

## Gender Wage Gaps and Firm Characteristics

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The large scale entry of women into the labor force is one of the most dramatic changes in the nature of work, and one of the largest drivers of economic growth, in the past half century. Despite rapid change, in virtually every developed economy, women still earn substantially less than their male peers (see Altonji and Blank, 1999 and Blau, 2012 for reviews). Recent research (e.g., Blau and Kahn, 2006) suggests these pay disparities have stopped shrinking post-2000, leading some to wonder whether women are sharing appropriately in the aggregate gains from growth.

Economists have long been interested in whether gender wage gaps result from unmeasured differences in productivity or some form of discrimination (Becker, 1957). To date, most studies by economists adopt a competitive framework for wage determination, whereby workers with identical perceived levels of skill will be paid equivalent wages.

An alternative line of inquiry, dating back at least to Joan Robinson (1933), asks whether in an imperfectly competitive labor market, wage gaps between men and women might be attributable to differences in bargaining power. Such differences could arise for several reasons. For instance, given the large differences in occupation mix across genders, the market structure of potential employers might differ by sex – nurses, for example, are employed primarily by large local hospitals with whom they have notoriously limited bargaining power. Likewise, married women may have less scope to move to an alternative labor market with better opportunities because they are tied to their husbands who are often the primary earner (Mincer, 1978). Moreover, recent research suggests that gender differences in attitudes towards competition (Gneezy, Niederle, and Rustichinni, 2003; Niederle and Vesterlund, 2007; Lavy, 2008) might also be important in influencing bargaining behavior.

Modern labor market models with realistic search frictions (e.g. Pissarides, 1985, 1990; Burdett and Mortensen, 1998; Cahuc, Postel-Vinay, and Robin, 2006) build upon Robinson's original monopsony analysis by describing the employment relationship as akin to a bilateral monopoly setting where a worker's wages are a function of both her own characteristics and those of her employer. To date, however, we are not aware of an analysis of the role of market frictions in generating gender wage gaps.<sup>1</sup>

This project will assess the bargaining power explanation by examining the link between employer characteristics and gender pay gaps. Our analysis will rely upon the Quadros de Pessoal (QP) – a large administrative dataset from Portugal with information on the characteristics of workers and employers. Crucial for our analysis, these data will be linked with detailed Bureau Van Dijk (BvD) balance sheet data on firms, which will allow us to measure sales, capital intensity, and value added at each employer.

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<sup>1</sup> Black (1995) presents a related analysis of racial wage gaps in a frictional environment.

Our research goal is to examine how worker and firm characteristics interact to differentially affect the wages of male and female employees. We will start by estimating worker-firm wage models of the sort pioneered by Abowd, Kramarz, and Margolis (1999) separately by gender. These models allow us to disentangle unobserved heterogeneity in worker skills from the wage setting practices of firms. We will use the estimates from these models to examine how firm wage premia correlate across genders and whether particular sorts of firms offer differential premia for men relative to women. Characteristics of particular interest are the nationality of the firm's owner, whether the firm is an exporter, industry, and the size and profitability of the firm.

We will also explore whether the gender mix of the firm's workforce has an effect on the wage gap, as a large literature in sociology and economics suggests that "feminized" occupations tend to underpay women (Blau and Kahn, 2000; Blau, Brinton, and Grusky, 2006). Recent research suggests that this degree of underpayment may not be productivity related, as increases in firm female share appears to be associated with higher productivity and greater prospects for firm survival (Hellerstein, Neumark, and Troske, 1997; Weber and Zulehner, 2010, 2011).

Having examined the observational relationship between firm characteristics and gender differences in firm specific wage premia, we plan to explore the gender wage effects of shocks to firm productivity. We will seek out events yielding large changes in measured productivity and examine the resulting effects on gender wage gaps among the set of employees who remain employed at the firm. A finding that productivity increases at a firm increase gender wage gaps would provide evidence that men are able to capture a larger share of the firm specific rents than women, while a finding that productivity increases decrease gaps would suggest the opposite conclusion. It is also possible that firm specific shocks have no effect on the wage gap which would suggest that bargaining over rents is not a major source of gender wage gaps. We will also examine whether the response to positive and negative shocks is different.

In a complementary research design, we will also examine whether monetary policy actions by the European Central Bank disproportionately move the gender wage gap at firms with large debt to equity ratios. This design will be particularly relevant to "hold-up" formulations of rent sharing involving large irreversible capital investments (e.g., Card, Devicienti, and Maida, 2011).