**Appendix**

***Table A1. Coding of STEM, STEM+Medicine, Sciences, Engineering/Technology (ET)***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **STEM** | **STEM +M** | **Sciences** | **ET** | DZHW School Leavers’ Survey 2003/4 | Irish School Leavers’ Survey 2001/2005 | Scottish School Leavers’ Survey 2001/2005 |
| **X** | **X** | **X** |  | Biology, Physics, Chemistry, Geological/Earth sciences, Environmental sciences, Mathematics, Computer science, Agricultural/Food sciences, Forestry | Science, Agriculture | Biological sciences, Physical sciences, Mathematical sciences & informatics, Agriculture & related subjects |
| **X** | **X** |  | **X** | Electrical engineering, Industrial engineering, Construction engineering, Traffic engineering, Engineering (general), Architecture, Spatial planning, Manufacturing, Surveying/Geodesy | Engineering, Architecture | Engineering & technology, Architecture,  Building & planning |
|  | **X** |  |  | Medicine, Dentistry, Veterinary medicine, Pharmacy, Health studies (general) | Medicine, Nursing | Medicine, Dentistry & subjects allied to medicine |

***Table A2. Descriptive Statistics: school leavers. Column percentages***

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Germany** | **Ireland** | **Scotland** |
| **Gender** |  |  |  |
| male | 44.02 | 47.57 | 47.91 |
| female | 55.98 | 52.43 | 52.09 |
| **STEM subjects in school** |  |  |  |
| 0 | 45.42 | 36.5 | 32.36 |
| 1 | 43.90 | 42.77 | 24.1 |
| 2 | 10.68 | 20.73 | 43.54 |
| **Parental class** |  |  |  |
| ESEC 1&2 | 49.74 | 34.38 | 47.6 |
| ESEC 3 or higher | 50.26 | 65.62 | 52.4 |
| **Higher education entry** |  |  |  |
| already/soon enrolled | 71.08 | 52.95 | 56.82 |
| not enrolled | 28.92 | 47.05 | 43.18 |
| **Final grade / UCAS score** | (2.40) | (235) | (500) |
| N | 6106 | 1883 | 5725 |

Source: DZHW School Leaver Survey 2003/4, Irish and Scottish School Leavers’ Survey 2001/05, own calculations

Weighted percentages and means; unweighted N

***Table A3. STEM subjects in secondary school, column percentages***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Germany** | | | **Ireland** | | | **Scotland** | | |
|  | *Males* | *Females* | *All* | *Males* | *Females* | *All* | *Males* | *Females* | *All* |
| **0** | 38.4 | 50.9 | 45.4 | 41.7 | 31.8 | 36.5 | 30.2 | 34.4 | 32.4 |
| **1** | 46.0 | 42.3 | 43.9 | 36.1 | 48.8 | 42.8 | 20.7 | 27.2 | 24.1 |
| **2 (or more)** | 15.6 | 6.8 | 10.7 | 22.1 | 19.4 | 20.7 | 49.1 | 38.4 | 43.5 |
|  | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Total N | 2688 | 3418 | 6106 | 857 | 1026 | 1883 | 2351 | 3374 | 5725 |

Sources: DZHW School Leaver Survey 2003/4, Irish and Scottish School Leavers’ Survey 2001/05, own calculations

Note: Weighted data; unweighted N

***Table A4. Gender differences in enrolment in higher education for STEM, STEM + medicine and health related fields (STEM+M), Sciences, Engineering and technology (ET), percentages of men and women enrolled and percentage point differences (PPdiff)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **%male** | **%female** | **PPDiff** |
| **Germany** | STEM | 50,0 | 20,9 | 29,2 |
| STEM+M | 55,8 | 29,6 | 26,2 |
| Sciences | 23,1 | 12,0 | 11,1 |
| ET | 25,9 | 7,7 | 18,3 |
|  |  |  |  |  |
| **Ireland** | STEM | 47,0 | 19,7 | 27,3 |
| STEM+M | 48,8 | 28,9 | 19,9 |
| Sciences | 23,8 | 15,8 | 8,1 |
| ET | 23,2 | 3,9 | 19,2 |
|  |  |  |  |  |
| **Scotland** | STEM | 47,4 | 19,6 | 27,8 |
| STEM+M | 55,8 | 40,6 | 15,2 |
| Sciences | 27,5 | 16,3 | 11,1 |
| ET | 19,9 | 3,3 | 16,6 |

Source: DZHW School Leaver Survey 2003/4, N=4235, Irish School Leavers’ Survey, N=1019, Scottish School Leavers’ Survey 2001/05, N=3534; own calculations

STEM= Science, technology, engineering and math, STEM+ M= STEM plus medicine and health-related fields, Sciences = Sciences, ET= Engineering/technology

***Table A5. Enrolling in higher education (Germany). Results from logistic regression. Average Marginal Effects. t-statistics in parentheses***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Germany** | | **Ireland** | | **Scotland** | |
|  | AME | t | AME | t | AME | t |
| **Enrolment in HE** |  |  |  |  |  |  |
| Gender (= female) | -0.098\*\*\* | (-8.14) | 0.0122 | (0.62) | 0.0311\*\* | (2.69) |
| STEM school (= 0) |  |  |  |  |  |  |
| 1 | 0.022 | (1.87) | 0.0437 | (1.94) | 0.0601\*\*\* | (3.75) |
| 2 | 0.104\*\*\* | (5.21) | 0.0939\*\* | (3.00) | 0.112\*\*\* | (6.77) |
| Parental Class (= ESEC 1&2) | 0.047\*\*\* | (4.22) | -0.0123 | (-0.59) | 0.0452\*\*\* | (3.87) |
| Grades | 0.131\*\*\* | (24.45) | 0.233\*\*\* | (26.75) | 0.190\*\*\* | (31.41) |
| N | 6106 |  | 1883 |  | 5725 |  |

Source: DZHW School Leaver Survey 2003/4, Irish and Scottish School Leavers’ Survey 2001/05, own calculations

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

***Table A6. Interaction between gender and STEM school subjects. Results from two-step probit estimation procedure (only main equation shown). Probit Regression Coefficients, Standard Errors in Parenthesis.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Germany** | | **Ireland** | | **Scotland** | |
| **STEM in HE** | Coeff. | (SE) | Coeff. | (SE) | Coeff. | (SE) |
| Gender (= female) | -0.692\*\*\* | (0.072) | -1.060\*\*\* | (0.205) | -0.853\*\*\* | (0.137) |
| STEM school (= 0) |  |  |  |  |  |  |
| 1 | 0.750\*\*\* | (0.072) | 0.299 | (0.158) | 0.0456 | (0.135) |
| 2 | 1.425\*\*\* | (0.106) | 0.978\*\*\* | (0.166) | 1.053\*\*\* | (0.122) |
| Gender#STEM school |  |  |  |  |  |  |
| female#1 STEM school | -0.103 | (0.094) | 0.292 | (0.249) | 0.287 | (0.178) |
| female#2 STEM schools | -0.006 | (0.142) | 0.459 | (0.248) | 0.179 | (0.148) |
| Inverse Mills Ratios | 0.421\* | (0.114) | 0.575\*\*\* | (0.143) | 0.461\*\*\* | (0.100) |
| cons | 0.757\*\*\* | (0.075) | -0.900\*\*\* | (0.165) | -1.042\*\*\* | (0.139) |
| N | 4253 |  | 1019 |  | 3534 |  |

Source: DZHW School Leaver Survey 2003/4, Irish and Scottish School Leavers’ Survey 2001/05, own calculations

Note: Instrumental variable in selection part: grades (standardised); \* p<0.05 \*\* p<0.01 \*\*\* p<0.00

***Table A7. STEM field of study in higher education: comparing estimates without correcting for selection into HE (M1) and estimates from two-step selection probit estimation procedure (M2). Average Marginal Effects, SE in parentheses***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Germany** |  | **Ireland** |  | **Scotland** |  |
| **STEM\_HE** | M1 | M2 | M1 | M2 | M1 | M2 |
| Gender (= female) | -0.214\*\*\* | -0.227\*\*\* | -0.235\*\*\* | -0.222\*\*\* | -0.258\*\*\* | -0.245\*\*\* |
|  | (0.012) | (0.012) | (0.016) | (0.0158) | (0.028) | (0.028) |
| STEM school (= 0) |  |  |  |  |  |  |
| 1 | 0.206\*\*\* | 0.212\*\*\* | 0.0167 | 0.040\* | 0.087\*\* | 0.101\*\*\* |
|  | (0.013) | (0.014) | (0.019) | (0.018) | (0.031) | (0.029) |
| 2 | 0.440\*\*\* | 0.471\*\*\* | 0.268\*\*\* | 0.325\*\*\* | 0.288\*\*\* | 0.360\*\*\* |
|  | (0.024) | (0.023) | (0.018) | (0.020) | (0.035) | (0.037) |
| Parental Class (= ESEC 1&2) | 0.014 | 0.026 | -0.035\* | -0.014 | -0.010 | 0.006 |
|  | (0.013) | (0.013) | (0.015) | (0.015) | (0.027) | (0.028) |
| Inverse Mills Ratios |  | 0.127\*\*\* |  | 0.134\*\*\* |  | 0.175\*\*\* |
|  |  | (0.034) |  | (0.032) |  | (0.042) |
| N | 4253 | 4253 | 3534 | 3534 | 1019 | 1019 |

M1: Probit model without accounting for selection in HE

M2: Probit model accounting for selection in HE (Inverse Mills Ratios included), Instrumental variable in selection part: grades (stand.)

Source: DZHW School Leaver Survey 2003/4, Irish and Scottish School Leavers’ Survey 2001/05, own calculations

\* p<0.05 \*\* p<0.01 \*\*\* p<0.00