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BACKGROUND PAPER

GENDER DIFFERENCES IN EDUCATION, CAREER CHOICES AND LABOR MARKET OUTCOMES ON A SAMPLE OF OECD COUNTRIES

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GENDER DIFFERENCIALS IN EDUCATION, CAREER CHOICES AND LABOR MARKET OUTCOMES ON A SAMPLE OF OECD COUNTRIES

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1. Introduction

In most OECD countries gender differentials in the labor market have experienced a steady reduction in the 1970s and 1980s. Starting with the 1990s, however, the convergence between the labor market performance of men and women has essentially stopped. As a result, gender differentials in the labor market are still significant and persistent.[1] At the same time, differences in pre-labor market characteristics, in particular education, have decreased and in most OECD countries women now acquire more education than men.[2] However, if the differences in the amount of education acquired by men and women are small, the differences in the type of education (such as the field of study, major or other characteristics of the study programme) are still large.[3]

This paper focuses on describing and analyzing gender asymmetries in the interactions between labor market outcomes and education choices for a sample of OECD countries. Within this general line of research, the paper focuses on:

1. *Describing the main asymmetries by gender in education choices.* The level of education considered is the tertiary level since this is the level where majors and fields of specialization have the strongest impact on labor market outcomes. A

[1] For international comparisons, see Blau and Kahn (2003). For evidence of trends over time, see Flabbi (2010) and Blau and Kahn (2006).
[2] In the United States, starting with the cohort of individuals born after 1956, the proportion of women with a College degree is higher than the proportion of men with a College degree. (Source: CPS data). Becker, Hubbard, and Murphy (2009) show that the phenomenon is common to most median and high-income countries starting with the generations born after 1970. OECD (2008) reports that women constitute more than 50% of new entrants in Tertiary Education (OECD average is 54%, see Table A2.6).
[3] See for example, Arcidiacono (2004) and Daymont and Andrisani (1984).

description of the performance in education as measured by graduation rates and grades obtained at the completion of the degree will also be provided.

2. *Measuring which factors may explain the gender asymmetries in education choices.* The main explanatory variables considered are the characteristics of the study programme, observable measures of ability and a concise description of family backgrounds.
3. *Measuring the contribution of education choices in explaining gender differentials in the labor market.* The main focus is on explaining gender differentials in earnings since gender differentials in earnings and wages remain the prominent issue in the study of gender differentials in the labor markets of OECD countries.
4. *Studying the correlation between education choices and occupation choices.* The choice of a field of study has a strong impact on the future occupation due to the match between the skill required on the job and the ones acquired in school. Conversely, a given occupation may have desirable characteristics that may induce a specific choice of field of study. If the direction and the specific mechanisms of the causation are difficult to disentangle in the data,[4] providing suggestive and descriptive evidence on this type of dynamic may help gauge the magnitude of the effects and on how they differ by gender.

The paper is organized as follows. The next section briefly describes the data used in the analysis. Section 3 provides descriptive evidence on gender differentials in education choices. Section 4 estimates gender-specific determinants of education choices. Section 5 evaluates to what extent educational choices determine gender differentials in the labor market. Section 6 provides descriptive evidence on the relation between the choice of field of study and the choice of occupation. The last section concludes summarizing the main results.

2. Data

The analysis requires a data set comparable across countries, containing detailed information on the type of education acquired by the individuals and reporting some measures of labor market performance.

The *Flexible Professional in the Knowledge Society* (REFLEX) data set is one of the few available data set that satisfies these criteria. The REFLEX data set collects the result

[4] Going beyond a descriptive evidence to provide causal implications is a notoriously difficult task. Some works exist that tries to identify causation of at least one characteristic of the future occupation: expected earnings. An example of a recent attempt in this research area is Beffy, Fougère and Maurel (2009).

of a survey on graduates from higher education that have about 5 years of experience since leaving higher education. They are graduates from an ISCED 5A level degree (equivalent to a College B.A. or a Master in most countries) who got their degree in the academic year 1999/2000. The project is carried out in 14 countries: Austria, Belgium (only Flanders), Finland, France, Germany, Italy, the Netherlands, Norway, Spain, UK, Czech Republic, Portugal, Japan and Estonia.

Since the focus on the project was to study "the Flexible Professional in the Knowledge Society", the data set is extremely rich in variables describing the type of education and skills acquired by the individuals and their mapping in occupation choices and skills.[5] The sample stratification should guarantee that the samples are representative at the country level for this specific graduating cohort.[6]

3. Gender Differentials in Education Choices

In the description of the gender differentials in education choices, three outcomes are considered: the level of education as measured by the proportion of individuals that successfully graduate; the type of education as measured by the major or field of specialization; and finally the performance in education as measured by the grade obtained at graduation.

Figure 1 reports the proportion of women among graduates from a Tertiary level degree (ISCED 5A level degree) by country. Women are the majority of graduates in most countries with the exception of Germany and Japan where the proportion is almost exactly 50/50. The results confirm that a positive differential in College education for women is by now a common feature in OECD countries. The distribution between a first level degree (such as a Bachelor degree in UK or a Maîtrise degree in France) and a second level degree (such as a Master degree in UK or a DEA in France) shows a greater concentration of women in first level degrees. This concentration is dramatic in Japan where only less of 20% of the second level graduates are women.

Figure 2 starts to provide evidence on asymmetries in the choice of the type of education acquired. Results are now for the pooled sample, i.e. computed on pooling all the individual level observations for all countries together. The field of choice definition

[5] Most of the papers using the REFLEX data focus on skills mismatch and overeducation: see for example McGuinness and Sloane (2009). So far, no paper has specifically focused on gender differentials using REFLEX data.

[6] See Allen and van der Velden (2007) for a detailed description of the REFLEX project, including data documentation and papers containing the main results. Additional and updated information is at http://www.reflexproject.org.

used has the objective to enable accurate coding of programmes into 3-digit ISCED fields of training. A more aggregated field of choice definition is provided in the country-by-country statistics.

Social Sciences, Business and Law are the favourite fields for women while the favourite fields for men are Engineering and Architecture with Social Sciences, Business and Law scoring a close second place. Figure 3 organizes the same information in a different way. The figure reports the proportion of women that have completed their degree by field of study. The fields may be roughly aggregated in three groups: fields where the majority of graduates are women (Education, Humanities, and Health), fields where the proportion of women roughly corresponds to the proportion of women in the overall sample (Social Sciences, Business and Law; Sciences and Mathematics; Agriculture and Veterinary; Social Service), and fields where the majority of graduates are men (Engineering and Architecture).

Figure 4 shows the distribution by aggregate field of study[7] for each country. The differences between countries are quite significant. However, the fact that men and women make quite different field choices is common to all countries: men are more concentrated in the Sciences, women in the Humanities while Social Sciences covers about 30% of the choices for both men and women. The proportion of men and women choosing Health is the one showing the largest differences between countries.

Overall, Figure 2 to 4 show that there are systematic differences between men and women in the choice of field of study and that these differences are much larger than the difference in the overall proportion of graduates.

Figure 5 and 6 look at gender differences in performance at the Tertiary level. Performance is measured by the grade received upon graduation (Tertiary School Grades). To make the grades comparable across countries, all the Figures concerning the grades present the distribution over quartile by gender where the distribution is computed on the pooled sample of men and women for each country.[8] Notice that the scale of the final grade upon graduating from a tertiary level degree varies widely between countries. Some countries use a very fine grid generating an almost continuous variable (for example, Italy uses a score with a range from 60 to 110). On these countries, the number of individuals in the top quartile roughly corresponds to a proportion of 25%. Other countries use a very coarse grid with final grades assuming only an handful of values (for example, Austria uses only four values). On these countries, the number of individuals in

[7] A more aggregated definition of field is necessary to make the Table readable and also to perform some discrete choice regression in the fourth section of the paper. The aggregation in four fields follows OECD (2008), Chart A2.5. It merges Education and Humanities to generate the field *Humanities*; Social Sciences, Business, Law, and Social Services to generate the field *Social Sciences*; Sciences, Mathematics, Agriculture, Veterinary, Engineering, Architecture to generate the field *Sciences*. Finally, the field Health remains unchanged.

[8] Also Allen and van der Velden (2007) use relative grades to study the impact of grades on labor market performance. They conclude that grades are a clear signal for future employers.

the top quartile is frequently much higher than 25% because many individuals may receive the top.

The graph does not show major differences in performance. Women fare a little better since more of them are in the third quartile than in the first quartile with respect to men. This lack of difference in performance on the pooled sample masks some important differences at the country level. Figure 6 presents the proportion of graduates in the top 25% of the grade distribution or scoring the top grade available[9] for each country. If many countries confirm the lack of differential in performance, Japan and UK report a worse performance for women while Italy, the Netherlands and Estonia show a better performance for women than men.

A next instructive step is checking if similar evidence about individuals' performance was present at the entrance of the Tertiary level of education. Figures 7 and 8 present the distribution computed on the grades obtained upon graduation from the *Secondary* level of education. The figures essentially confirms the results obtained at the Tertiary level on the pooled sample. At the country level, the differential in performance is a little smaller on countries actually showing a differential. The striking exception is Japan where the ranking in performance is reversed: At the entrance of the tertiary school level more women than men hold top grades, at the exit of the tertiary school level more men than women hold top grades.

Grades are usually not homogeneous across fields and since we have seen major differences in the choice of field by gender, it is interesting to present some evidence of performance by field. Figures 9 and 10 present the proportion of graduates with top grades upon graduating from, respectively, tertiary school and secondary school; Figures 11 and 12 present the same evidence by country.

Men and women have a very similar performance upon graduating from the tertiary level in Sciences or in Social Sciences. In the Humanities women obtain a slightly better performance but a substantially worse performance in Health. Probably the major difference between men and women is that the proportion of top performer women is very similar across fields while men show a little bit more variation.

The field Sciences attracts the highest proportion of top performing students in secondary school both on the male and female sample. At the opposite, Health attracts the lowest proportion of top performing students even if, upon graduation, Health is granting the highest proportion of top grades. The evidence by country (Figures 11 and 12) confirms the same evidence about Health. The evidence about Science is much more differentiated by gender. Italy, Japan and Belgium confirm the positive selection (i.e. Science attracts the highest proportion of top performing students) only on the male

[9] As mentioned above, the fact that some countries use a very coarse grid implies that potentially much more than 25% of the graduates receive a Top Grade.

sample; the UK and the Czech Republic show a substantial positive selection only on the female sample; the other countries report more mixed results. The evidence common to all countries (possibly with the exception of the Czech Republic and Japan's female sample) is that grade performance upon graduation varies widely across fields and that the differences are *not* explained by sample selection at the entrance of the tertiary school level programme. The low variation of performance across fields found on the pooled sample was therefore in part due to aggregation effects.

Conclusion

The main differences in education choices between men and women are:

1. Women acquire a little more tertiary education than men but they are more concentrated in the first level of tertiary education (e.g. B.A.) than in the second level (e.g. Master).
2. The significant differences in the choice of field of study by gender can be summarized as follows: women are the majority of graduates in Education, Humanities, and Health; the proportion of women roughly corresponds to the proportion of women in the overall sample among the graduates in Social Sciences, Business and Law; Sciences and Mathematics; Agriculture and Veterinary; Social Service; finally, the majority of graduates are men in the fields of Engineering and Architecture.
3. Grade performance upon graduation varies widely across fields at the country level but not at the aggregate level. The differences are *not* explained by sample selection at the entrance of the tertiary school level.
4. Men and women have usually a similar performance in Sciences and in Social Sciences while women perform better in the Humanities and men in the field Health.
5. Overall, the main differences between men and women at the tertiary school level of education are not in the total amount of education acquired or in the performance obtained but in the field of study actually chosen.

4. Gender-Specific Determinants of Education Choices

Given that systematic differences exist in the education choices of men and women, it is interesting to study the sources of this asymmetry. This section focuses on the characteristic over which men and women experience the largest asymmetry: the choice of field of study. In studying what factors may have an impact on the choice of field, the focus is on characteristics of the study programme, ability, and family backgrounds

controls. See footnote to Table 1 for a detailed description.[10] The choice of the aggregate field of study is the dependent variable in the econometric analysis.[11]

Table 1 reports the impact of gender on the choice of field of study based on a Multinomial Logit model. Three specifications are presented depending on the inclusion of controls for characteristics of the study programme (demanding, prestigious, with broad focus), ability (as measured by grade at the end of Secondary school) and family backgrounds (as measured by the mother's education level). Only the marginal effects of the dummy female are reported in the Table. Notice that the introduction of controls changes the sample size: this is due to missing values on the relative variables.[12]

Not surprisingly gender has a huge impact on the choice of the field of study: being female - conditioning on controls - decreases the probability to choose Sciences by about 27 percentage points and increases the probability to choose Humanities by more than 16 percentage points. These effects are not sensitive to the addition of significant controls for ability and family background. Moreover, they are not significantly different from the point estimates obtained without any control (not reported). We can then conclude that the impact of gender on the choice is not driven by selection on the other observable individual characteristics.

Table 2 reports results of the same model but estimated separately for men and women. Only the richer specification (corresponding to specification (3) in Table 1) is reported. For both men and women, a "demanding" programme has a positive impact on choosing Sciences and Health but negative on choosing Humanities and Social Sciences. Ability has a positive impact on choosing Sciences and the impact is much larger for men than for women. Having a mother with College is correlated with a higher probability of choosing Health for both genders and of choosing Sciences for women.

Table 3 reports some evidence at country level. The coefficients reported refer to a multinomial logit regression run separately for each country. The specification includes the full set of controls, i.e. it corresponds to same specification (3) in Table 1. Results are

[10] Local labor market conditions are potentially important in this decision. However, they are not included in the analysis because the REFLEX data set is sampling the same graduating cohort for a given country so there is not enough information to identify any impact of labor market conditions.

[11] The literature on the determinants of field of choice at the Tertiary level is extremely scarce due to lack of data; one example is Arcidiacono (2004) using NLSY data for the US. A larger literature exists that look at the determinant of acquiring an additional degree after Secondary education. This literature is developed enough that works looking at gender differentials also exist, see for example Checchi and Flabbi (2007) and Dustmann (2004) for evidence on Italy and Germany using PISA data.

[12] The variables with the largest number of missing refer to the characteristics of the Programme. Also variables relating to family background have a nontrivial number of missing: this is the reason why we use only the mother education as control for family backgrounds. Using also the father education would have reduced the sample size by a much larger margin, in particular on some countries (Czech Republic, Estonia).

strikingly similar across countries: being female - at same Programme characteristics, ability, and family backgrounds - increases the probability to choose Humanities and Health and decreases the probability to choose Sciences. This is the same result found on the pooled sample. However, there are differences across countries with respect to the sign of the impact on Social Sciences (either positive or negative depending on the country) and with respect to the magnitudes of the effects. For example, the impact on choosing the field Health ranges from a positive impact equal to about 21 percentage points for Japan to a not significant impact for Portugal.

Since the perceived characteristics of the study programme seem to play a role in the choice of the field and since they are a piece of information rarely available in large data sets, Table 4 describes the correlation between the program characteristics and the field of study. More than 20% of men and women regard study programmes in the field of Sciences as very Demanding while only about 10% of the respondents express the same judgment about study programmes in the field of Humanities. The same asymmetry is reported with respect to judging a programme Prestigious while the judgement about the Broad focus of a programme is more evenly distributed. If there are some asymmetries across fields these asymmetries are not so large as to completing predict a field given a program characteristics. Difference in judgment between genders are present but they are not as large as to change the ranking of the fields, i.e. both men and women agree on which fields are the most prestigious, demanding and broad.

Conclusion.

1. Gender is a significant determinant of the field of study: being female increases the probability to choose Humanities and Health and decreases the probability to choose Sciences and Social Sciences.
2. This result carries through also at the country-level.
3. The robustness of the impact across specifications suggests that the impact of gender on the field choice is not driven by selection on the other observable individual characteristics.
4. Looking at determinants by gender indicates that a "demanding" Programme and a high grade in Secondary School are positively correlated with choosing the field Sciences but negatively correlated with choosing the field Humanities. Ability has a larger impact on men's decisions than on women's decisions

5. Gender Differentials in the Labor Market and Educational Choices

The next step of the analysis is studying if and to what extent educational choices explain gender differentials in the labor market. The focus is on the most important gender differential available in the data: the earnings differential. Preliminary to the analysis on earnings, Figure 13 and 14 reports results on labor market status by gender. Strong gender asymmetries in this respect may generate strong gender differences in the selection of the samples of individual we observe working and therefore they should be taken into account when comparing wages across genders. The large majority of both men and women are employed at the time of the interview but gender asymmetries exist. The proportion of graduates who are unemployed or out of the labor force is much larger for women than men: about 4% of men are unemployed or out of the labor force as opposed to about 10% of women. The same differential is present in all countries but the magnitude is stronger on some countries than others. The differentials in participation rates are particularly large in the Czech Republic, Austria, Germany, Finland and Japan. Unemployment differentials are particularly large in Italy and Spain.

Table 5 reports the results of twelve log earnings regression. The first six regressions are based on the current job and the last six on the first job after graduation. The only coefficient reported is the one referring to the dummy female, i.e. the conditional earnings differential between men and women. This first round of regressions has the objective of studying the sensitivity of the differential with respect to the available and relevant individual characteristics. On top of age, country fixed effects and the usual controls for job characteristics (industry, occupation, self-employment, public sector) and family background (education level of the parents), the model also includes controls for ability based both on the secondary level and tertiary level degree grades and controls for the field of study. The most interesting result is that the field of study implies a reduction on the conditional differential on the current job. The conditional differential is about 10.3% when controlling for field but more than 12% when only age and country fixed effects are present. Only controls for job characteristics imply an higher reduction in the differentials. It is also important to notice that this wide range of controls explains a fair amount of the overall earnings variation for the current job but much less of the variation at the first job.

Table 6 reports results at country level; only the richer specification for the current job is reported. Results show major differences across countries.[13] If in all countries

[13] This result is somewhat at odds with Allen and van der Velden (2007): they conclude their analysis suggesting that across countries "similarities in outcomes are more striking than differences". Their conclusion is in part driven by the fact that gender differentials do not take centre stage in their study.

women earns less on average than men at same observable characteristics, the conditional differentials ranges from about 18.5% for Portugal to 3% (and statistically not different from zero) for Belgium.

Table 7 reports results of the same log earnings regressions but estimated separately for men and women. The results are very different between genders. On the male sample, choosing any field which is not Humanities increases the wage of a significant amount, from about 6% for Sciences to more than 10% for Health. On the female sample, only social sciences significantly increase the wage with respect to Humanities, even if when some sample selection bias correction is introduced (Heckman correction in column (3)) the difference becomes not statistically significant. Another asymmetry between man and women refers to the characteristics of the Study programme: choosing a prestigious programme has a positive and significant effect for women but not for men.

Table 8 reports an Oaxaca-Blinder decomposition based on the regressions in Table 5. The decomposition reports the contribution of each group of variables on the gender differential as measured by the difference between the average earnings of men and the average earning of women. The contribution of each group is split between the effect due to the amount of the variable (the endowments) and the return on the variable (the coefficients). The Table reports two specifications and the values are scaled to represent percentage point. For example, looking at specification (1) we can conclude that most of the differential is due to differences in returns: the coefficient explain 9.2 percentage points out of the total 11.9 percentage points differential. The returns to the field of study contribute a non-negligible amount to the differential, up to 4.8 percentage points in the richer specification. The most important source of differential are the returns on job characteristics, even though the large magnitude is very imprecisely estimated.

Conclusion.

1. The field of study is a significant but not major variable in explaining the earnings gender differentials.
2. In all the measures presented - conditional earnings differentials, gender-specific impact on earnings, Oaxaca-Blinder decomposition - the choice of field plays a significant role but other factors, notably the returns on job characteristics play a much more important role.
3. The estimates of gender-specific coefficients suggest that choosing a given field has very different impacts on men and women.
4. Evidence at the country level shows a wide range of gender earnings differentials, even if in all countries women experience a negative differential.

6. The Relation between Choice of Field of Study and Choice of Occupation

Different occupations require different skills and different fields of study - even if at exactly the same level of education - teach different skills. Finding and retaining a job, therefore, is a matching process over multiple job characteristics and individual skills. Not surprisingly, the analysis in the previous section has shown that the characteristics of the job, described by occupation and industry dummies, are a significant determinant of wages and that the returns on them may contribute about 18 percentage points to the gender earnings differentials (see Table 8). If the choice of a field of study has a strong impact on the future occupation, conversely a given occupation may have desirable characteristics that induce a specific choice of field of study. This section of the paper provides descriptive evidence on this dynamic and on how it differs by gender.

Figure 15 reports the distribution of male and female workers across occupations. The occupations are defined following the *major groups* definitions from the International Standard Classification of Occupations. Since the REFLEX sample includes only individuals who graduated from a Tertiary level of education, we observe that the first job they accept after graduation is usually in a skilled occupation: most of men and women work as *professionals* or *skilled technicians* with a few holding less skilled positions (mainly *clerks*) and a negligible minority more senior positions. Within these four occupation choices, more men than women work in senior and professional positions while more women than men work as technicians or clerks.

Since the occupations *professionals* and *skilled technicians* cover more than 80% the occupational choices, Figure 16 and 17 focus only on these two categories. The Figures report the distributions over occupations defined as *sub-major groups* from the International Standard Classification of Occupations. At this level of aggregation the gender asymmetry becomes stark. If more than 40% of men work in occupations related to *physics, mathematics and engineering* only a little more than 10% of women do. Women, instead, are concentrated in teaching occupations: almost 30% of women work as teacher and more than 70% of teachers are women. A large proportion of both men and women are employed in occupations labeled as *other*. The *other* category is very heterogeneous and it includes jobs as different as creative writers and financial brokers. Within this occupation, both men and women concentrate in jobs described as business, legal, finance and administrative professionals.

Figure 18 presents some evidence at country-level. The Figure reports the same evidence presented in Figure 16 on the pooled sample: distributions over occupations defined as *sub-major groups* among the *professionals* and *skilled technicians*. All countries show large differences by gender and confirm the results found on the pooled

sample: men are concentrated in *physics, mathematics and engineering* and women in *teaching*; the *other* category is chosen by a significant proportion of individuals of both genders. Some countries experience particularly strong asymmetries: in Japan the concentration of men in *physics, mathematics and engineering* reaches about 60%; in France the proportion of women choosing a teaching profession reaches about 40%.

Table 9 concentrates on the mapping from Fields of Study to Occupation. Each row reports how many graduates (in percentage) from a given field of education work in a given occupation. The data refers to the first job after graduation. As in the previous figures we observe a very high concentration in *professionals* and *skilled technicians* jobs for both men and women. *Engineering* and *science* are the fields where most graduates tend to work as professionals (about 60/70% of them) while *humanities, social sciences* and *social services* are the fields where fewer graduates tend to work as professionals (about 40/50%). This variation across fields suggests that there actually is an important correlation between field of study and occupation but that this correlation is not dramatic at this level of aggregation. Moreover, it does not seem to significantly differ by gender.

When we look only at professionals and technicians we start to observe starker asymmetries by gender. Table 10 reports correlations between aggregate fields of study and the four categories in which the occupations *professionals* and *skilled technicians* are organized. Almost 70% of the female graduates from the field humanities work as teachers compared to about 50% of the male graduates. The majority (about 55%) of the male graduates from the science field work as professional in physics, mathematics and engineering as opposed to 33% of the female graduates. Overall only 7.5% of women work in these fields while physics, mathematics and engineering is the second favourite field for men. Women, instead, are highly concentrated in teaching professions. This level of disaggregation shows stronger differences by gender and stronger correlations between field of study and occupations than those found at a more aggregate level in Table 9.

Table 11 reports evidence on each country at the same level of disaggregation of Table 10. In all countries women are concentrated in teaching professions but in some countries this is true on the male sample as well (Belgium and France). The concentration of men in physics, mathematics and engineering occupations is also confirmed, with some variation across countries: Japan reaches 33%, Belgium only 14%. The dimension over which both the pooled samples and the country levels samples show similarities across gender is the high proportion of individuals choosing the field *other*. This is a sort of residual category in the *sub-major* group of occupations defined by the International Standard Classification of Occupations (which is the standard used in the REFLEX survey). It includes professions as different as Business and legal professionals, creative

professionals, finance and sales associate professionals. This category is therefore likely to mask additional asymmetries between genders.

Conclusion.

1. There are asymmetries in the occupation choices of men and women but they become really stark and important at relative fine level of occupation disaggregation.
2. Most of the differences concern teaching occupations and professions related to physics, mathematics and engineering: almost 30% of women teach as a profession as opposed to about 12% of men. As a result, more than 70% of teachers are women. More than 40% of men work in physics, mathematics and engineering professions as opposed to little more than 10% for women.
3. The correlation between field of study and occupation is not very strong at the *major group* of occupation level since most of the graduates work as *professionals or technicians*.
4. However, when we look within the *professionals and technicians* occupations, the correlation between field of study and occupation becomes strong and significant.
5. The asymmetries by gender are also stronger when we look within the *professionals and technicians* occupations. One possible interpretation of this result is that the teaching professions are crowding-out all the other occupations in the sample of women.
6. This overall evidence is substantially confirmed at the country level.

5. Conclusion

This paper focuses on describing and analyzing gender asymmetries in the interactions between labor market outcomes and education choices for 14 OECD countries: Austria, Belgium (only Flanders), Finland, France, Germany, Italy, the Netherlands, Norway, Spain, UK, Czech Republic, Portugal, Japan and Estonia.

The analysis requires a data set comparable across countries and containing detailed information on the type of education acquired by the individuals. The *Flexible Professional in the Knowledge Society* (REFLEX) data set is one of the few available data set that satisfies these criteria. The data set focuses on graduates from higher education that have about 5 years of experience since completing their ISCED 5A level degree (equivalent to a College B.A. or a Master in most countries) in 2000.

The main conclusions of the analysis are the following. They describe results that are on average common to all the countries considered in the study.

1. *Gender Differentials in Education Choices.* Women acquire a little more tertiary education than men. There are significant differences in the choice of field of study by gender: women are the majority of graduates in Education, Humanities, and Health while men are the majority of graduates in the fields of Engineering and Architecture. Grade performance upon graduation varies widely across fields: men and women have a similar performance in Sciences and Social Sciences while women perform better in the Humanities and men in the field Health.
2. *Gender-Specific Determinants of Education Choices.* Gender is a significant determinant of the field of study even after controlling for detailed individuals characteristics: being female increases the probability to choose Humanities and Health and decreases the probability to choose Sciences and Social Sciences. Ability has a larger impact on men's decisions about the field of study than on women's decisions.
3. *Gender Differentials in the Labor Market and Educational Choices*. The field of study is a significant but not major variable in explaining the earnings gender differentials; other factors - notably, the returns on job characteristics - play a much more important role. Choosing a given field has very different impacts on men and women.
4. *Relation between Choice of Field of Study and Choice of Occupation*. Since job characteristics may be a function of the field of study, the actual identification of the causal impact of field of study on labor market gender differentials remains an open question. However, providing descriptive evidence on the relation between field of study and occupation may help to clarify the issue. I find that the correlation between field of study and occupation is strong and significant only within occupations defined as professionals and technicians. These occupations employ more than 80% of Tertiary School graduates. With respect to occupation choices most of the differences between men and women concern teaching occupations and professions related to physics, mathematics and engineering.

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Table 1: Impact of Gender on Field of Study - Multinomial Logit Model

Specification:	(1)				(2)				(3)			
Choice of Field:	Humani-ties	Social Sciences	Sciences	Health	Humani-ties	Social Sciences	Sciences	Health	Humani-ties	Social Sciences	Sciences	Health
Female (=1	0.168	-0.006	-0.269	0.107	0.168	-0.007	-0.268	0.107	0.168	-0.006	-0.268	0.106
if Woman)	(0.005)	(0.005)	(0.004)	(0.004)	(0.005)	(0.007)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.004)
Controls for:												
Study Programme		Yes				Yes				Yes		
Ability (Top Grades)		No				Yes				Yes		
Family Backgrounds		No				No				Yes		
Observations		26,291				37,227				36,180		
Loglikelihood		-38,796				-30,645				-29,797		

Notes:
Dependent Variable: choice of field.
Coefficient Reported (Standard Errors by delta method in parentheses): marginal effects computed at the sample mean of the regressors.
Controls: Each regression includes age and country fixed effects. Study Programme: dummy for secondary or primary level of tertiary degree and dummies describing if the programme is demanding, has broad focus, is academically prestigious; Ability: dummy if Top Grade holder at the end of secondary school; Family Background: dummy if mother completed a tertiary education level degree.

Table 2: Determinants of Field of Study by Gender - Multinomial Logit Model

	Female				Male			
Choice of Field:	Humani-ties	Social Sciences	Sciences	Health	Humani-ties	Social Sciences	Sciences	Health
Programme:								
Second Level	0.0509	0.0473	0.0583	-0.1565	0.0138	0.0045	0.0035	-0.0217
	(0.0084)	(0.0086)	(0.0072)	(0.0066)	(0.0072)	(0.0104)	(0.0111)	(0.0055)
Demanding	-0.0838	-0.1427	0.0859	0.1405	-0.0647	-0.1890	0.1925	0.0612
	(0.0114)	(0.0116)	(0.0078)	(0.0077)	(0.0100)	(0.0130)	(0.0127)	(0.0054)
Broad	-0.0174	0.0178	-0.0036	0.0032	-0.0006	0.0236	-0.0217	-0.0013
	(0.0095)	(0.0095)	(0.0078)	(0.0074)	(0.0083)	(0.0115)	(0.0124)	(0.0061)
Prestigious	-0.1008	0.0471	-0.0117	0.0653	-0.0313	0.0107	-0.0050	0.0257
	(0.0141)	(0.0133)	(0.0102)	(0.0096)	(0.0117)	(0.0147)	(0.0154)	(0.0063)
Ability:								
Top Grades	-0.0017	-0.0167	0.0291	-0.0106	-0.0016	-0.0502	0.0556	-0.0039
(Secondary)	(0.0074)	(0.0076)	(0.0061)	0.0061	(0.0062)	(0.0089)	(0.0094)	(0.0049)
Fam. Backg.:								
Mother with	-0.0235	-0.0036	0.0132	0.0139	-0.0039	-0.0047	-0.0260	0.0346
Tertiary Ed.	(0.0081)	(0.0084)	(0.0067)	0.0066	(0.0071)	(0.0102)	(0.0108)	(0.0051)
Observations		17,766				12,031		
Loglikelihood		-22,697				-13,274		

Notes:
Dependent Variable: choice of field.
Coefficient Reported (Standard Errors by delta method in parentheses): marginal effects computed at the sample mean of the regressors.
Additional Controls: Each regression includes age and country fixed effects..

Table 3: Impact of Gender on Field of Study by Country - Multinomial Logit Model

Field: Country:	Humanities	Social Sciences	Sciences	Health
Italy	0.190	-0.022	-0.218	0.049
	(0.016)	(0.018)	(0.015)	(0.011)
Spain	0.132	0.036	-0.246	0.078
	(0.015)	(0.016)	(0.012)	(0.012)
France	0.118	0.042	-0.213	0.053
	(0.024)	(0.027)	(0.022)	(0.014)
Austria	0.187	0.033	-0.231	0.011
	(0.021)	(0.025)	(0.019)	(0.007)
Germany	0.129	0.045	-0.270	0.097
	(0.018)	(0.021)	(0.019)	(0.017)
Netherlands	0.128	-0.115	-0.215	0.202
	(0.016)	(0.017)	(0.012)	(0.017)
UK	0.206	-0.050	-0.193	0.037
	(0.031)	(0.030)	(0.025)	(0.017)
Finland	0.115	0.019	-0.343	0.208
	(0.015)	(0.019)	(0.011)	(0.018)
Norway	0.123	-0.092	-0.191	0.161
	(0.021)	(0.017)	(0.015)	(0.021)
Czech Republic	0.206	0.008	-0.286	0.071
	(0.010)	(0.011)	(0.009)	(0.008)
Japan	0.165	-0.083	-0.298	0.215
	(0.019)	(0.016)	(0.015)	(0.024)
Portugal	0.119	0.077	-0.245	0.049
	(0.037)	(0.043)	(0.032)	(0.031)
Belgium	0.124	0.005	-0.203	0.074
	(0.023)	(0.026)	(0.021)	(0.018)
Estonia	0.236	0.002	-0.277	0.039
	(0.036	(0.036)	(0.021)	(0.017)

Notes:
See Table 1, Specification (3)

Table 4: Correlation between Program Characteristics and Field of Study

Program:	Demanding		Broad		Prestigious	
Field:	Male	Female	Male	Female	Male	Female
Humanities	9.86	10.61	14.98	14.94	7.31	6.32
Social Sciences	10.44	10.3	16.57	16.96	9.99	9.45
Sciences	22.53	21.38	15.21	16.21	12.38	11.07
Health	36.6	22.36	18.24	17.17	21.02	13.08
Total	18.07	14.56	15.83	16.26	11.6	9.46

Notes: The table reports the proportion of respondent that perceive their program of study Demanding, Broad or Prestigious. The subjective evaluation are given as answers to the question: "Was the study programme generally regarded as < .. >?". The answers are organized in a scale from 1 (= not at all) to 4 (= to a very high extent). The table reports the proportion of answers = 4.

Table 5: Sensitivity of Gender Earning Differentials with respect to Observable Characteristics - OLS Regressions

	Current Job						First Job					
Specifications:	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.122***	-0.103***	-0.0874***	-0.121***	-0.122***	-0.0833***	-0.104***	-0.0932***	-0.0919***	-0.103***	-0.107***	-0.0886***
	(0.00552)	(0.00600)	(0.00568)	(0.00568)	(0.00558)	(0.00618)	(0.00914)	(0.00995)	(0.00967)	(0.00949)	(0.00931)	(0.0107)
Controls:												
Field of Study	No	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes
Job	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
Ability	No	No	No	Yes	No	Yes	No	No	No	Yes	No	Yes
Family Back.	No	No	No	No	Yes	Yes	No	No	No	No	Yes	Yes
Observations	25,737	24,906	24,262	24,298	25,119	21,742	20,655	20,119	20,032	19,504	20,037	17,979
R^2	0.599	0.604	0.640	0.600	0.603	0.644	0.356	0.358	0.371	0.353	0.355	0.367

Notes:
Dependent Variable: log of gross hourly earnings.
Coefficient Reported (Standard Errors in parentheses): coefficient on a dummy=1 if woman.
Controls: Each regression includes a constant, age and country fixed effects. The other controls are defined as follows. Field of Study: dummy for secondary or primary level of tertiary degree, 4 dummies for aggregate field of study and dummies describing if the programme is demanding, has broad focus, is academically prestigious; Job Characteristics : 8 dummies for occupation; 8 dummies for industry; dummy if self-emplyed; dummy if in Public sector; Ability: dummy if top grades at the end secondary school, dummy for quartile of grade at the end of tertiary school; Family Background: dummy if mother has completed tertiary education.

Table 6: Gender Earning Differentials conditioning on Observable Characteristics - OLS Regressions by Country

	IT	ES	FR	AT	DE	NL	UK	FI	NO	CZ	JP	PT	BE	EE
Female	-0.102***	-0.0769***	-0.174***	-0.0552**	-0.0455*	-0.0503***	-0.0497	-0.0938***	-0.0776***	-0.0571***	-0.185***	-0.172***	-0.0301	-0.169***
	(0.0241)	(0.0171)	(0.0290)	(0.0238)	(0.0259)	(0.0127)	(0.0339)	(0.0157)	(0.0169)	(0.0130)	(0.0448)	(0.0520)	(0.0216)	(0.0385)
Field	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Job	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ability	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Family.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	1,654	2,592	986	1,068	1,029	2,221	743	1,796	1,448	4,678	1,491	381	997	658
R^2	0.134	0.229	0.214	0.174	0.176	0.217	0.189	0.349	0.274	0.139	0.087	0.211	0.121	0.278

Notes:
Dependent Variable: log of gross hourly earnings.
Coefficient Reported (Standard Errors in parentheses): coefficient on a dummy=1 if woman.
Controls: Each regression includes a constant and age. The other controls are defined as in Table 4.

Table 7: Impact of Field of Study on Earnings by Gender - OLS and Heckman Selection Model

		Female		Male	
Specification	(1)	(2)	(3)	(4)	(6)
Estimation Method	OLS	OLS	Heckman	OLS	OLS
Field of Study:					
Social Sciences	0.0164*	0.0256**	0.0270	0.143***	0.0889***
	(0.00895)	(0.0103)	(0.0189)	(0.0147)	(0.0164)
Sciences	0.00219	-0.0114	-0.0369	0.130***	0.0615***
	(0.0107)	(0.0119)	(0.0239)	(0.0141)	(0.0160)
Health	-0.00903	0.0107	0.0206	0.0815***	0.104***
	(0.0109)	(0.0140)	(0.0260)	(0.0209)	(0.0284)
Type of Degree:					
Second Level	0.119***	0.0765***	0.0835***	0.0813***	0.0521***
	(0.00881)	(0.00932)	(0.0174)	(0.0106)	(0.0111)
Study Programme:					
Demanding	0.00607	0.000689	-0.00447	0.0507***	0.0452***
	(0.0113)	(0.0115)	(0.0212)	(0.0126)	(0.0126)
Broad Focus	-0.0190**	-0.0164*	-0.0253	-0.0297**	-0.0182
	(0.00968)	(0.00981)	(0.0183)	(0.0120)	(0.0121)
Prestigious	0.0704***	0.0552***	0.0975***	0.0236	0.00694
	(0.0136)	(0.0139)	(0.0297)	(0.0149)	(0.0150)
Additional controls:					
Job	No	Yes	Yes	No	Yes
Ability	No	Yes	Yes	No	Yes
Family Back.	No	Yes	Yes	No	Yes
Observations	14,557	12,583	14,001	10,476	9,159
R^2	0.598	0.643		0.603	0.649

Notes:
Dependent Variable: log of gross hourly earnings in current job.
Omitted category is the Field of study Humanities.
Additional Controls: Each regression includes a constant, age and country fixed effects. The other controls are defined as in Table 4. Standard Errors in parentheses. P-values: *** p<0.01, ** p<0.05, * p<0.1.

Table 8: Oaxaca-Blinder Decomposition of the Gender Earnings Differential

Specification:	(1)	(2)
Differential	0.119	0.121
	(0.009)	(0.009)
Endowments:		
Field of Study	0.027	0.009
	(0.002)	(0.003)
Study Program	0.007	0.005
	(0.001)	(0.001)
Job Characteristics	-	0.040
		(0.003)
Ability	-	0.000
		(0.000)
Family Background	-	-0.001
		(0.000)
Country F.E.	-0.007	-0.004
	(0.007)	(0.008)
Total	0.027	0.052
	(0.007)	(0.008)
Coefficients:		
Field of Study	0.084	0.048
	(0.014)	(0.016)
Study Program	-0.019	-0.011
	(0.007)	(0.008)
Job Characteristics	-	0.184
		(0.326)
Ability	-	-0.026
		(0.020)
Family Background	-	-0.001
		(0.003)
Country F.E.	-0.099	0.386
	(0.044)	(0.042)
Constant	0.126	-0.535
	(0.047)	(0.332)
Total	0.092	0.068
	(0.005)	(0.005)

Notes:
The Table reports the contributions, in percentage points, of each group of variables to the gender differential in gross hourly earnings in the current job. Based on the difference male - females. The decompostions is based on the OLS regressions reported in Table 4. Standard Errors in parentheses.

Table 9: Occupation Choice by Field of Study Completed - Male and Female

Occupation: Field of Study:	armed forces	senior positions	professionals	technicians	clerks	service workers	agricolture fishery workers	craft and related trades	plant and machine operators	unskilled	Tot
Male											
education	0.17	3.47	63.43	24.09	3.99	1.91	0.00	0.87	0.69	1.39	100.00
humanities	0.24	3.67	55.50	19.80	10.51	5.50	0.12	1.59	0.98	2.08	100.00
social sciences	0.46	10.53	45.42	22.91	14.63	3.50	0.09	0.54	0.51	1.42	100.00
science	0.72	3.73	66.86	20.76	4.13	1.44	0.33	0.33	0.39	1.31	100.00
engineering	0.18	4.31	71.58	18.52	2.86	0.57	0.05	0.88	0.75	0.29	100.00
agriculture	0.22	6.14	48.90	24.78	7.89	3.29	4.39	1.32	1.10	1.97	100.00
health	0.24	1.43	65.64	29.73	0.59	1.31	0.00	0.12	0.59	0.36	100.00
social service	0.95	9.49	42.09	31.65	5.38	5.06	0.63	0.63	2.22	1.90	100.00
Total	0.36	5.99	59.68	21.84	7.18	2.23	0.28	0.71	0.69	1.04	100.00
Female											
education	0.00	1.90	65.96	23.35	3.41	3.48	0.00	0.11	0.18	1.61	100.00
humanities	0.08	2.94	50.73	19.70	17.77	7.13	0.08	0.52	0.12	0.93	100.00
social sciences	0.05	6.88	44.59	24.85	18.45	3.53	0.02	0.16	0.14	1.32	100.00
science	0.23	2.57	64.04	21.37	7.10	2.57	0.00	0.55	0.16	1.40	100.00
engineering	0.00	3.49	63.64	26.84	3.57	0.89	0.00	0.59	0.52	0.45	100.00
agriculture	0.21	3.00	50.64	26.82	8.58	3.65	4.51	0.86	0.00	1.72	100.00
health	0.00	1.03	49.02	42.46	2.57	4.32	0.00	0.06	0.06	0.48	100.00
social service	0.24	9.81	34.21	36.60	10.77	7.66	0.00	0.00	0.24	0.48	100.00
Total	0.06	3.84	52.44	27.42	10.59	4.01	0.14	0.26	0.16	1.08	100.00

Notes: Percentage of graduates by field in each occupation. First job after graduation. Occupations are the *major groups* from the International Standard Classification of Occupations. Fields of study definition is abbreviated, see main text and figures for a more detailed description.

Table 10: Occupation Choice by Field of Study Completed for Professionals and Technicians - Male and Female

Occupation: / Field of Study:	physics, mathematics and engineering	life science and health	teaching	other	Total
Male					
humanities	7.94	0.89	52.36	38.80	100.00
social sciences	13.40	1.14	7.71	77.75	100.00
science	55.32	18.40	13.80	12.49	100.00
health	8.35	76.56	3.12	11.97	100.00
Total	23.03	15.44	16.79	44.74	100.00
Female					
humanities	1.98	1.70	68.43	27.89	100.00
social sciences	5.45	2.43	11.42	80.70	100.00
science	33.65	28.91	22.12	15.32	100.00
health	5.61	69.89	5.15	19.35	100.00
Total	7.54	21.06	29.92	41.48	100.00

Notes: Percentage of graduates by field in each occupation. First job after graduation. Occupations are the *sub-major groups* from the International Standard Classification of Occupations. Examples of occupations at the *minor group* level that correspond to the *sub-major group* level occupation *other* are: Business and legal professionals, creative professionals, finance and sales associate professionals. Fields of study definition is abbreviated, see main text and figures for a more detailed description.

Table 11: Occupation Choice by Field of Study Completed for Professionals and Technicians - Male and Female by Country

Occupation: Field of Study:	physics, math, eng.	life sciences, health	teaching	other	Total
Italy					
Male					
humanities	11.54	1.92	38.46	48.08	100.00
social sciences	5.31	0.27	5.84	88.59	100.00
science	44.30	24.16	20.81	10.74	100.00
health	6.33	84.81	5.06	3.80	100.00
Total	14.76	15.98	11.72	57.53	100.00
Female					
humanities	1.20	0.80	59.20	38.80	100.00
social sciences	4.11	1.30	12.99	81.60	100.00
science	36.08	25.32	29.75	8.86	100.00
health	3.30	76.37	6.59	13.74	100.00
Total	8.08	17.78	25.38	48.76	100.00
Spain					
Male					
humanities	2.78	0.00	52.78	44.44	100.00
social sciences	6.36	0.00	16.36	77.27	100.00
science	39.73	33.93	7.59	18.75	100.00
health	54.76	34.52	0.00	10.71	100.00
Total	29.39	21.43	14.90	34.29	100.00
Female					
humanities	1.23	3.38	61.23	34.15	100.00
social sciences	10.34	3.83	17.24	68.58	100.00
science	43.20	29.60	9.20	18.00	100.00
health	42.71	39.66	2.03	15.59	100.00
Total	23.43	18.74	24.14	33.69	100.00
France					
Male					
humanities	0.00	2.17	65.22	32.61	100.00
social sciences	8.33	1.04	27.08	63.54	100.00
science	50.46	13.76	33.94	1.83	100.00
health	0.00	92.00	4.00	4.00	100.00
Total	22.83	14.49	34.06	28.62	100.00
Female					
humanities	2.62	0.00	69.63	27.75	100.00
social sciences	4.31	3.53	23.53	68.63	100.00
science	29.20	25.55	40.15	5.11	100.00
health	1.11	77.78	6.67	14.44	100.00
Total	8.47	16.94	37.74	36.85	100.00
Austria					
Male					
humanities	8.70	2.17	39.13	50.00	100.00
social sciences	8.27	0.38	4.14	87.22	100.00
science	62.50	17.65	6.62	13.24	100.00
health	0.00	100.00	0.00	0.00	100.00
Total	22.42	8.97	10.92	57.70	100.00
Female					

Occupation: Field of Study:	physics, math, eng.	life sciences, health	teaching	other	Total
humanities	1.40	1.40	54.55	42.66	100.00
social sciences	1.65	3.31	9.37	85.67	100.00
science	23.19	42.03	17.39	17.39	100.00
health	0.00	95.65	2.17	2.17	100.00
Total	3.40	11.65	26.57	58.38	100.00
Germany					
Male					
humanities	7.87	1.12	51.69	39.33	100.00
social sciences	19.74	0.66	5.92	73.68	100.00
science	67.23	5.88	18.49	8.40	100.00
health	4.35	62.32	2.90	30.43	100.00
Total	27.97	12.12	18.41	41.49	100.00
Female					
humanities	4.21	0.00	67.29	28.50	100.00
social sciences	7.30	2.81	16.85	73.03	100.00
science	54.79	4.11	32.88	8.22	100.00
health	1.48	40.00	5.19	53.33	100.00
Total	10.67	10.33	34.17	44.83	100.00
Netherlands					
Male					
humanities	7.56	0.00	58.82	33.61	100.00
social sciences	27.52	3.67	0.92	67.89	100.00
science	71.11	16.30	5.19	7.41	100.00
health	5.10	73.47	0.00	21.43	100.00
Total	29.46	15.61	11.78	43.15	100.00
Female					
humanities	2.88	2.88	62.97	31.26	100.00
social sciences	4.60	6.14	5.63	83.63	100.00
science	34.44	47.78	7.78	10.00	100.00
health	1.25	57.50	2.92	38.33	100.00
Total	4.82	25.21	23.16	46.81	100.00
UK					
Male					
humanities	18.52	0.00	29.63	51.85	100.00
social sciences	11.43	0.95	14.29	73.33	100.00
science	59.34	7.69	14.29	18.68	100.00
health	3.85	80.77	3.85	11.54	100.00
Total	27.90	10.51	16.30	45.29	100.00
Female					
humanities	3.26	2.17	59.78	34.78	100.00
social sciences	4.29	4.29	20.71	70.71	100.00
science	31.58	14.74	28.42	25.26	100.00
health	6.02	79.52	2.41	12.05	100.00
Total	9.36	17.93	33.47	39.24	100.00
Finland					
Male					
humanities	7.41	1.23	46.91	44.44	100.00
social sciences	10.97	0.00	8.39	80.65	100.00
science	64.22	12.84	18.35	4.59	100.00
health	5.00	75.00	10.00	10.00	100.00

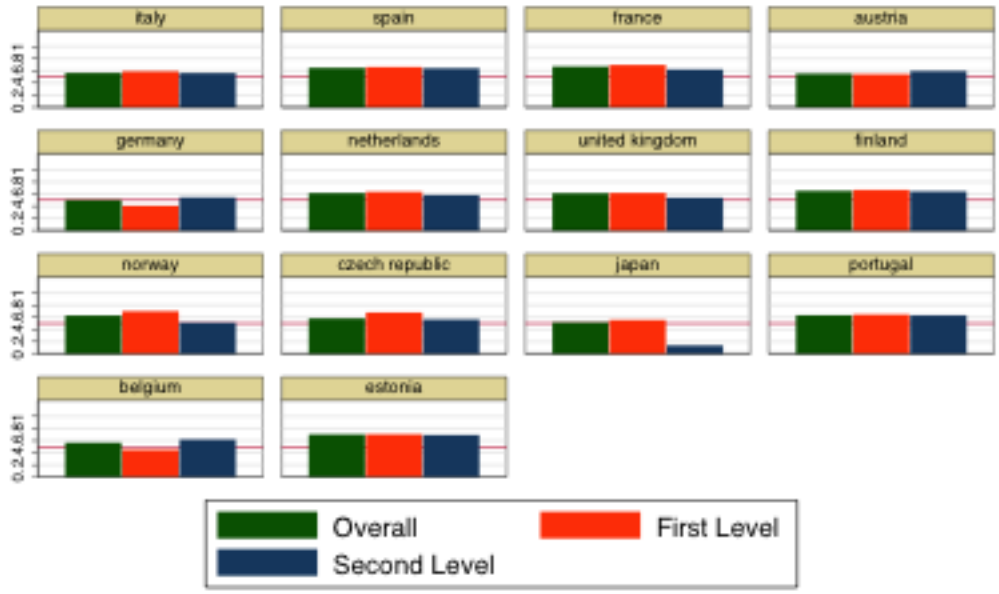
Occupation: Field of Study:	physics, math, eng.	life sciences, health	teaching	other	Total
Total	24.68	11.69	19.48	44.16	100.00
Female					
humanities	1.73	1.45	62.72	34.10	100.00
social sciences	10.12	1.16	8.38	80.35	100.00
science	34.59	32.33	16.54	16.54	100.00
health	0.29	77.55	7.29	14.87	100.00
Total	7.53	27.23	25.09	40.15	100.00
Norway					
Male					
humanities	1.96	0.98	65.69	31.37	100.00
social sciences	8.17	0.48	4.33	87.02	100.00
science	71.20	12.80	10.40	5.60	100.00
health	2.50	77.50	2.50	17.50	100.00
Total	20.00	20.00	16.58	43.42	100.00
Female					
humanities	0.00	2.00	84.79	13.22	100.00
social sciences	3.92	1.96	8.33	85.78	100.00
science	30.30	33.33	30.30	6.06	100.00
health	0.19	73.68	4.29	21.83	100.00
Total	2.45	34.80	33.70	29.05	100.00
Czech R.					
Male					
humanities	11.62	0.83	53.11	34.44	100.00
social sciences	14.62	0.99	8.70	75.69	100.00
science	50.57	24.53	4.91	20.00	100.00
health	0.58	91.81	3.51	4.09	100.00
Total	20.03	19.36	16.15	44.46	100.00
Female					
humanities	0.60	1.51	79.33	18.55	100.00
social sciences	5.19	0.79	5.86	88.16	100.00
science	21.20	40.76	11.96	26.09	100.00
health	0.40	87.40	5.80	6.40	100.00
Total	3.63	20.83	34.72	40.81	100.00
Japan					
Male					
humanities	10.53	1.75	73.68	14.04	100.00
social sciences	36.21	6.90	13.79	43.10	100.00
science	50.00	18.60	19.77	11.63	100.00
health	0.00	100.00	0.00	0.00	100.00
Total	33.18	14.69	31.75	20.38	100.00
Female					
humanities	11.95	4.40	69.18	14.47	100.00
social sciences	18.46	6.15	24.62	50.77	100.00
science	31.40	25.58	19.77	23.26	100.00
health	11.80	61.49	14.29	12.42	100.00
Total	16.35	28.03	35.24	20.38	100.00
Portugal					
Male					
humanities	3.23	0.00	74.19	22.58	100.00
social sciences	5.08	1.69	5.08	88.14	100.00

Occupation:	physics, math, eng.	life sciences, health	teaching	other	Total
Field of Study:					
science	61.90	9.52	14.29	14.29	100.00
health	0.00	95.24	4.76	0.00	100.00
Total	12.88	17.42	22.73	46.97	100.00
Female					
humanities	0.95	0.00	75.24	23.81	100.00
social sciences	2.96	0.00	7.41	89.63	100.00
science	31.82	27.27	36.36	4.55	100.00
health	0.00	87.72	1.75	10.53	100.00
Total	3.76	17.55	30.72	47.96	100.00
Belgium					
Male					
humanities	1.75	0.00	40.35	57.89	100.00
social sciences	15.71	1.43	15.00	67.86	100.00
science	32.00	8.00	46.00	14.00	100.00
health	0.00	87.50	9.38	3.12	100.00
Total	13.98	12.19	25.09	48.75	100.00
Female					
humanities	0.69	1.38	49.66	48.28	100.00
social sciences	2.99	2.99	23.08	70.94	100.00
science	20.37	16.67	53.70	9.26	100.00
health	0.00	91.84	3.06	5.10	100.00
Total	3.58	20.34	29.76	46.33	100.00
Estonia					
Male					
humanities	10.71	0.00	35.71	53.57	100.00
social sciences	13.33	0.00	1.33	85.33	100.00
science	65.45	7.27	10.91	16.36	100.00
health	12.50	25.00	0.00	62.50	100.00
Total	30.12	3.61	10.24	56.02	100.00
Female					
humanities	3.70	0.53	64.02	31.75	100.00
social sciences	6.11	1.31	6.99	85.59	100.00
science	46.15	15.38	23.08	15.38	100.00
health	2.17	67.39	10.87	19.57	100.00
Total	7.95	8.15	30.02	53.88	100.00

Notes: Percentage of graduates by field in each occupation. First job after graduation. Occupations are the *sub-major groups* from the International Standard Classification of Occupations. Examples of occupations at the *minor group* level that correspond to the *sub-major group* level occupation *other* are: Business and legal professionals, creative professionals, finance and sales associate professionals. Fields of study definition is abbreviated, see main text and figures for a more detailed description.

Figure 1: Gender Differential in Level of Tertiary Education

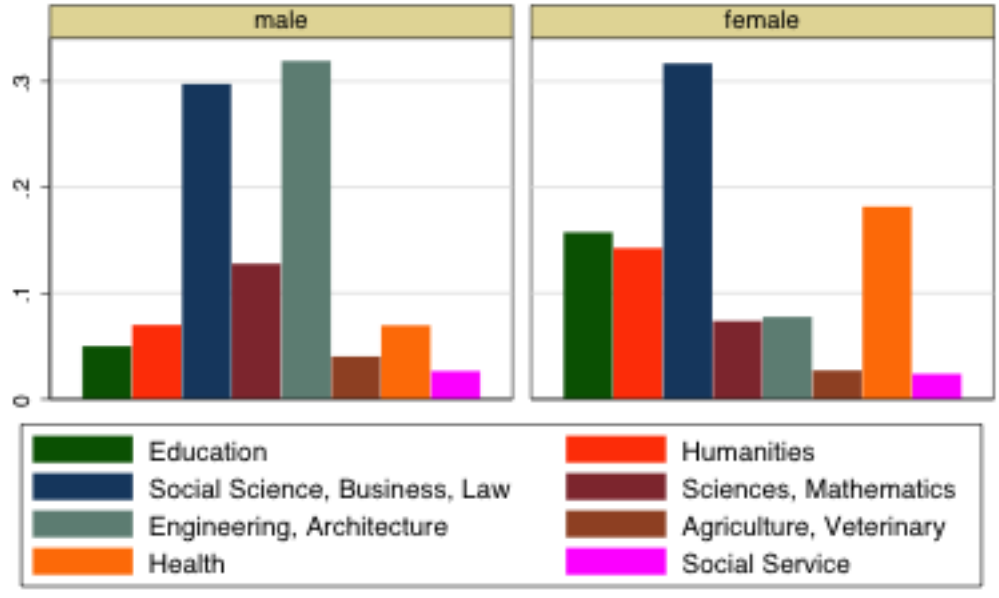
(Proportion of Women among Tertiary Graduates)



Graphs by countrycode

Figure 2: Field of Study Choice by Gender

(Proportion of Graduates in Each Field)



Graphs by female

Figure 3: Proportion of Women in Field of Study

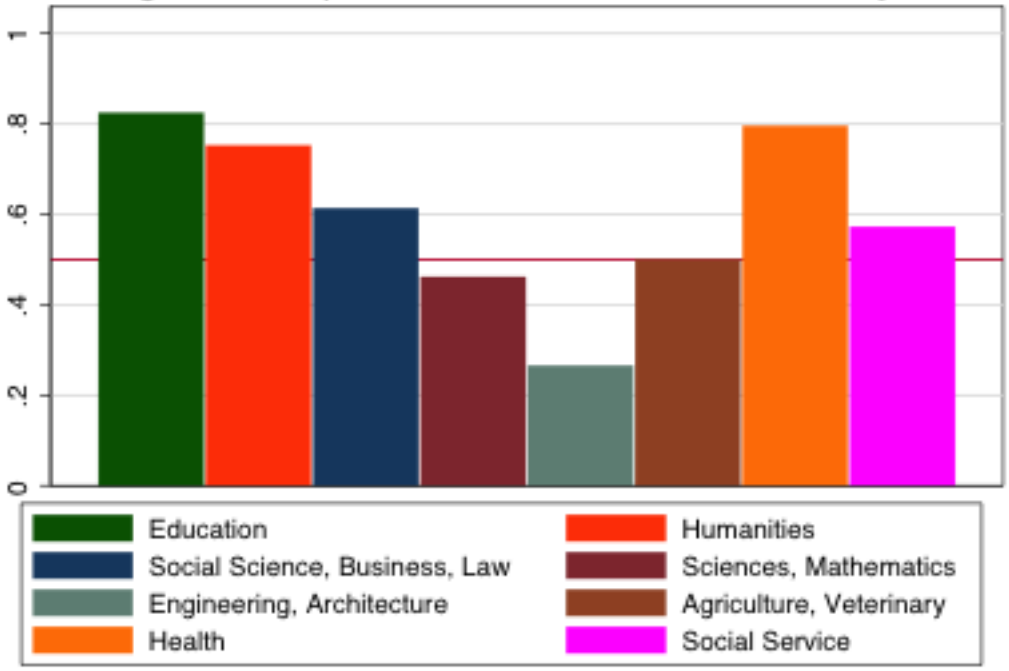
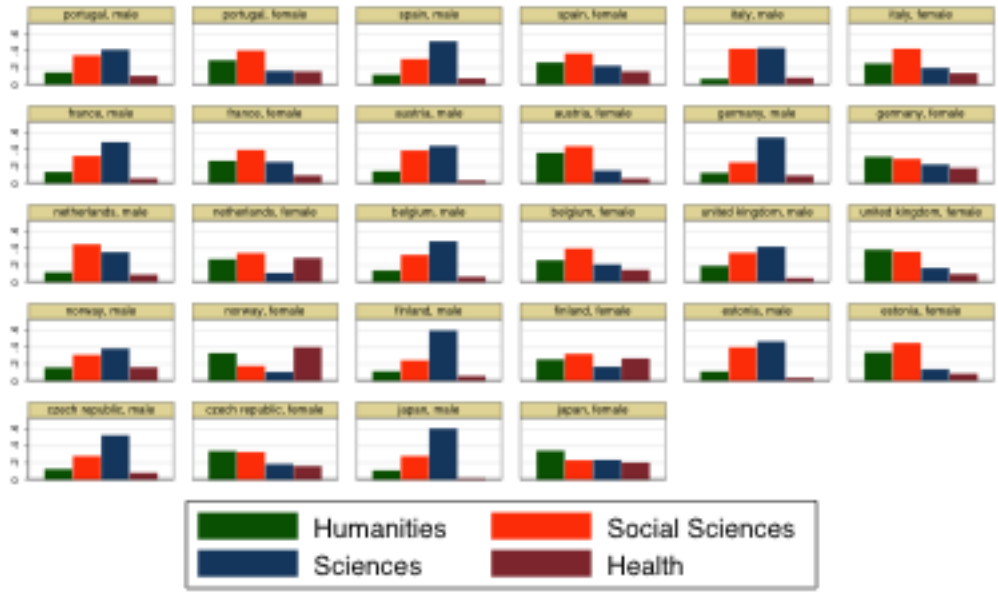


Figure 4: Field of Study Choice by Country by Gender

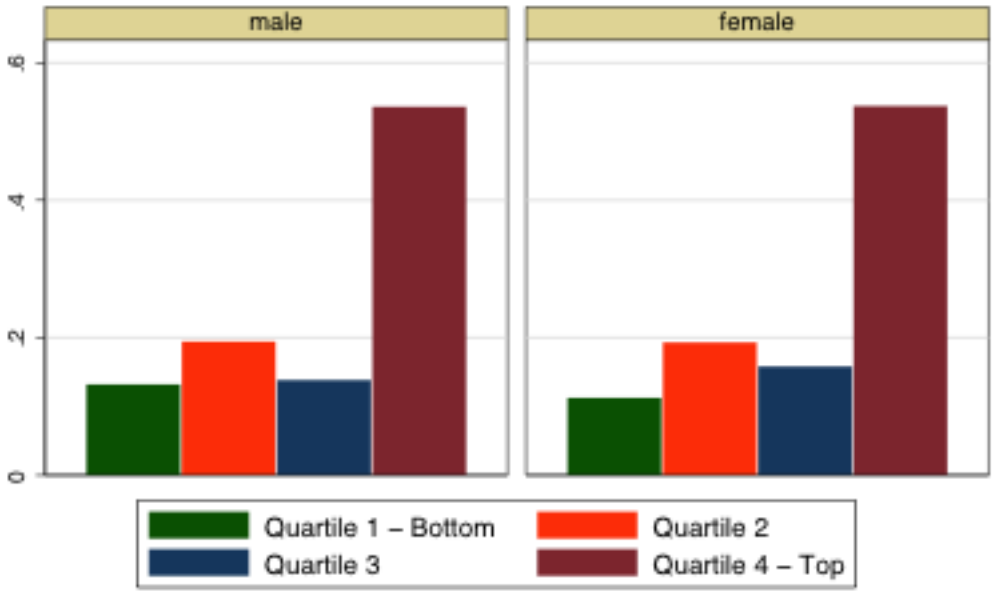
(Proportion of Graduates in Each Field)



Graphs by country coding for final report and female

Figure 5: Tertiary School Grades Distribution by Gender

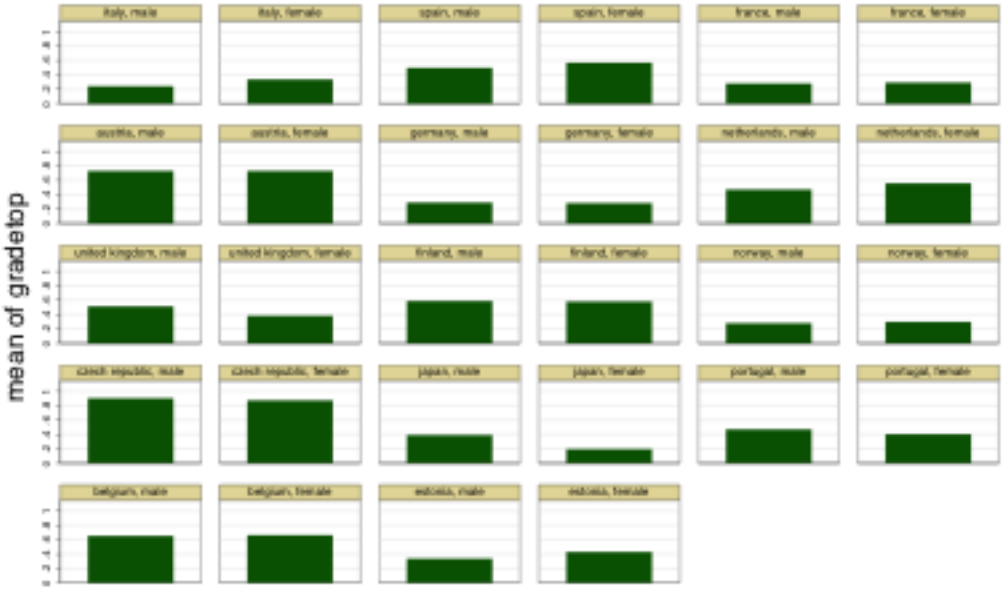
(Proportion of Graduates in Quartiles of Grade Distribution)



Notes: Grade distribution computed by country on the joint sample of males and females.

Figure 6: Tertiary School Grades Distribution by Country

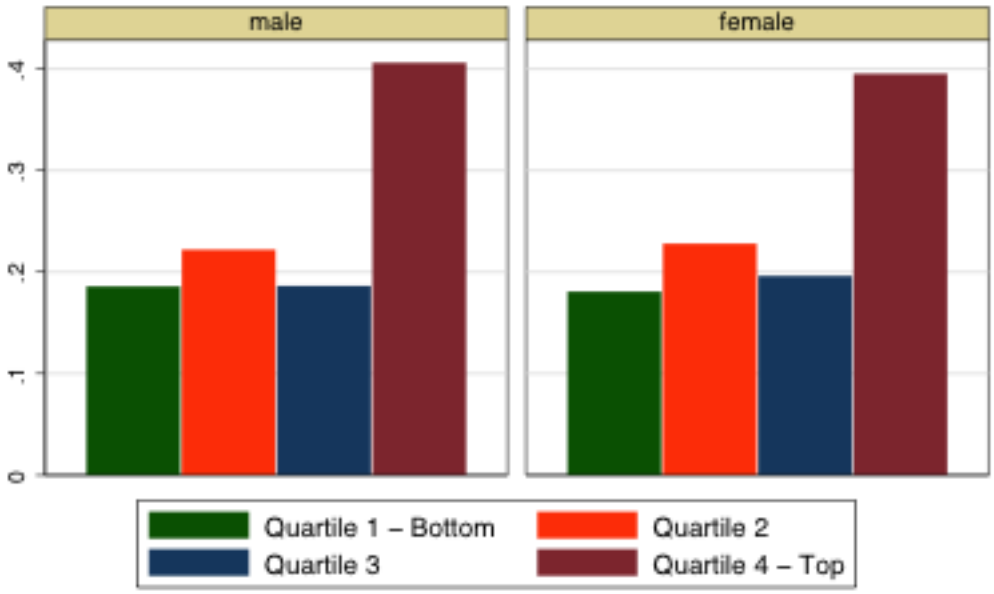
(Proportion of Graduates with Top Grades)



Notes: Top Grades means top grade available or in the top 25% of country–specific distribution.

Figure 7: Secondary School Grades Distribution by Gender

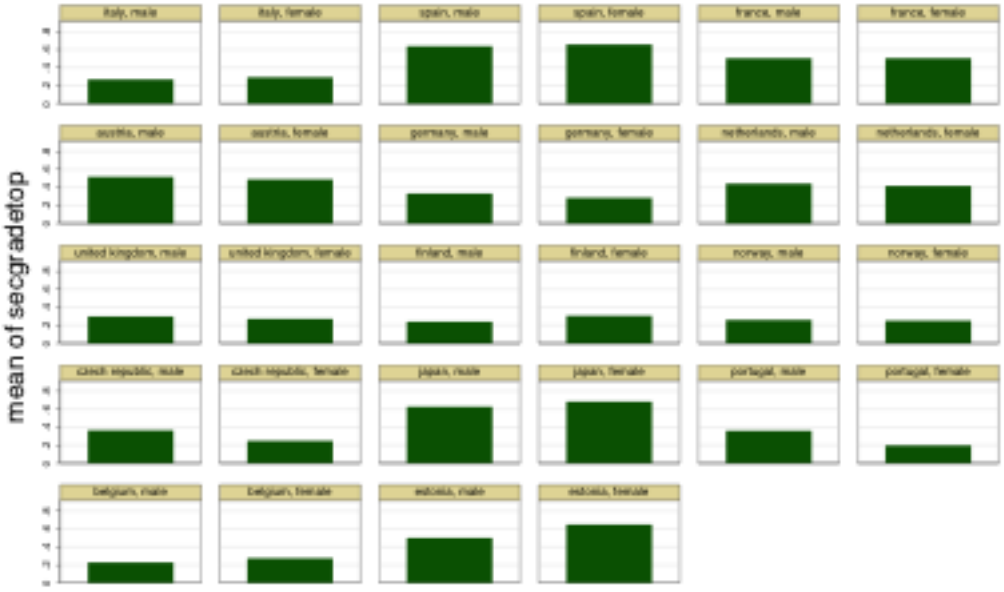
(Proportion of Graduates in Quartiles of Grade Distribution)



Notes: Grade distribution computed by country on the joint sample of males and females.

Figure 8: Secondary School Grades Distribution by Country

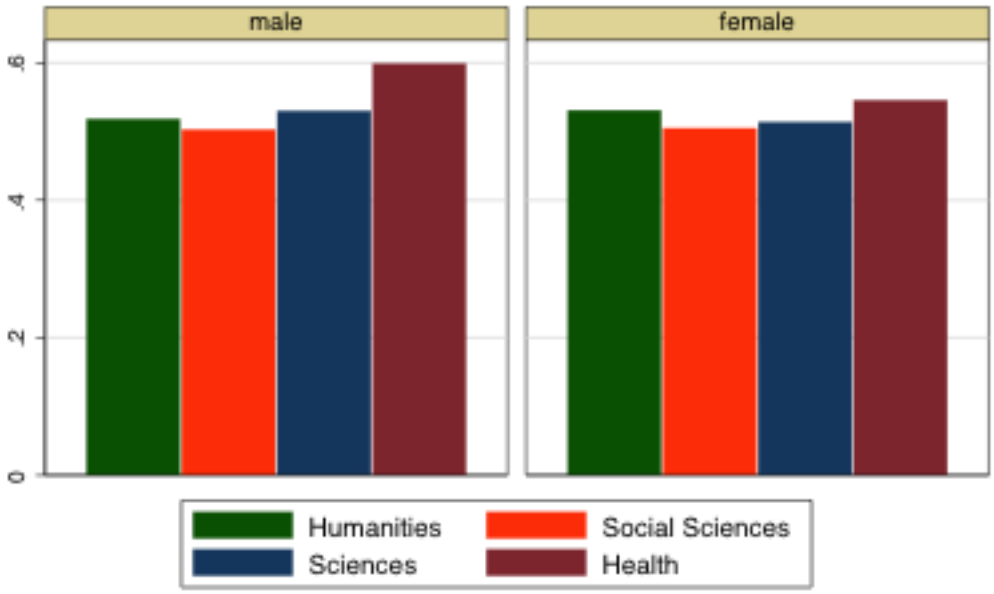
(Proportion of Graduates with Top Grades)



Notes: Top Grades means top grade available or in the top 25% of country-specific distribution.

Figure 9: Top Grades by Field of Study and Gender

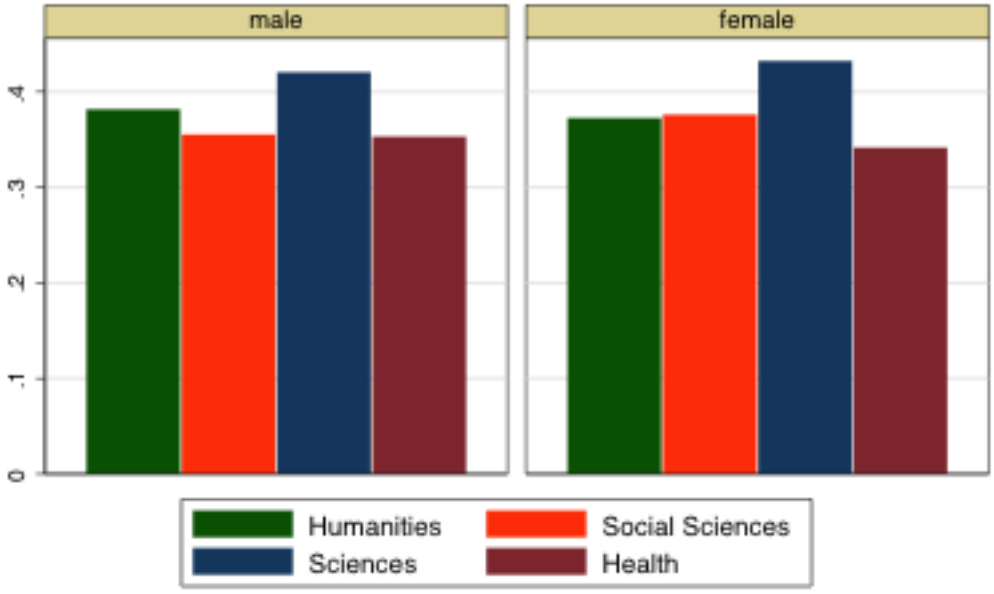
(Proportion of Graduates with Top Grades)



Notes: Top Grades means top grade available or in the top 25% of country–specific distribution.

Figure 10: Top Grades Secondary by Field of Study and Gender

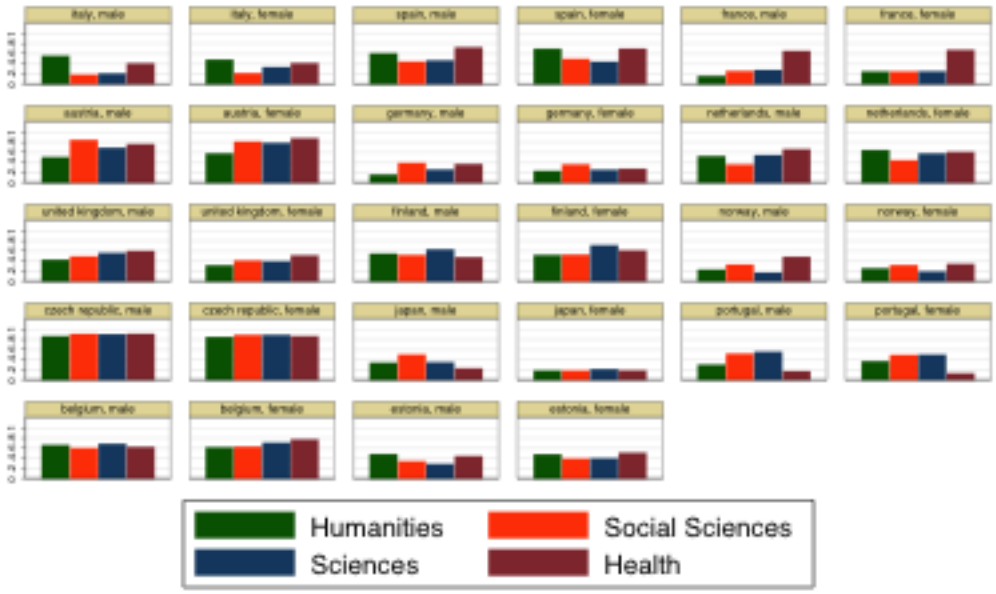
(Graduates with Top Grades in Secondary School by Tertiary School Field)



Notes: Top Grades means top grade available or in the top 25% of country–specific distribution.

Figure 11: Top Grades by Field of Study, Gender, Country

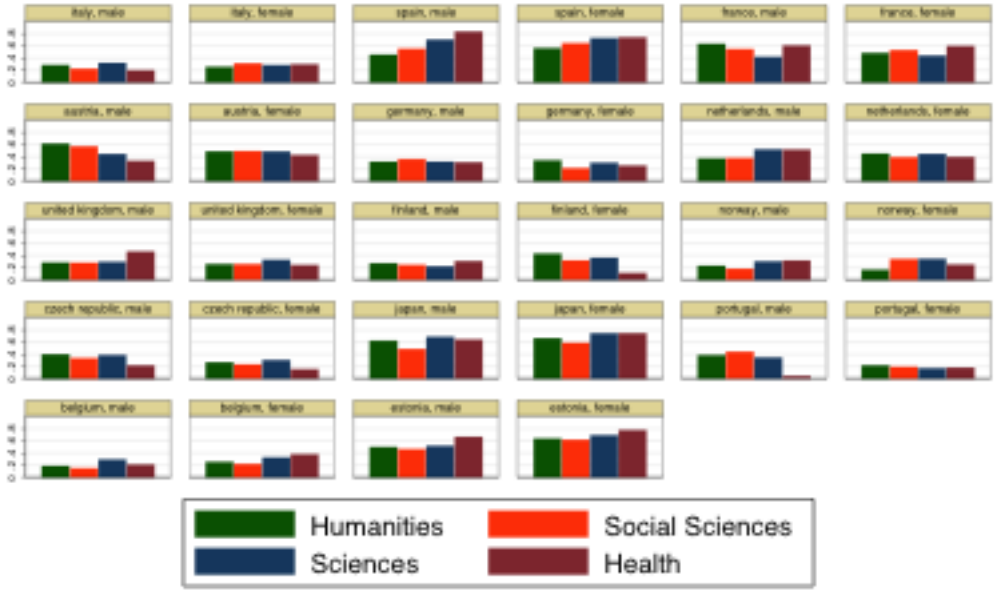
(Proportion of Graduates with Top Grades)



Notes: Top Grades means top grade available or in the top 25% of country−specific distribution.

Figure 12: Top Grades Secondary by Field, Gender, Country

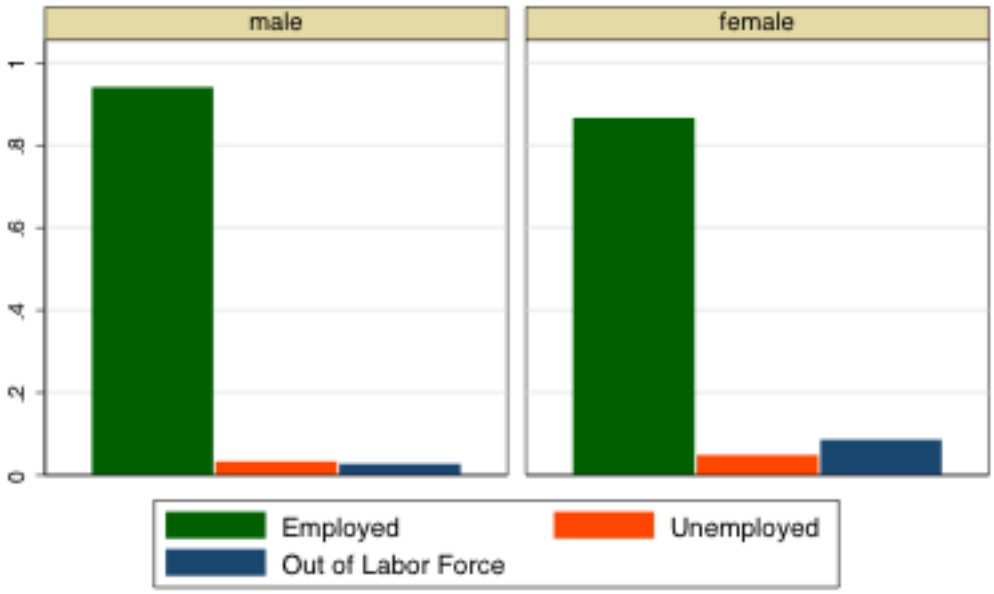
(Graduates with Top Grades In Secondary School by Tertiary School Field)



Notes: Top Grades means top grade available or in the top 25% of country−specific distribution.

Figure 13: Labor Market Status by Gender

(Proportion of Graduates by Labor Market Status)



Note: Status reported at Time of Interview

Figure 14: Labor Market Status by Gender and Country

(Proportion of Graduates by Labor Market Status)

Note: Status reported at Time of Interview

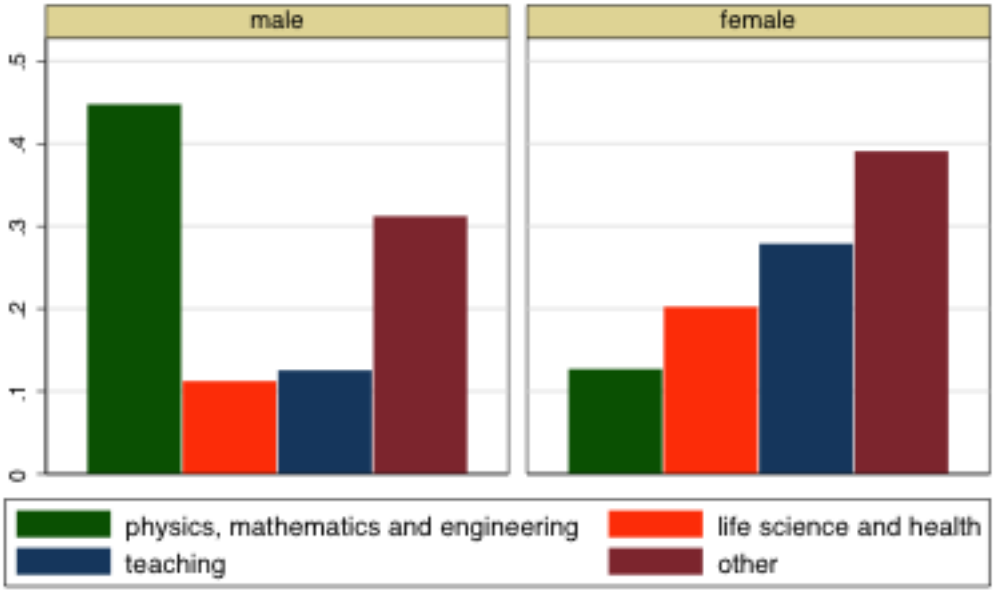
Figure 15: Occupation by Gender

(Proportion of Workers in Each Occupation)

Note: First job after graduation.

Fig 16: Occupation by Gender – Professionals and Technician

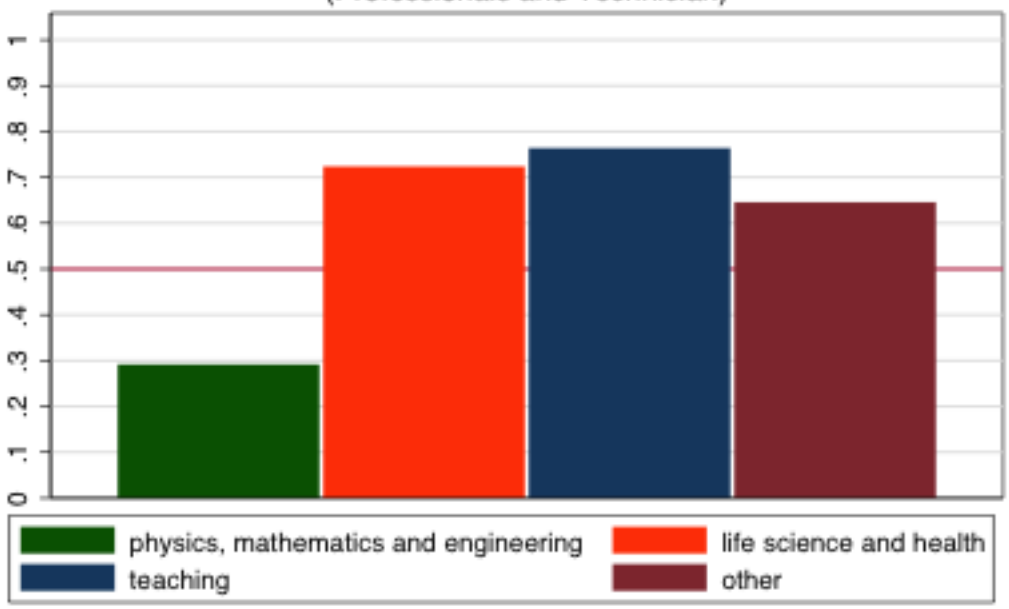
(Proportion of Workers in Each Occupation)



Notes: First job after graduation.

Figure 17: Proportion of Women in Occupation

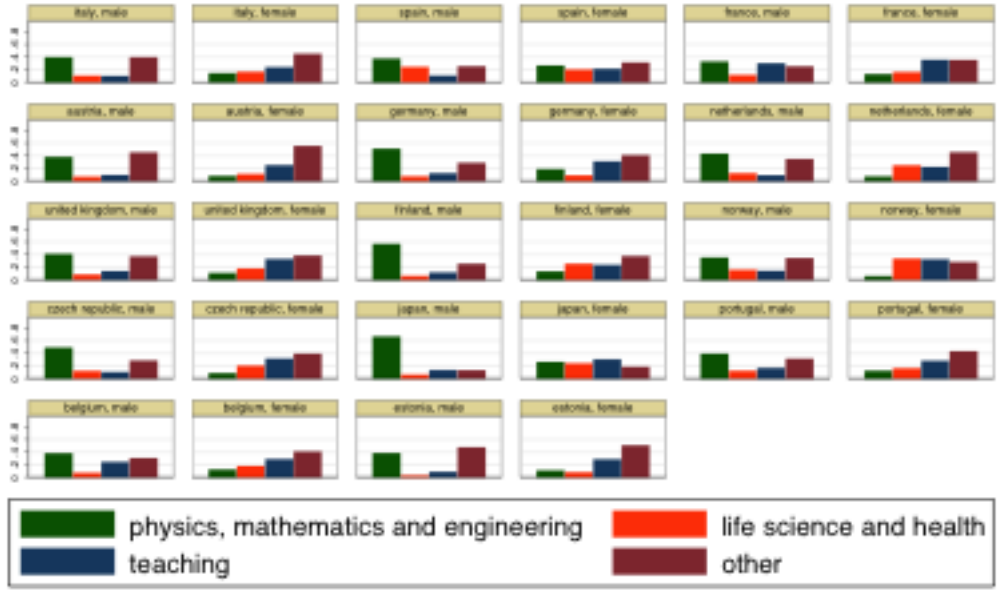
(Professionals and Technician)



Notes: First job after graduation.

Fig 18: Occupation by Gender and Country – Pro. and Tech.

(Proportion of Workers in Each Occupation)



Notes: First job after graduation.