

Mini-Grant-Funded Research

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Industry Growth and Decline and Changes in the Gender and Education Wage Gaps During the 1980s

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Using panel data from the Panel Study of Income Dynamics that cover a long period of time, this study finds that industry growth and decline had a large effect on wages during the 1976–2001 period. Over 10-year periods, workers who were initially in industries that subsequently declined have slower wage growth than other workers. Furthermore, workers who were predicted, based on their education, sex, and industry affiliation at the beginning of the decade, to be likely to move to industries that subsequently declined have much slower wage growth than other workers. This suggests that some skills are neither industry-specific nor purely general in nature. The effects of industry demand changes on wages are larger for younger workers but similar for men and women.

These estimates are used to predict how the relative wages of different education, sex, and race groups were affected by changes in industry composition during the decade of the 1980s. A simple accounting scheme using regression estimates suggests that changes in industrial composition can account for most of the within-cohort increase in the wages of women relative to men and 30–50 percent of the increase in the relative wage of more education groups within cohorts. These effects are larger than those typically reported in studies that use repeated cross sections to study changes in relative wages across cohorts. The smaller increase in the

wages of whites relative to nonwhites cannot be explained by changes in industry demand.

The results have some interesting interpretations: they suggest that it is overly restrictive to describe skills as being either completely general or specific to one industry. Individuals can be seen as having a portfolio of skills that have different values in different industries. Shifts in labor demand across industries lead to changes in the value of the portfolio of skills. Other research shows how the male–female wage gap closed during the 1980s despite the fact that women had fewer general skills (in terms of education and experience) and the return to general skill increased. The results suggest that although women had fewer general skills, their portfolios for industry-specific skills increased in value over the decade relative to those of men. This was an important factor in the reduction of the male–female wage gap over this period.

Using Cluster Analysis in Program Evaluation

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The conventional way to measure program impacts is to compute the average treatment effect; that is, the difference between a treatment group that was subject to some program and a control group that was denied the opportunity. Recently, scholars have recognized that looking only at the average treatment effect may obscure interesting and policy-relevant impacts that accrue to subgroups. As part of the effort to inform subgroup analysis research, this paper explains how treatment group heterogeneity challenges program evaluators. It then proposes using cluster analysis to identify otherwise difficult-to-identify subgroups within evaluation data. The approach maintains the integrity of the experimental evaluation design, thereby producing unbiased estimates of program impacts by subgroup.

This method is applied to data from the evaluation of New York

State's Child Assistance Program (CAP), a reform program that intends to increase work effort and earnings among welfare recipients. The paper interprets the substantive findings of the subgroup analysis applied to CAP and then addresses the advantages and disadvantages of using the proposed method.

Does Multiskilling Matter? Evidence from Displaced Workers

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Using displaced worker surveys merged with occupational information on multiskilling from other sources, this study examines the relationship between multiskilling, earnings, and displacement-induced earnings losses. Overall, the findings suggest that workers in multiskilled jobs earn more, both in the multiskilled jobs and in the jobs they locate after displacement. Since the latter differential outweighs the former by a small but statistically significant amount, multiskilling mitigates displacement-induced earnings losses. Controlling for the total training time required for the job, however, multiskilling is associated with lower earnings in both the pre- and postdisplacement jobs. Since the latter effect is smaller than the former, a small prophylactic effect against displacement-induced wage losses exists in this sense as well.

Estimating the Probability of Leaving Unemployment Using Repeated Cross Sections with an Application: Temporary Contracts and Unemployment Duration Distribution

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Since the mid-1970s, European labor markets have suffered from high unemployment rates as well as a high

fraction of long-term unemployed. These markets have also been characterized by a wide use of permanent contracts with high regulated firing costs. In 1984, Spain, which was plagued by the highest unemployment rate and the highest rates of long-term unemployment among all the OECD countries, introduced fixed-term contracts with negligible firing costs as a measure to increase flexibility of the labor market. Since then, while the unemployment rate remained very much unchanged, the share of long-term unemployed has decreased between the mid-1980s and early 1990s. However, this fact does not reveal how the increased employment chances were distributed among the unemployed workers, because when outflow rates increase at any duration of unemployment, the incidence of long-term unemployment tends to decrease.

In this project (joint with Maia Guell of Universitat Pompeu Fabra), the probability of leaving unemployment by duration is estimated and the relative exit probability between the short-term unemployed and long-term unemployed is analyzed in order to fully understand the changes in the duration distribution of unemployment. We first solved a technical difficulty encountered in the empirical analysis. Panel data from the Spanish Labor Force Survey are not available before 1987. To analyze the changes in the probability of leaving unemployment before and after the introduction of fixed-term contracts, we use the cross-section data drawn from the same survey, which is available since 1976. We develop a new method-of-moments based estimation method that uses repeated cross-section data on unemployed individuals. The most important features of the method are 1) it estimates the exit probability at the individual level and thus avoids the small cell problem encountered in previous studies, and 2) it relaxes any stationarity assumption on the composition of inflows into unemployment. We find that the unemployed pool becomes more segmented in the 1990s. Specifically, the relative probability of leaving unemployment of the short-term unemployed compared to the long-term

unemployed becomes significantly higher in 1990s. In this sense, our results would suggest that more targeted policies toward the long-term unemployed can be beneficial in reducing unemployment.

Why Have Aggregate Skilled Hours Become So Cyclical Since the Mid-1980s?

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Skilled labor has been traditionally thought of as being relatively insulated from business cycle fluctuations, with most variations in aggregate hours of work being accounted for by changes in unskilled employment. This paper documents and then tries to formally explain a dramatic increase in the cyclical of skilled labor starting from the mid-1980s.

The paper uses the Current Population Survey's Merged Outgoing Rotation Groups to construct quarterly measures of the quantity and price of hours worked by college educated ("skilled") and non-college educated ("unskilled") workers for the sample period 1979:1–2003:4. In the 1979:1–1983:4 subperiod, which includes the 1981–1982 recession, detrended aggregate hours worked by skilled individuals are not very cyclical. For each percentage point by which GDP is below trend, skilled hours are about one-third of a percentage point below trend. In the 1984:1–2003:4 subperiod, instead, the relative volatility of skilled hours increases dramatically. For each percentage point by which GDP is below trend, skilled hours are a little over one percentage point below trend. This figure slightly exceeds the corresponding one for unskilled hours. This pattern is dominated by an increase in the relative volatility of skilled employment rather than average hours per employed worker. In both subperiods, instead, unskilled hours, are as volatile as GDP. Remarkably, while the data suggest that wage inequality between skilled and unskilled workers has been increasing

over the last 25 years, inequality among these two groups, as measured by the sensitivity of their employment status to business cycles, is instead lower now than it was 20 years ago.

The theoretical part of the paper adopts a simple relative demand/supply framework. The central feature of the model is an aggregate production function characterized by capital-skill complementarity. The latter implies that aggregate skilled hours are cyclically less volatile than aggregate unskilled hours. In a recession, for example, since the stock of capital equipment changes slowly at high frequencies, capital-skill complementarity in production leads to an increase in the relative demand for skilled hours. This simple model is used to evaluate quantitatively two potential explanations for the dramatic increase in the relative volatility of skilled hours: 1) The volatilities of GDP and unskilled hours have declined substantially since the mid-1980s. Capital skill complementarity in production predicts that, in such instance, the volatility of skilled hours should increase relative to the volatility of GDP. 2) The skill premium has grown more slowly since the late 1980s, while at the same time investment in equipment has boomed. Jointly taken, these trends point to a structural decrease in the degree of capital-skill complementarity itself. In turn, a lower degree of capital-skill complementarity implies a higher cyclical of skilled labor. The simple model is calibrated using information on the long-run dynamics of the skill premium and the production inputs. The calibration exercise reveals that the two mechanisms reviewed above jointly account for about sixty percent of the observed increase in the relative volatility of skilled hours. The main effect, from a quantitative point of view, comes from the reduction in the degree of capital-skill complementarity.