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Is monetary union necessarily counterproductive?

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Abstract

This paper analyses the case of a monetary union between identical countries characterised by oligopolistic competition in their labour market. It suggests that the switch to a common currency may improve their macroeconomic performances depending on labour market features.

Keywords: Monetary union; Employment; Inflation

JEL classification: E24; F33; J51

1. Introduction

An important strand of literature has shown that, in the presence of strategic interactions between non-atomistic labour unions and the central bank, neutrality of monetary regime no longer holds. Applied to a monetary union (MU) context, this result suggests that the switch to a common currency may affect inflation as well as employment. Indeed, with the establishment of an MU all the wage setters become smaller relative to the monetary authority. This, in turn, reduces their perception of the impact of their decisions on monetary policy, inducing them to less wage discipline (Cukierman and Lippi, 2001; Grüner and Hefeker, 1999; Soskice and Iversen, 1998). As a consequence, MU unambiguously increases

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inflation and unemployment. So, recent studies mainly conclude to harmful effects of the formation of an MU between identical countries.

In this paper, we investigate whether introducing oligopolistic competition in the member countries' labour market may qualify those pessimistic conclusions. The setup we use to specify the features of the underlying economies is based on the microfounded framework provided by Lippi (2003). As a result, in addition to the conventional wage-increasing effect of a MU, we identify a novel mechanism through which MU strengthens the contractionary impact of wage hikes on output and thus on labour demand, leading unions to moderate their wage claims. If this mechanism prevails, depending on structural labour market parameters, the formation of a monetary union then has beneficial implications for price stability and employment. This result also suggests that joining an MU could be a way of achieving lower inflation without increase in the Rogoff's (1985) degree of central bank conservativeness and hence without extra flexibility costs.

2. The model

2.1. The underlying economies

We consider two identical countries named 1 and 2. The economy of country h ($h=1, 2$) is populated by a representative profit-maximising competitive firm and a continuum of workers arranged in the unit interval. Workers are organised in $n \geq 1$ independent unions indexed by j ($j=(1/n), (2/n),\ldots, 1$) and of size n^{-1}.

The firm of country h produces output (Y_h) using domestic differentiated labour inputs, with the technology

$$Y_h = \left(\sum_{j=\frac{1}{n}}^{1} L_{hj}^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\alpha\sigma}{\sigma-1}}; \qquad 0<\alpha<1, \sigma>1 \tag{1}$$

where L_{hj} is the labour supplied by union j in country h, α is a return to scale parameter and σ measures the degree of substitutability among the different types of domestic labour inputs.[1] The firm maximises profits $Y_h - \sum_{j=\frac{1}{n}}^{1} W_{hj}L_{hj}$ subject to (1), taking real individual wages W_{hj} as given. This yields the firm's labour demand function for each union j in country h. Taking logarithms, this function can be written as

$$l_{hj} \equiv \ln L_{hj} = \bar{l} - \sigma\left(w_{hj} - w_h\right) - \frac{1}{1-\sigma}\left(w_h - \pi\right) \tag{2}$$

where $\bar{l} \equiv (\ln \alpha / 1-\alpha)$, w_{hj} and w_h are respectively the growth of the nominal wage obtained by union j and the aggregate nominal wage growth in country h.[2] The variable π defines the inflation rate.

Eq. (2) indicates that an increase in the nominal wage of union j triggers two effects on labour demand. First, it raises the *aggregate* nominal and real wages, causing the firm to reduce output and

[1] We suppose that labour substitutability is confined to national borders.

[2] Without loss of generality, this implies that the previous period nominal wages are normalized to unity. Furthermore, note that w_h is defined by the relation: $1 + w_h = \left[\sum_{j=\frac{1}{n}}^{1}\left(1+w_{hj}\right)^{1-\sigma}\right]^{\frac{1}{1-\sigma}}$, thus $(\partial w_h / \partial w_{hj}) = (1/n)$.