

Occupational Upgrading and the Business Cycle in West Germany

Report

The paper investigates the relationship between the occupational skill composition (324 occupations), the occupational composition wages and the unemployment rate during the period 1984 to 2004 based on West German register data. The paper is motivated by Reder's (1955) theory on wage and employment dynamics during the business cycle. The paper replicates Devereux's (2002) research design for empirically testing implications of Reder's (1955) theory. Devereux's (2002) work is based on US Data. According to the study, a 10% decrease in unemployment rates increases the share of graduates by 1% and the share of employees with vocational qualifications by 3.5% in West Germany. The comparable point estimates for the United States are higher. However, the difference seems to be insignificant from a statistical point of view. The paper proceeds with an impressive number of refinements. For example, different estimates are performed for males and females, for small and large firms, and along the wage distribution. In a second step, a similar approach is undertaken to investigate the relationship between occupational composition wage and unemployment rates.

Overall, the analysis has been conducted with great care and competence. The comparison with the US looks promising. The paper addresses a relevant theme in labor economics, issuing large data and competent empirical methods. Nevertheless, there is some room for improvement in the presentation. The main flaw is that the interpretation is too lengthy and too speculative. At times it loses the thread and makes for difficult reading. In order to retrieve the thread, the paper should focus on data and econometrics. Although the point estimates are plausible, problems remain that require some reflection to increase the impact of the paper. The following remarks are intended to be constructive in this respect.

(1) Implicitly, the paper can be structured as follows. First, the Devereux analysis is replicated with West German register data. Second, the estimates are compared with the Devereux results. Reasons for similarities are discussed. Third, there is a more general discussion on theories of labor market imperfections and the paper interprets the empirical results in favor of or against some of these theories. The strength of the paper lies in the replication part, and, with some modifications discussed below, its interpretation. The discussion of labor market imperfection is the most ambitious and the least convincing part of the paper. First, there is no longer a dispute on whether or not labor markets deviate from auction markets. They do. Second, empirical work that is intended to assess the amount and the consequences of labor market imperfection needs to elaborate on counterfactual wages and employment pairs. One example for such an effort can be found in the literature on the extent of wage rigidities and the amount of the counterfactual wage sweep-up (Altonji and Devereux (2000) for the US, Fehr and Götte (2005) for Switzerland, Pfeiffer (2003) with register data for West Germany, Hübler and Conelisen (2008) with the SOEP data, among others). The paper has a focus on occupational up-grading and the business cycle and that is sufficient for one paper. The first suggestion therefore is to focus on parts one and two.

(2) The data set used has advantages and also some disadvantages for investigating wages and employment over the cycle. One disadvantage not explicitly mentioned in the paper is that it is not possible to construct the exact wages. Wages from the register data are daily wages, not hourly wages. Daily wages may or may not vary over the cycle through hourly variations. Some of the differences reported in the paper between females and males, small and large firms, and along the wage distribution may indeed result from hourly variations. The labor

supply of females is more elastic compared to that of males. Small firms presumably need more individual hour flexibility in the face of demand shocks compared to large firms, because larger firms have a larger pool of employees. And the labor supply of high wage workers is more inelastic. The authors cannot differentiate between hours and wages with the data they use. Since the advantages of the data override this disadvantage, not much can be done. However, the authors should, if they are convinced by the argument, mention this disadvantage and discuss its potential role behind some of their findings.

(3) A second problem with the estimates results from potential endogeneity. How can one ensure that the direction of causality is from unemployment rates to occupational skill composition and not vice versa? For instance, educational expansion may have generated supply shocks. More graduates have been produced and at times that may have contributed to non-neutral technical change and to an increase in unemployment rates, perhaps even contributing to the business cycle. I do not recommend providing an answer. Trying to identify supply or demand factors underlying wages, employment and unemployment is not the theme of the paper. However, if the authors agree that unemployment rates and the occupational composition of employment and wages may be interdependent, they should mention this in the conclusion. Although the direction of a potential bias is a priori not known, it might lead to an underestimation of the parameters of interest. In fact, in a world without such interdependencies, occupational up- and downgrading could be even more sensitive during a business cycle than the paper suggests.

Literature

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