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# Unexplored Dimensions of Discrimination

*Edited by*

Tito Boeri,  
Eleonora Patacchini,  
and Giovanni Peri

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A REPORT FOR THE FONDAZIONE RODOLFO DEBENEDETTI

# Unexplored Dimensions of Discrimination

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# Introduction

*Tito Boeri*

Labor market discrimination is one of those allegations that is more difficult to prove before a jury of economists than before a judicial court. The issue is that the evidence typically being produced by the plaintiff in the trial period is more a measure of ignorance than truly a measure of discrimination. In many court rulings discrimination is identified in some residual, apparently unexplained, variation in the treatment (wage, hiring, layoff) of workers. For instance, differences in male and females wages not accounted for by differences in observed characteristics (age, education, previous work experience, etc.) between men and women are generally considered by lawyers as evidence of discrimination. The presumption is that, once account is made of age, education, work experience, and other observable characteristics of the worker, residual differences in the treatment of workers can only be attributed to prejudice and discriminatory practices of employers. This residual measure of discrimination seems to fit well into the economic definition of discrimination. The latter dates back to Kenneth Arrow and refers to “the valuation in the market place of personal characteristics of the worker that are unrelated to worker productivity” (Arrow 1973). In other words, discrimination occurs whenever the labor market position of individuals (the fact of having a job, the wage being received, the amount of hours worked) depends on characteristics that are unrelated to their productivity: a worker is treated differently than other workers simply because of her gender, race, age, sexual orientation, beauty, and so on, independently of her productivity.

Unfortunately this residual measure of discrimination may understate as well as overstate the actual extent of labor market discrimination (Altonji and Blank 1999). Some of the observed characteristics may be influenced by the existence of discrimination. Women, for instance, may invest less in education in anticipation of wage discrimination that reduces for them the returns to education. They may also devote more time to non-market, home-related, activities than their spouses and become the primary care-givers for

children, giving up on career plans, because they expect a more favorable labor market treatment for their husbands. They may therefore become (desperate) housewives even if their performance in the university was way better than that of their not so much better half. When this self-selection of women into non-employment takes place, the true extent of discrimination is understated by gender differences in returns to education because also the differences in educational attainments are attributable to discrimination. In order to tackle these self-selection issues, one should ideally take into account of workers' histories well before labor market entry or at least make inferences as to the decisions made by individuals with respect to labor market participation.

It is also possible that some factors affecting individual productivity are not observed by researchers (and by the judges themselves). These omitted characteristics may be related to human capital characteristics and tastes and can be very important in affecting labor market outcomes. A large body of socio-psychological research, for instance, suggests that men and women differ quite systematically in psychological traits (including the so-called Big Five, that is, extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience) and preferences. This makes some types of jobs more attractive to women and other jobs more attractive to men (Bertrand 2010). Thus, measures of discrimination not accounting for these unobserved differences in preferences may overstate the actual extent of discrimination.

The first part of this book is a major attempt to deal with these self-selection and unobservability issues in assessing the gender wage gap. A team of researchers led by Giovanni Peri, and including Massimo Anelli, Sara de La Rica, Ainara Gonzáles de San Román, Luca Flabbi, and Mauricio Tejada gathered a wealth of data on education and marriage choices of men and women, focusing in particular on the US, Spanish, and Italian labor markets. They developed quite sophisticated econometric models to estimate from these data the underlying and unobserved choice rules rather than confining themselves to characterize (reduced form) correlations between observed variables (pay, education, age, etc.). This enabled them also to consider at the same time gender wage and employment gaps. Last but not least, they made a major data collection effort, tracking individuals in Milan from their high school performance to major choice, to the labor market outcomes after tertiary education. To my knowledge, this is the first time that a similar “from paddle to the grave” tracking of potential determinants of wage gaps has been made.

The effort is well placed as the authors can address a number of substantial issues, which were left unexplored by most previous research on gender wage

1. How relevant is the different role played by men and women in rearing children on their labor market outcomes, and more general how do family needs affect differentially the working career of men and women?

2. How relevant is the choice of college major in determining the occupation and wage of individuals and how different is it between genders?

Some of the results among these unexplored dimensions of discrimination are quite striking. The authors find that the link between college major and occupational choice is very strong in all countries. There are two key dimensions along which women self-select themselves into less paid curricula. First, highly educated women, in spite of their better academic performance than men, tend to avoid math-intensive majors as Engineering and Mathematical sciences, preferring majors in the Humanities. Second, this major choice is coherent with an occupational choice giving priority to “teaching-type” jobs, as opposed to the engineering types of jobs, which are dominated by men. This double and interrelated difference (major and occupational choice) contributes significantly to explain gender gaps in career, wage, and earnings.

These findings are important in refining equal opportunity legislation and making it effective well before labor market entry of women takes place. For instance, a strategy to counteract women segregation into less paid jobs may also consider reducing the degree of tracking in school curricula. Allowing students to specialize later and postpone their major choice, it is possible that they would not follow stereotypes attributing to women talents generally outside the hard sciences, engineering and math. One may also argue in favor of a more balanced composition by gender of teachers in maternity schools as “teaching-type” of jobs may become popular among women on the basis of the example of pre-schools. Needless to say, the option to first enroll in the Humanities and then opt for teaching jobs may also be inspired by the choice of having more time for family responsibilities. In this respect, it is family policies inspired by equal opportunity principles (e.g., requiring a sizeable paternity leave) that may affect choices made well before entering the labor market.

While the first part of the book focuses on unexplored mechanisms generating labor market discrimination along the gender divide, the second part of the volume addresses unexplored outcomes. Discrimination has been typically addressed by the economic literature along the gender and the ethnic divide. There are, however, many other dimensions where prejudice may arise and affect labor market outcomes.

The second part of the book is on these unexplored dimension of discrimination, and a particular attention is placed on physical appearance, obesity, religion, and sexual orientation. One of the reasons why these dimensions have been less considered by empirical research is that it is extremely hard to gather information on these characteristics. The research team led by Eleonora Patacchini, and including Giuseppe Ragusa and Yves Zenou, tries to fill this gap. The first very useful thing they do is to offer an

up to date literature review of the few studies devoted to these dimensions of discrimination. Next they draw on non-experimental data covering a number of European countries. Finally, they draw on a field experiment, carried out in the two largest Italian cities (Rome and Milan), by sending almost 2,500 “fake” CVs to real ads, where all curricula had pictures and some contained information about involvement in gay or lesbian friendly associations.

The results are quite striking in that they suggest that discrimination along these dimensions can be substantial. Muslims appear to be the most penalized religious minority in Europe in terms of labor-market outcomes, homosexuals have a lower chance of being employed and to participate to the labor market than their heterosexual counterparts, and obese women (identified on the basis of their Body Mass Index (BMI)) have significantly lower employment prospects than non-obese women. It is possible that part of the observed asymmetries in employment and wage outcomes is related to different attitudes towards work, but the size of these gaps is so large as to suggest that there is also a reluctance of employers to hire individuals with these characteristics. Moreover, the aforementioned “fake” CV experiment is concentrated on labor demand for workers having apparently the same characteristics, except sexual orientation or beauty. Its results, described in detail in Chapter 8 (Part II of this volume), indicate that male homosexuals have a 30 percent lower call-back rate than the average, while beauty significantly improves labor market prospects of women, notably low-skilled women, and not those of men. Notice that applications were not for positions of salesman or requiring a visual contact with clients, nor for traditionally female-dominated or male-dominated occupations, but were for the most related to jobs in call centers.

Although these types of experiments, in the tradition of correspondence study techniques, have not been undertaken in a large number of countries and, as most experiments, pose questions of external validity, it is nevertheless possible to compare them with those of previous studies in order to gauge their relevance. Most studies, including the pioneering by Bertrand and Mullainathan (2004) and a recent one on China by Zhou et al. (2013), have been looking either at race or gender discrimination. This book offers one of the first applications of the correspondence techniques to the study of discrimination along sexual orientation. The only previous study we are aware of is from Ahmed et al. (2011), who investigated whether homosexuals experienced discrimination in the hiring process in Sweden, found that, on average, gay men received 4 percent fewer callbacks than heterosexual men while lesbian women received 6 percent less callbacks than heterosexual women. This is a much smaller effect than that found by Patacchini, Ragusa, and Zenou.

Discrimination along the physical appearance dimension had been previously investigated. For instance, Ruffle and Shtudiner (2010) sent out application letters to employers with and without a picture of either an attractive male/female or a plain-looking male/female. They found that attractive males are much more likely to receive callback than plain males while for females the difference in callback rates between attractive and plain applicants was small. This result goes just the other way round than the effect observed in Italy.

Taken together, the findings in the second part of the volume suggest that there is a large scope for a better enforcement of anti-discrimination laws in Europe. They are consistent with data on perceived discrimination (recalled also in the insightful discussion of the report by Alan Manning) indicating that more than 50 percent of Europeans believe that there is widespread discrimination by ethnic origin and sexual orientation. Unfortunately there is little tradition of jurisprudence counteracting labor market discrimination on this side of the Atlantic. Legislation is fairly strong—a 2000 EU Directive puts the burden of proof mostly on the employer—but apparently rarely enforced. Unions have for long underestimated the importance of anti-discrimination practices as they have been relying on employment protection legislation to defend workers against unfair layoffs. The problem is that in countries, like Italy, the law explicitly requires an involvement of unions in the suing of employers for discrimination practices. No role is given to other voluntary associations representing specifically some categories of workers potentially subject to discrimination, such as gay or lesbian associations.

Employers are typically not keen to embark on anti-discrimination campaigns as they reduce their monopsony power. The presence of market imperfections is also a factor that prevents competition to wash away discriminatory practices, by making firms led by prejudiced employers no longer viable.

As the report focuses on outcomes more than on the underlying mechanisms, it cannot identify specific policies that could tackle the sources of the observed asymmetries in labor market outcomes, which may not necessarily be related only to prejudice, but also to poor information about the quality of applicants, and hence so-called statistical discrimination, and self-selection of some categories of workers in occupational profiles offering lower wages and less stability than the average job.

One area where there is little doubt that policies could be improved is that of migration restrictions. Legislations requiring a frequent renewal of residence permits and conditioning these renewals upon the fact of having a job, put many migrant workers in a sort of limbo, conveying a very strong bargaining power to their employers. There are also restrictions for non-EU citizens in the access to public sector jobs, and rules that explicitly prevent



them from having access to some cash transfers. Removing these asymmetries would be very useful also to promote a culture of equal opportunity and diversity at the workplace. Diversity is particularly important as employers may often favor their own kind rather than discriminating against specific minorities. Put it in the new terminology introduced by Daniel Hamermesh, they may be affected by endophilia—preferences for their own—rather than by exophilia, disliking others.

## References

- Ahmed, A., Andersson, L., and Hammarsted, M. (2011). “Are homosexuals discriminated against in the hiring process?”, mimeo.
- Altonji, J. and Blank, R. (1999). “Race and gender in the labor market.” In: O. Ashenfelter and D. Card (Eds.), *Handbook of Labor Economics*, vol. 3. Amsterdam: Elsevier, pp. 3143–3259.
- Arrow, K. J. (1973). “The theory of discrimination.” In: O. Ashenfelter and A. Rees (Eds.), *Discrimination in Labor Markets*. Princeton: Princeton University Press, p. 3.
- Bertrand, B. and Mullainathan, S. (2004). “Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination.” *American Economic Review* 94: 991–1013.
- Bertrand, M. (2010). “New perspectives on gender.” In: O. Ashenfelter and D. Card (Eds.), *Handbook of Labor Economics*, vol. 4b. Amsterdam: Elsevier, pp. 1543–1590.
- Ruffle, B. J. and Shtudiner, Z. (2010). “Are good-looking people more employable?”, mimeo.
- Zhou, X., Zhang, J., and Song, X. (2013). “Gender discrimination in hiring: Evidence from 19,130 Resumes in China,” mimeo.

Part I

# The Wage Gap in the Transition from School to Work



# 1

## Gender Gap in Labor Market Outcomes: Less Explored Aspects and Dimensions

*Giovanni Peri and Massimo Anelli*

### 1.1 Introduction

Human talent is, by far, the most valuable economic factor available to a country. Giving women the same access to economic and political opportunities as men increases the growth potential of a country. Hence, a gap in women's economic and social opportunities and achievements is a net loss for the economy. Even setting social and human considerations aside, there are plenty of reasons, from an economic standpoint, to target the gender gap in wages and opportunities in order to understand it better, explore its less well-known dimensions and find mechanisms and policies to reduce it.

An example of the far-reaching implications of gender gap disparities can be seen in developing economies. Empowering women has become a key aspect of several development policies. Giving more opportunities and resources to women, it appears, increases the chances of economic success of families and communities in developing countries. The World Development Report of 2012 analyzes and dissects gender disparity in the world, with a special focus on developing countries, and proposes several policies to address it. The World Bank has developed a whole research agenda on "Gender and Development."<sup>1</sup> Developed countries are also monitoring their gender gap policies very carefully and the goal of gender equality is explicitly stated in several "Process and Strategy" statements of companies and countries. Since 2006, for instance, the World Economic Forum has produced a yearly Global Gender Gap report to monitor the progress that each country (rich and poor) is making in achieving gender equality in four key areas: health and

<sup>1</sup> See the website at <<http://go.worldbank.org/A74GIZVFW0>>.

survival, education, economic participation and opportunity, and political empowerment.

The first part of this book (Chapters 2–5) focuses on the difference in labor markets and income performances between men and women. The second part of the book will analyze other form of gap and potential discrimination on the labor markets driven by sexual orientation, physical aspects, and age. While the gender gap and its determinants have been widely studied, we focus on less-known aspects and we propose original approaches. First we combine structural, model-based methods in Chapter 2 with micro data to identify the role of discrimination and prejudice. Then we use less-explored (Chapter 3) or completely new data (Chapters 4 and 5) to make progress on less well-known issues such as the role of early schooling career and choices in college in determining the labor market gender gap. Moreover, we focus on the highly educated, and on three countries, Italy, Spain, and the United States, as representative of the whole range of variation in gender gap across developed economies. In the 2011 Global Gender Gap report the US was ranked 6th (from the top) in terms of gender inequality in earnings. Together with northern European countries, the US exhibits the smallest gender gap in earnings. Nevertheless, there is a very significant gender disparity in the US in access to highly paid and powerful positions both in the corporate world and in government (senior officers, CEOs, Board of Directors). Spain, on the other hand, has been a country with rapid economic growth in the last two decades and similarly fast progress on gender inequality. However, it was ranked 74th in the world in terms of its economic gender inequality, and so right in the middle of the distribution of 135 countries analyzed by the Global Gender Gap report. As we will document in Chapter 3, gender inequality in economic access and achievement is still significant in Spain, even when we focus only on the college educated. Finally, Italy was ranked 90th in terms of gender differences in economic achievement by the Global Gender Gap report. This is the country with the largest gender income differences among Organization for Economic Co-operation and Development (OECD) countries, except for Japan and Greece. There is a perception that even highly educated Italian women do not have access to the same occupations and opportunities that men have. We will analyze these issues in greater detail in Chapters 4 and 5.

In order to put the above countries into, further context, Italy and Spain are among the European countries with the higher wage and employment gap. Sweden, Norway, and Denmark are among those with smallest gaps. Differences in policies, in particular in the generosity of work–family reconciliation and maternity policies, may explain some of these differences within Europe (e.g. Christofides et al., 2010) and changes in policies are certainly in place in some of the countries analyzed (see Chapter 3). However, considering the US as reference—a country without generous policies and a low gender