Intergenerational Mobility and Gender Gap: Evidence from Mediterranean Countries

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Abstract The aim *of this paper is to investigate in a generational perspective the transmission of preferences in education and the main gender differentials across four developed countries of southern Europe (Greece, Italy, Portugal and Spain), taking into account the peculiarities of their macroeconomic and educational systems. More precisely, sets of α-indexes – which reflect the whole wage and educational distribution of women across socio-economic sub-groups of employees – are computed to explore the different extent to which these gaps can be attributed to discrimination. Country-specific differentials are sketched and the often controversial role of national contexts in shaping gender discrimination is widely discussed.*

1 Background and Introduction

Both in developed and developing countries socio-economic advantages are frequently transmitted across generations [1,6]. Education is surely one of the main dimensions in which intergenerational mobility may occur as it mediates the influence of other dimensions (*i.e.*, occupation and earnings) that are critical components of social stratification and predictors of inequality within and across generations. Over the last few decades, a reversal of trend in gender educational gap has emerged in most industrialized economies. Indeed, since the late 1960s, the cultural progress and female emancipation have created greater autonomy for women, more opportunities for their careers, and, consequently, an increasing attractiveness of education [5].

Although non-linearities in generational mobility exist, several factors may help to explain the patterns of educational mobility and their differences across countries. The family of origin, the type of ties or interaction dynamics, in terms of time and efforts that parents invest in their children [2], and the ways through which they differently allocate resources between sons and daughters may play a crucial role for understanding generational transmission processes and for shaping gender differentials in education. Anyway, these mechanisms may strongly vary over family

components and, even more so, across countries where structural and institutional differences exist.

The aim of this paper is to investigate the profiles of intergenerational mobility in education across a set of four developed economies of southern Europe – Greece, Italy, Portugal and Spain – and their role in creating educational gender differentials. Taking into account more than one measure of the degree of gender discrimination in wage and education, the paper explores the main determinants for "success in education". In other words, in the light of country-specific peculiarities, in terms of national school systems, educational policies and returns to education, the paper discusses some key factors, mainly in the spheres of family background, that differently affect upward mobility in education and gender gaps.

2   Educational Mobility and Gender: Data Source

Our analysis draws upon EU-SILC data (European Union-Survey on Income and Living Conditions), currently the main European reference source for comparable and multidimensional socio-economic statistics both at household and individual level. We refer to wave 2005, the only one which collects, as secondary target variables, retrospective parental information (*i.e.*, education, employment, activity sector) for each respondent aged 24-66, which allows us to account for generational changes over time. The analysis focuses on currently working employees, *i.e.* anyone who works for a public or private employer with a wage, a salary or any other form of compensation.

Although the selected countries share similar cultural and economic frameworks, the impact of EU legislation that protects gender equality and anti-discrimination principles varies among Member States, depending on the different forms of gender relations and the strength of organised feminism [4]. Indeed, while in Italy a general policy of equal treatment and opportunities is officially in force, but not very actively pursued, Greece and Portugal adopt more specific programs for gender equity, especially in education; finally, Spain, like other Central and Nordic EU countries, actively promotes the gender equality through even more specific anti-discrimination provisions. The interaction of these alternative approaches to gender equality with the different socio-economic structures and mechanisms of generational transmission of preferences can produce complex outcomes that reflect in gaps in labour participation, education and wage.

In EU-SILC data, intergenerational upward mobility in education, calculated as the proportion of employees with an educational attainment higher than their parents, is close to 70% in all the countries, except for Portugal where this incidence is markedly lower, and with small gender differentials. Thus, children strongly outperform their parents and this pattern of upward mobility shows a strong increasing trend in the earlier birth cohorts (1940-1959) – consistently higher for males with a gender gap even higher than 10%, especially in Italy – and somewhat smaller in later cohorts (1960-1980), when progress is greater for females. Indeed, younger women strongly outperform not only their parents but also their male colleagues all over the countries.

3   A methodological view and some preliminary results

In order to get a distribution pattern of the degree of discrimination across countries and to assess its nature and extent, both in terms of earnings and education, two sets of aggregate indexes (dr_α), based on an α-order mean of individual measures of discrimination, are computed at different levels of "aversion to discrimination" [3]. Indeed, α-indexes are based on the difference between the estimated wage (or education) that each woman could earn if her individual characteristics were remunerated at average male rewards and her estimated wage (or education) if her same characteristics were remunerated at average female rewards. A higher α-value denotes a greater weight on the most discriminated female employees. More precisely, while dr_0 merely shows the incidence of discriminated females, two more indices measure the intensity (dr_1) and the severity (dr_2) of discrimination suffered on average by women. Finally, a relative index (γ), based on the previous dr_α indexes, allows to compare the relative evenness of the distribution of discrimination between Italy and each other country.

The first set of α-indexes, concerning wage discrimination, has been computed starting from the estimation of some extensions of Mincerian log-earnings equations, separately for each country and for male and female employees, on a wide range of characteristics considered to be linked to productivity. Thus, the earnings of individuals depend not only on human capital characteristics (*i.e.*, educational attainment and work experience), but also on a range of personal socio-demographic (*i.e.*, marital status, children, residence area) and structural factors related to the professional status (*i.e.*, activity sector, type of occupation and contract, working hours, firm-size).

The second set of α-indexes, regarding the discrimination in education, has been computed starting from the estimation of ordered logistic regressions, separately by country and by gender, on personal and family background characteristics supposed to influence the educational level attained (*manifest* variable). Indeed, we expect there is an underlying decisional process, based on the comparisons among the utilities of the different levels of education, which leads out to the choice to be high-educated; thus, a continuous unobservable propensity (*latent* variable) would cross thresholds which differentiate the adjacent levels of the observed ordered y_i's. In these models, the role of generational dimension is considered by evaluating how the parental education level, employment status and professional profile, as well as the composition of family of origin and the potential existence of financial problems in household, differently affect the probability to acquire a higher education.

Preliminary findings of our analysis open to some interesting interpretations. As regards to earnings equations, the education level results as one of the most significant factors in explaining individual wages everywhere, both for females and males. Differences in education directly affect differences in wages and, therefore, a prospective discrimination suffered in education can add to wage discrimination. In addition, it is worth stressing that in the Iberian countries, Spain and Portugal, the role of education in shaping individual earnings and male-female wage differentials is even higher than some specific aspects linked to family responsibilities (*i.e.*, to be married with dependent children) or to professional characteristics. On the other side, all over the countries, the ordered logistic regressions highlight the strong influence of parental education level and parental work status, as proxies for measuring the human and social capital in a generational perspective, on the probability of acquiring an higher level of education, pointing to clear links between parents and children. In other words, the family background, as the main channel through which the generational transmission process take place, strongly influences the educational success of children. Anyway, living in a large family with an employed mother significantly reduces the chance to reach a high level of education almost everywhere.

As regards to gender discrimination, it is worth to note that it is consistently higher, more intense and severe for wage than education (tab. 1).

Table 1: Discrimination indexes at different levels of α (aversion to discrimination) by countries

Indexes - dr_α	Greece		Italy		Portugal		Spain	
	Wage	Educ.	Wage	Educ.	Wage	Educ.	Wage	Educ.
dr_0 – *diffusion*	90.02	84.67	95.02	74.11	93.17	8.48	98.62	42.38
dr_1 – *intensity*	17.80	7.52	16.98	7.47	21.99	0.97	19.25	4.02
dr_2 – *severity*	5.91	6.35	3.99	1.42	6.95	0.32	4.65	0.82
γ – *evenness*	-0.23	-0.76	–	–	-0.02	-55.1	0.08	-1.71

In Spain, the greater attention paid to gender equality principles reflects on the lowest levels of discrimination in education (after Portugal), but the incidence of wage discrimination is still higher. Conversely, Italy, where legislation on equality is less binding, shows a high degree of discrimination in education, although the penalty in wages for women is the lowest, both in terms of intensity and severity. Nevertheless, the γ index of wage discrimination between Italy and Spain highlights a more uneven distribution for Italian females; all the while, Portugal and Greece, which share similar gender policies, keep very different degrees of educational discrimination. Briefly, it emerges a very high complexity of gender gap issues which starts from individuals' perceptions and cognitive sex differences and produces substantial effects on labour market and on the economy on the whole.

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