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Can a Payroll Tax Cut for Women Narrow the Gender Gap?

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POLICY BRIEF

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BRIEF HIGHLIGHTS

- *In 2013, Italy introduced a large payroll tax cut for female hires to tackle gender labor market inequality.*
- *The tax cut targeted long-term unemployed women working in male-dominated occupations and places.*
- *This policy increased female employment but did not affect female wages.*
- *The tax cut also stimulated firm profitability, particularly among firms in industries with significant gender biases.*
- *These findings demonstrate that differentiating payroll taxes by gender can narrow the gender gap in employment but may not address the gender gap in pay.*

For additional details, see the full working paper at https://research.upjohn.org/up_workingpapers/23-386/.

Gender inequality in the labor market is a persistent problem in every industrialized country. Policymakers have proposed various strategies to address it, including family policies, gender quotas (where legal), and pay transparency. However, it remains unclear how governments can effectively address gender inequalities. In a new study, I explore the effect of a novel policy in Italy: differentiating payroll taxes by gender.

A payroll tax cut for female workers can potentially improve female labor market outcomes and tackle gender inequalities. By making gender discrimination more costly, a payroll tax cut for female hires would raise demand for female labor by "taxing" discriminatory employers. Furthermore, even if the tax cut targets employers, it could translate into higher net wages and thus a lower gender pay gap if some of the reduction in labor costs is shared with workers.

The study focuses on a large payroll tax cut for female hires, implemented in Italy in 2013. The policy reduced the employer's portion of the payroll tax rate by 50 percent for a period of up to 18 months for permanent jobs and 12 months for temporary jobs. I analyze the impact of the tax cut using social security data on private sector workers, comparing women at employers who were more or less likely to benefit from the tax cut based on geography, women's birth years, and women's occupations.

I find that the tax cut leads to a significant increase in female employment, without affecting workers' net wages. The employment increase persists for up to eight years after the reform. I also find that firms that derive greater benefits from the tax cut (have a greater share of subsidized female hires) experience greater workforce growth, increased production value, and improved profitability. The productivity gains from subsidized female hires are larger in industries with more severe gender biases, suggesting that gender-biased firms have much more to gain from hiring female workers.

A cost-benefit analysis suggests that the policy has been quite effective, since the net cost per job created is about one-quarter of the budgetary cost. The tax cut thus turns out to be a quite effective policy to reduce the gender *employment* gap, but it is an undesirable policy if policymakers want to reduce the gender *wage* gap.

The Payroll Tax Cut for Female Workers in Italy

The so-called "Fornero reform" (law 92/2012) implemented a permanent employer payroll tax cut for female hires starting in January 2013. The reform reduced the employer portion of the payroll tax by 50 percent, shrinking the tax rate from 21.6 to 10.8 percent. The eligibility criteria for the tax cut were designed to provide stronger work incentives in economically disadvantaged municipalities, defined as those eligible for European Union funds (most of which are located in southern Italy). In these places, the payroll tax cut applies to women who have not worked for at least six months. In other municipalities, the tax cut was reserved for women who had not worked for 12 months if they were age 50 or over, or had not worked for 24 months if they were younger than 50. However, these minimum nonemployment duration requirements are reduced to six months for women hired in male-dominated occupations.

A payroll tax cut for female workers can improve their labor market outcomes and tackle gender inequalities by making gender discrimination more costly.

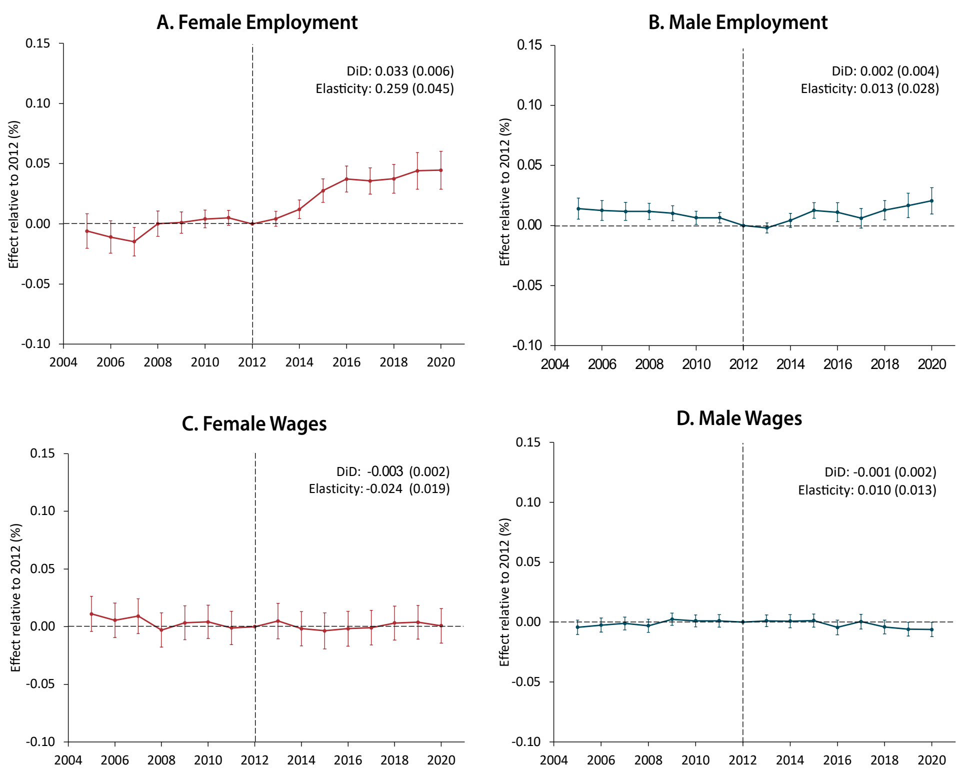
Italy provides an interesting laboratory to evaluate the effects of differentiating payroll taxes by gender. Female employment in Italy is among the lowest across OECD countries, and the gender employment gap is around 26.5 percentage points according to the OECD Family Database. Moreover, there is striking heterogeneity in female employment across both places and occupations. For instance, the gender employment gap is about 12 percentage points in cities in northern Italy such as Milan and Turin, but around 30 percentage points in southern Italy cities such as Naples and Palermo. Additionally, setting different tax rates by gender is legally possible in Italy, unlike in the United States.

The Impact of the Payroll Tax Cut on Employment, Earnings, and Gender Gaps

My study uses social security data on the universe of Italian private-sector workers to evaluate how the payroll tax cut affects employment and earnings of both men and women. The analysis relies on sharp differences in the eligibility criteria across municipalities, birth cohorts, and occupations. All these comparisons point to the same conclusion: the tax cut leads to lasting growth in female employment, but it does not affect workers' net wages.

To provide evidence of the impact across places, I compare differences in female employment over time between municipalities where tax cut eligibility is less binding (the "disadvantaged" municipalities) and nondisadvantaged municipalities where fewer women were likely to be eligible. As shown in panel A of Figure 1, female employment increases by around 3.3 percent in disadvantaged municipalities relative to nondisadvantaged municipalities. Employment effects build up gradually and are significant up to eight years after the reform. By contrast, female workers' take-home wages do not change following the tax cut (panel C). Although not shown, the trend in

Figure 1 The Employment and Wage Effects of the Payroll Tax Cut



SOURCE: Author's computations based on matched employer-employee data from the Italian Social Security Institute (INPS).

The findings suggest that the tax cut leads to a significant increase in female employment without affecting net wages.

the number of days worked is similar to that of overall employment, suggesting that firms do not replace incumbent workers with new hires benefiting from the tax cut. I also find no offsetting decline in men's labor market outcomes (panels B and D). Moreover, I find the same patterns in additional analyses that compare tax cut eligibility across cohorts and occupations rather than municipalities.

These findings indicate that the reform increased female employment without raising wages, suggesting that the payroll tax is ultimately paid by firms rather than workers. Although at odds with the received wisdom in public economics, my results accord with a recent stream of studies also finding that employers can bear the burden of payroll taxes (see, e.g., Saez, Matsaganis, and Tsakloglou 2012; Saez, Schoefer, and Seim 2019, 2021). My results also provide the first evidence of the potential for gender-based payroll taxes to curb gender inequalities (at least, in places where this is legal). Increased female employment without detrimental effects on male employment leads to a reduction in the gender employment gap. The increase in female labor demand in gender-imbalanced places and occupations suggests that gender stereotypes and prejudices are not fixed but rather can be shaped through policy. By making gender discrimination more costly, the payroll tax cut can tackle discrimination by "taxing" gender-prejudiced employers, leading them to raise their demand for female labor.

The Impact of the Payroll Tax Cut on Firms

I also investigate how the tax cut affected firms' outcomes. Firms' responses depend on two main channels. First, the tax cut generates a large cash flow to firms with higher subsidized hires. If firms are credit constrained, this cash windfall could lead firms to grow. A second channel is that the tax cut makes gender discrimination more costly. If gender prejudices created barriers to female employment, the tax cut can erode discrimination by "taxing" gender-prejudiced employers. The tax-cut-induced increase in female employment could then improve business performance, particularly in gender-biased firms. Matching social security data with firm-level balance sheets, I examine these possibilities by comparing firms that are more or less exposed to the tax cut based on their shares of subsidized hires.

I find that a 10 percentage point (p.p.) increase in the share of subsidized hires (approximately the equivalent of hiring an eligible worker at the median firm) raises a firm's workforce by nearly 4 percent, total production value by 1.7 percent, and value-added by 0.9 percent. Additionally, around half of the tax windfall is passed on to incumbent workers' wages. The tax cut also increases firm profitability: the return on assets increases by 0.4 p.p., the return on equity by 1.2 p.p., and the return on investment by 0.7 p.p.

To understand what drives these effects, I investigate whether the marginal impact of a subsidized hire is stronger for firms that are more likely to discriminate. Matching data on firm-level outcomes with a nationwide survey eliciting information on gender prejudices, I create a gender bias index based on the share of workers in a given industry who agree with the view that "when jobs are scarce, men have more rights to a job than women." Comparing industry-specific estimates of the tax cut with the gender bias index, I show that productivity gains are larger in industries with more severe gender biases. On average, a 1 p.p. increase in the gender bias index raises a firm's value-added by about 0.5 percent. Put differently, this result suggests that the value-added impact of the tax cut for a stereotypically male industry such as the construction sector (gender bias index = 0.3) could be 6.7 p.p. larger than the impact for a stereotypically female industry such as the health sector (gender bias index = 0.13), even holding exposure to the tax cut constant. I find a similar pattern for the impact on other profitability measures, suggesting that gender-biased industries have much more to gain from the integration of female workers.

A cost-benefit analysis suggests that the policy has been quite effective, since the net cost per job created is about one-quarter of the budgetary cost.

A Cost-Benefit Analysis of the Policy

A typical concern with hiring credit policies is that they can be costly. But up-front costs to the government budget need to be weighed against benefits from higher tax payments from the additional people working. I perform a simple back-of-the-envelope calculation to evaluate the net cost of the policy, which accounts for several benefit spillovers, including reduced spending on welfare and the additional income and payroll revenue coming from the employment increase. While the policy's budgetary cost is 1,907 euros per recipient, I estimate that each recipient brings in around 1,389 euros in additional revenue. This estimate suggests a 73 percent self-financing rate, making the net cost roughly a quarter the size of the budget cost. Consequently, employer-borne payroll tax cuts can be both effective and cost-effective for reducing the gender *employment* gap, but they do little to tackle the gender *wage* gap.

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