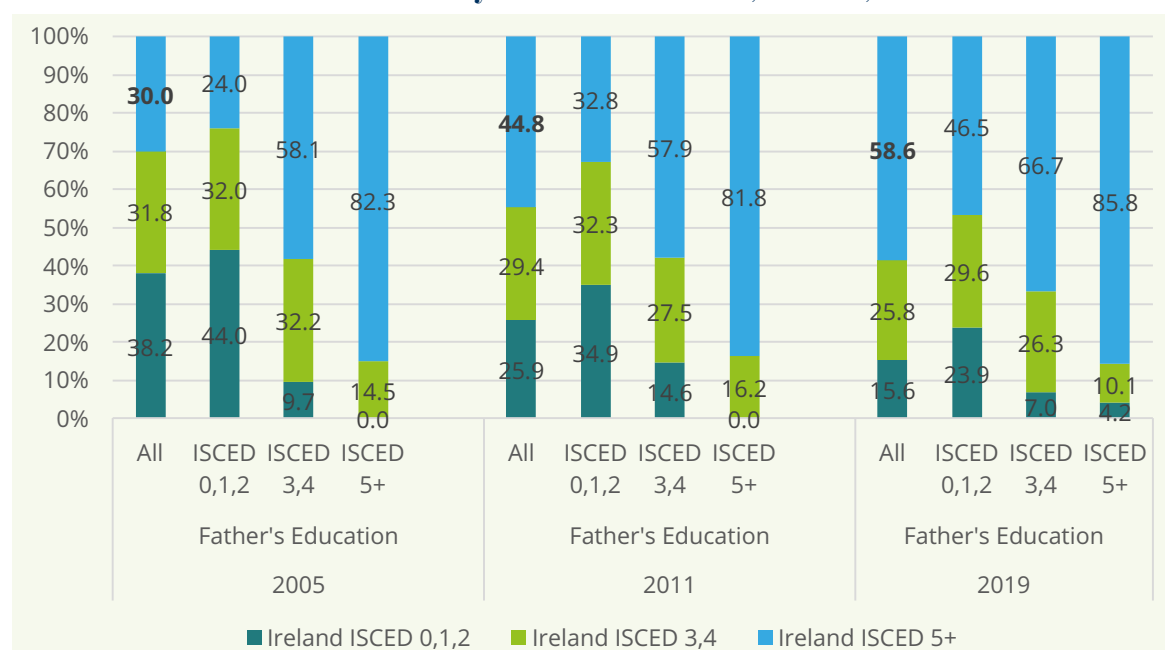
Chart 12 Educational Attainment by Father's Education, Germany, 2019**Chart 13 Educational Attainment by Father's Education, Ireland, 2019**

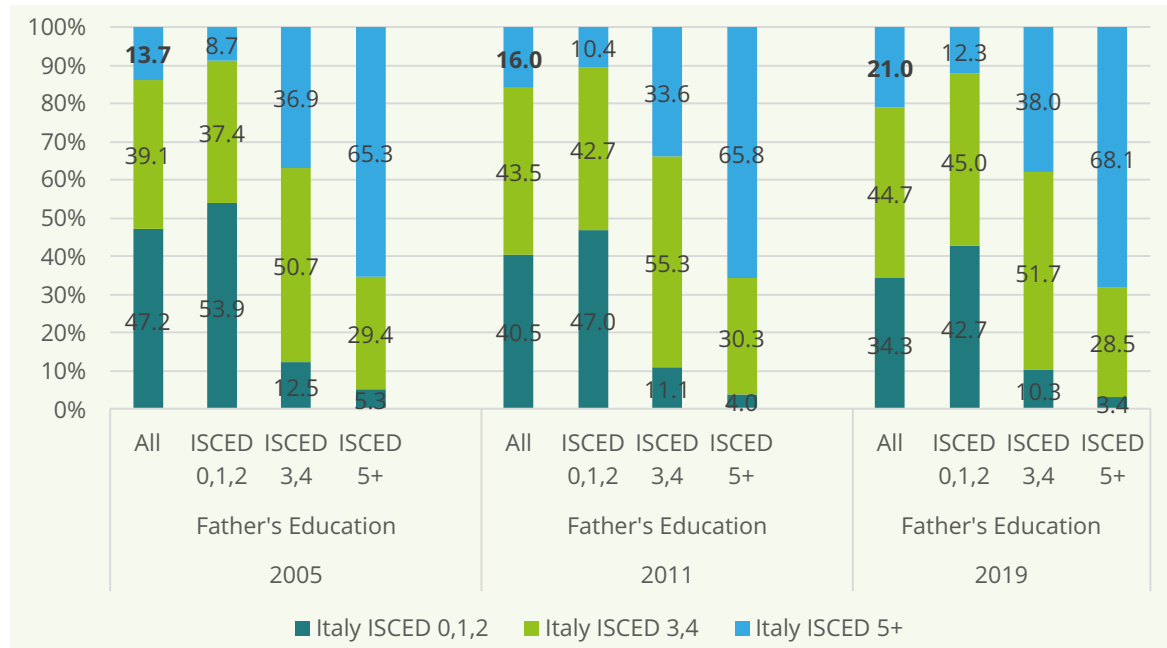
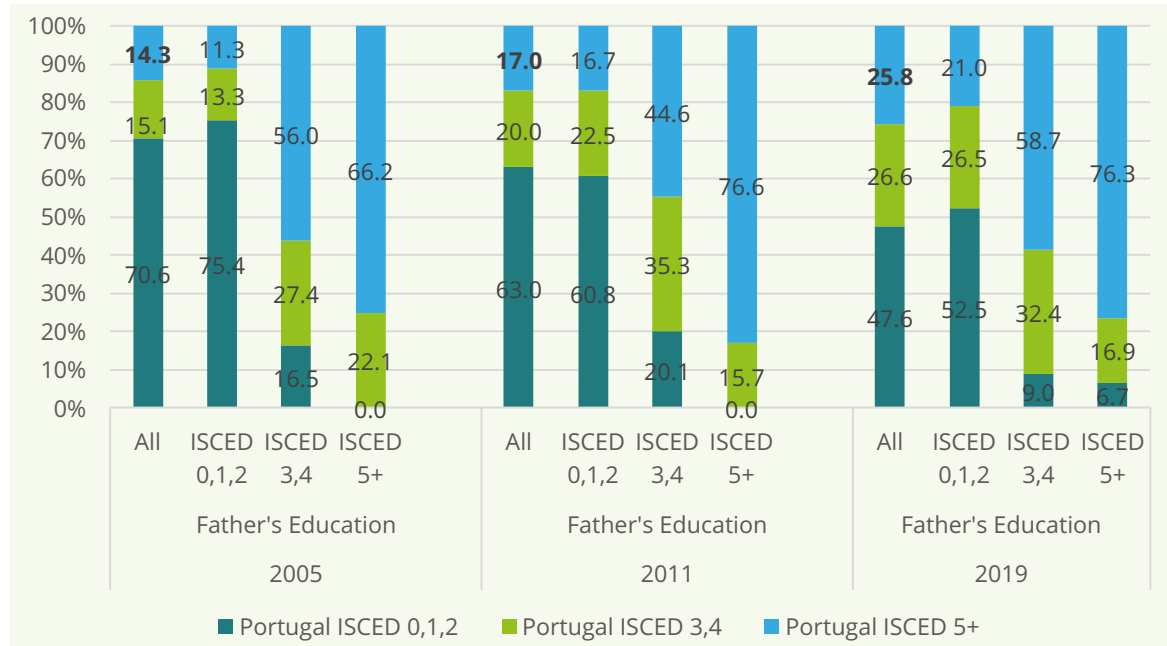
Chart 14 Educational Attainment by Father's Education, Italy, 2019**Chart 15 Educational Attainment by Father's Education, Portugal, 2019**

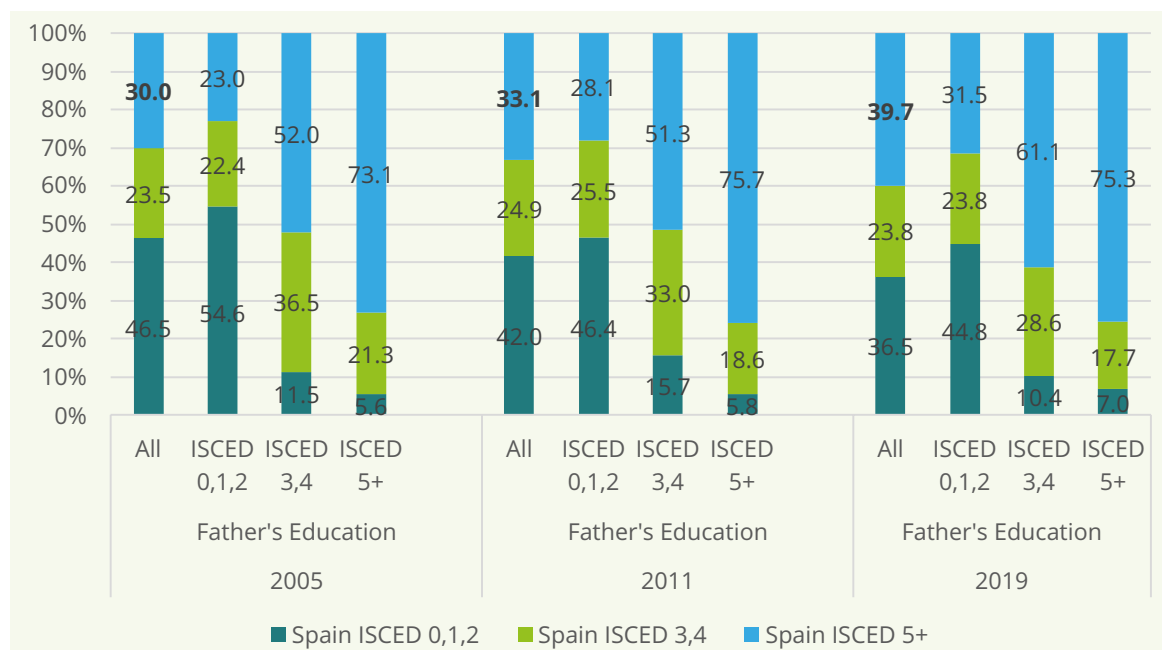
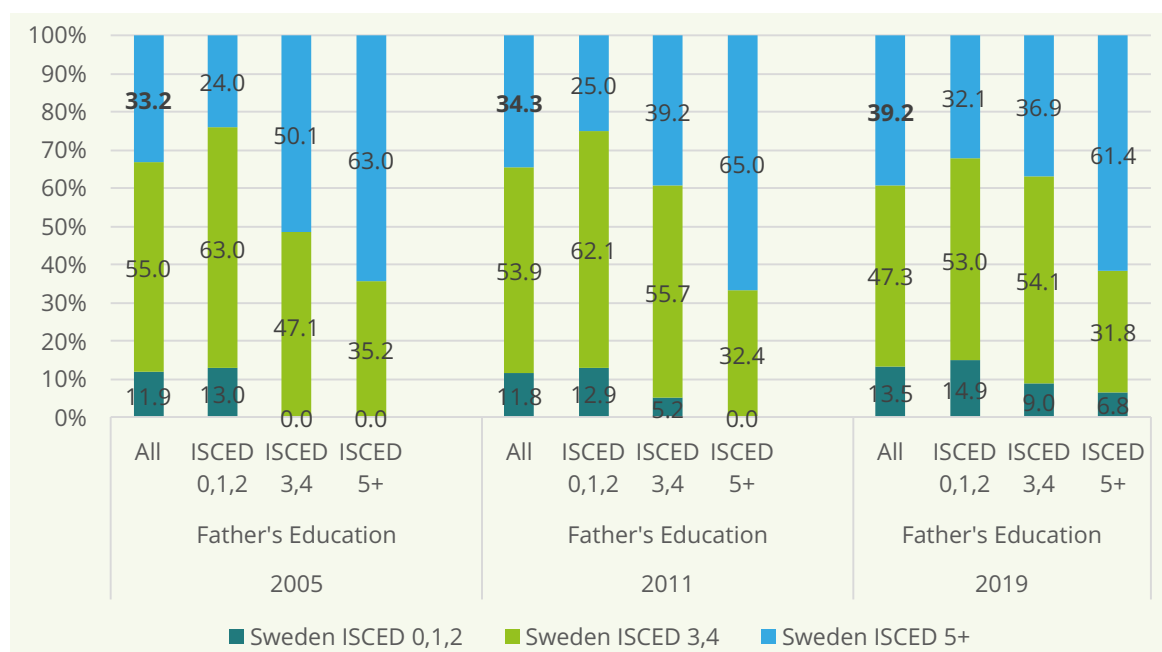
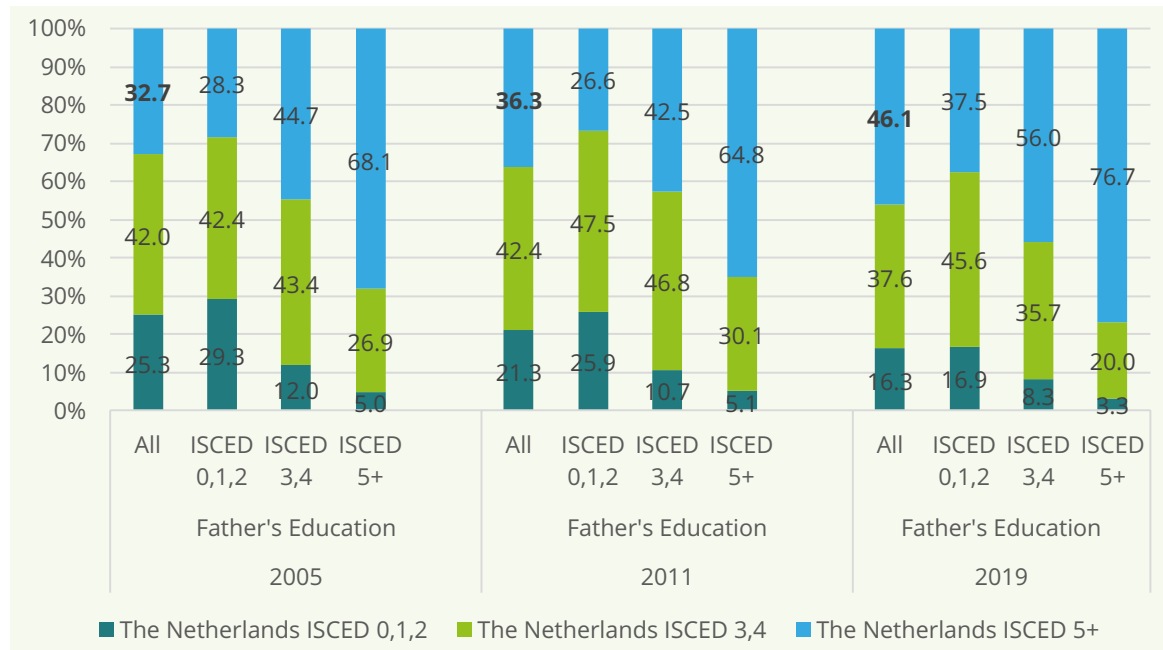
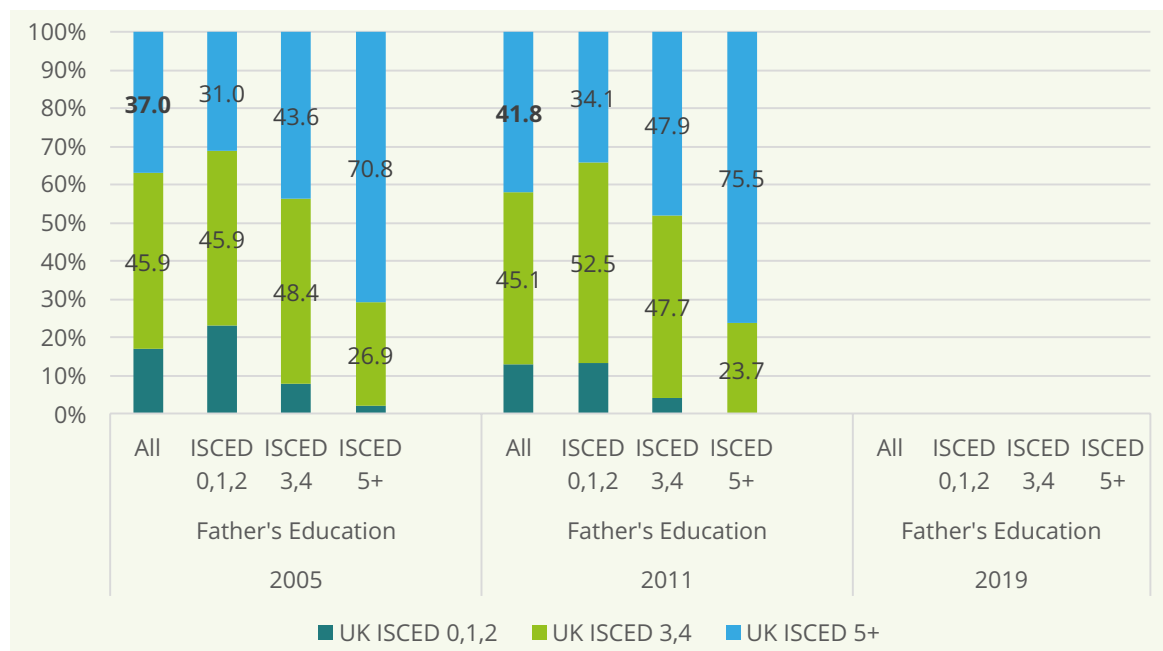
Chart 16 Educational Attainment by Father's Education, Spain, 2019**Chart 17 Educational Attainment by Father's Education, Sweden, 2019**

Chart 18 Educational Attainment by Father's Education, The Netherlands, 2019**Chart 19 Educational Attainment by Father's Education, UK, 2019**

Appendix

International Standard Classification of Education

The following ranges of duration of ISCED levels are used as criteria for classifying formal education programmes:

- ISCED 0: no duration criteria, however a programme should account for at least the equivalent of 2 hours per day and 100 days a year of educational activities in order to be included;
- ISCED 1: duration typically varies from 4 to 7 years. The most common duration is 6 years;
- ISCED 2: duration typically varies from 2 to 5 years. The most common duration is 3 years;
- ISCED 3: duration typically varies from 2 to 5 years. The most common duration is 3 years;
- ISCED 4: duration typically varies from 6 months to 2 or 3 years;
- ISCED 5: duration typically varies from 2 to 3 years; and
- ISCED 8: duration is a minimum of 3 years.

The typical duration of ISCED levels 6 and 7 is more easily described by reference to the durations of programmes at the respective levels as the duration of the ISCED level depends on the sequence of programmes offered at these levels in different countries.

- ISCED 6: the duration of Bachelor's or equivalent level programmes typically varies from 3 to 4 or more years when directly following ISCED level 3, or 1 to 2 years when following another ISCED level 6 programme;
 - ISCED 7: the duration of Master's or equivalent level programmes typically varies from 1 to 4 years when following ISCED level 6, or from 5 to 7 years when directly following ISCED level 3.
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