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A generalised wage rigidity result

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Abstract

This paper provides an alternative explanation of the empirically observed wage rigidity in industrialized economies. We provide sufficient conditions under which the negotiated wage in unionized imperfectly competitive industries is independent of a number of product market features, as well as of the bargaining institution (Right-to-Manage or Efficient Bargains), as long as negotiations are centralised at the industry level. The wage rate turns out to be the same independently of e.g. the number of firms, the degree of product substitutability, or the intensity of market competition, and this result is shown to hold in a broad class of industry specifications widely used in the literature.

JEL classification: L13; J31; J51

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1. Introduction

The empirically observed wage rigidity in most industrialized countries[1] has led to the emergence of a number of theoretical explanations, relying on, for example,

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[1]See e.g. Beckerman (1986).

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implicit contracts, efficiency wage theory, trade union models (e.g. McDonald and Solow, 1981; Oswald, 1982) and competitive theory.[2]

If one accepts that in addition to (real) wage inflexibility, a stylised fact is that wage-setting takes place through a process of bargaining, a natural question to ask is whether there is a link between the two. This is what some of the trade union models mentioned above study. McDonald and Solow (1981), using a constant elasticity demand, and Oswald (1982), and Carruth and Oswald (1989), with specific functional forms for the production function and the union's objective function, show that sectorial shifts in demand and labor productivity are entirely absorbed by employment adjustments. Ulph and Ulph (1989) illustrate situations where the negotiated wage is independent of the product price. The other strand in the literature (see e.g. Dowrick, 1989) compares the effects of product market characteristics on negotiated wages under different institutional forms of bargaining. Dowrick shows that wages depend on these parameters for a constant elasticity product demand whenever bargaining is decentralized. If, however, bargaining is 'centralized' (a slightly different interpretation is used by him), wages are independent of the degree of product market collusion.

In this paper we generalize the wage rigidity result derived in earlier studies to encompass not only monopoly unions and single union–firm interactions, but also to take account explicitly of different product market structures, where e.g. price is not a parameter and where firms' beliefs about other firms' actions potentially have effects on negotiated wages. Earlier studies ignored this strategic aspect of wage setting. We investigate situations in which even with this more general setting, one gets wage inflexibility. While we focus on the effect of product market structure on negotiated wages, clearly the analysis applies to any product market shocks as well.

In the context of a symmetric imperfectly competitive industry with centralized negotiations,[3] sufficient conditions are derived for the wage rigidity property to hold. We consider both the Right-to-Manage model where negotiations are over wages alone (leaving employment decisions at the firm's discretion) and the Efficient Bargains model where negotiations are over employment and wages. The union's objective function depends on wages and aggregate employment and is assumed to be log–linear in employment and in a function of the wage rate.

The Generalized Nash Bargaining solution is used to obtain the negotiated wage, assuming that unions and firms take into account the consequences of their

[2] For a full taxonomy see Carruth and Oswald (1989).

[3] By this we mean that there are institutions in the market which effectively allow firms to co-ordinate on their wage decisions, e.g. employers federations, or wage advisory councils and on the other side allow unions to co-ordinate on wages. One example of the latter is an industry union but in many cases this may not be necessary and it is the co-ordination on wages that we need at the industry level, rather than the existence of a formal industry union. There is some evidence that Japan, e.g. has this kind of centralised wage setting although the bargaining structure appears to be very decentralised.