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Collective bargaining, firm heterogeneity and unemployment

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ABSTRACT

We compare labor market outcomes under firm-level and sector-level bargaining in a one-sector Mortensen-Pissarides economy with firm-specific productivity shocks. Our main theoretical results are two-fold. First, unemployment is lower under firm-level bargaining, due both to a lower job destruction rate and a higher job-finding rate. Key to this result is the interplay between firm heterogeneity and wage compression under sector-level bargaining. Second, introducing efficient opting-out of sector-level agreements suffices to bring unemployment down to its level under decentralized bargaining.

1. Introduction

In most of continental Europe, wage setting takes place predominantly in the form of collective bargaining. The proportion of workers covered by collective bargaining agreements typically exceeds by far union membership, and in some cases coverage is almost universal. Among European countries, however, there are noticeable differences in the levels at which wage bargaining takes place (national, regional, sector, firm), the way in which collective bargaining agreements overlap, the unions and employers which are entitled to bargain, and the extension rules by which the agreements may be applied to workers and firms outside their scope.[1] The idea that the characteristics of collective bargaining systems may influence unemployment has received a lot of attention, at least since the 1980s, with many empirical studies trying to assign cross-country differences in unemployment to some of these characteristics.[2]

In principle, there are several reasons why the level at which collective bargaining takes place may determine wage setting outcomes and unemployment. For instance, wage setters may have different objective functions depending on the level at which bargaining takes place. Hence, it has been argued that centralized wage bargaining can internalize several externalities associated with wage-setting, while, in contrast, more decentralized wage bargaining leads to higher wage pressure because of "leapfrogging", that is, the inclusion of relative wages into the workers' objective function.[3] Additionally, from the employers' perspective, sectorial collective bargaining agreements can be perceived as instruments to "regulate" competition by imposing similar wages across all firms.

Possibly the most influential argument to relate collective bargaining and unemployment was the "hump-shape" relationship between centralization of collective bargaining and real wages, proposed by Calmfors and Driffill (1988).

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[1] For evidence on the coverage and characteristics of collective bargaining in European countries, see e.g. OECD (2004) and Du Caju et al. (2008).
[2] For a survey of these studies, see for instance, Flanagan (1999).
[3] See Calmfors (1993).

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The basis for this relationship is well-known: when collective bargaining takes place at firms facing competitive markets, there are no monopolistic rents to be shared among the wage-setters and real wages remain in line with productivity; when it takes place at the national level, wage-setters take into account "broader interests" and internalize the external effects of wage increases, for instance, those on inflation, unemployment, and taxes needed to finance unemployment benefits. However, when collective bargaining takes place at an intermediate level (say, sectorial or regional) wages are restrained by neither competition nor "corporatism", and, hence, unemployment is higher. This argument was extended to take into account other external effects of wage increases and to put it in the context of an open economy (Calmfors, 1993; Danthine and Hunt, 1994), with the conclusion that the hump shape hypothesis remains valid, although the unemployment consequences of the centralization of collective bargaining are less pronounced. Partly because of this, partly because of the difficulties to measure concepts like the "centralization" and the "coordination" of collective bargaining, the empirical literature has not found categorical evidence that cross-country differences in unemployment are related to cross-country differences in collective bargaining systems (OECD, 1997; Flanagan, 1999; Bassanini et al., 2010).

A striking feature in existing theoretical models on the macroeconomic effects of collective bargaining is the common assumption of symmetry across all firms in the economy, which differ only in the particular sector they belong to. To the extent that firms are affected both by firm-specific and sector-specific factors, analyses of the effects of collective bargaining that abstract from such heterogeneity may miss an important part of the overall picture.[4] Furthermore, once we take heterogeneity into account, the question immediately arises as to how sensitive relative wages are to firm-specific and sector-specific factors. In this regard, the empirical evidence suggests that centralization of wage bargaining tends to compress relative wages.[5] Hence, wages are more likely to react to firm-specific factors (such as productivity) if bargaining takes place at the firm level than if it takes place at the sectoral level or higher. A priori, the unemployment consequences of wage compression under firm heterogeneity are ambiguous. On the one hand, centralized collective bargaining may increase job destruction, as relative wages do not adjust sufficiently to negative firm-specific or sector-specific productivity shocks. On the other hand, wage compression may increase job creation, because wages do not incorporate positive firm-specific or sector-specific productivity shocks and therefore profits are higher for high productivity jobs.[6]

This paper addresses the question as to how the structure of collective bargaining affects labor market performance in the presence of firm heterogeneity. In order to provide a modern treatment of this issue, we base our analysis on the search-and-matching labor market framework developed by Mortensen and Pissarides (1994), where unemployment is the result of endogenous gross job creation and gross job destruction flows. In particular, we introduce collective bargaining in a one-sector Mortensen–Pissarides economy where firms differ in their productivity levels. We consider two alternative collective bargaining regimes: firm-level and sector-level bargaining. Motivated by the existing evidence on wage compression under centralized collective bargaining, we assume that under sector-level bargaining a common wage is chosen for all firms in the sector. In both cases, we assume Nash wage bargaining with credible threats along the lines of Hall and Milgrom (2008), where fallback positions are determined by the possibility of rejecting offers and continuing the negotiation. In this framework, wages respond to firm-specific productivity under firm-level bargaining, whereas they respond to sector-wide average productivity under sector-level bargaining. In each bargaining scenario, those jobs that fall below a certain productivity threshold are destroyed; absent hiring and firing costs, new jobs are created above the same productivity threshold. The latter threshold depends on how wages are determined, and therefore differs across collective bargaining regimes.

Our main theoretical results are two-fold. First, unemployment is *higher* under sector-level bargaining than under firm-level bargaining. This is the outcome of two effects working in the same direction. On the one hand, the productivity threshold below (above) which workers are fired (hired) is higher under sector-level bargaining. Intuitively, the failure of wages to reflect firm-specific productivity means that, as the latter decreases, the threshold below which jobs become unprofitable is reached earlier. As a result, low productivity jobs that would survive (or would be created) under firm-level bargaining are destroyed (or are not created) under sector-level bargaining. On the other hand, under sector-level bargaining the anticipation of lower (or zero) profits for low-productivity jobs discourages vacancy posting relative to firm-level bargaining. Both effects translate into a higher separation rate and a lower job-finding rate.

Our sector-level bargaining scenario can be interpreted as a situation in which firm-level agreements that lower the standards of higher level agreements are not possible, due for instance to legal constraints. We thus consider an alternative scenario in which those firms and workers that mutually agree to opt out of sector-level agreements can do so. The latter scenario, which we refer to as *efficient opting-out*, leads us to our second main result. We show that allowing for efficient opting-out is enough to bring unemployment down to its level under decentralized bargaining. This holds despite the fact that only a minority of firms (those which cannot afford to pay the wage agreed at the sector level) effectively opt out. The reason is the following. The productivity threshold for opting-out firms is lower than for non-opting-out firms, and therefore represents the relevant job creation and job destruction threshold in this scenario. We find that the latter threshold is exactly the same as in the firm-level bargaining scenario. As a result, the two transition rates and unemployment will be the same too.

[4] The need to consider firm-specific and sector-specific factors when studying the macroeconomic effects of collective bargaining was acknowledged already in Calmfors and Driffill's seminal work (see Calmfors and Driffill, 1988, p. 46).

[5] See Kahn (2000), Blau and Kahn (1996) and Flanagan (1999).

[6] See Bertola and Rogerson (1997).