

## Chapter 2

### Wage Competition between Germany and France

1) The static model. This chapter deals with competition between the German labour union and the French labour union. As a point of departure, take the static model. It can be represented by a system of three equations:

$$Y_1 = A_1 - \lambda W_1 - \mu W_2 \quad (1)$$

$$Y_2 = A_2 - \lambda W_2 - \mu W_1 \quad (2)$$

$$Y_3 = A_3 + \nu W_1 + \nu W_2 \quad (3)$$

This is a reduced form of the basic model, see Part One.  $Y_1$  denotes German output,  $Y_2$  is French output,  $Y_3$  is American output,  $W_1$  is German nominal wages, and  $W_2$  is French nominal wages.  $\lambda$ ,  $\mu$  and  $\nu$  denote the wage policy multipliers.  $\lambda$ ,  $\mu$  and  $\nu$  are positive coefficients with  $\lambda > \mu$  and  $\lambda > \nu$ .

According to equation (1), German output is a negative function of German nominal wages and a negative function of French nominal wages. According to equation (2), French output is a negative function of French nominal wages and a negative function of German nominal wages. According to equation (3), American output is a positive function of German nominal wages and a positive function of French nominal wages.

2) The dynamic model. At the beginning there is unemployment in Germany and France. More precisely, unemployment in Germany is high, and unemployment in France is low. By contrast there is full employment in America. The target of the German labour union is full employment in Germany. The instrument of the German labour union is German nominal wages. The target of the French labour union is full employment in France. The instrument of the French labour union is French nominal wages. We assume that the German labour union and the French labour union decide simultaneously and independently. The German labour union sets German nominal wages, forming

rational expectations of French nominal wages. And the French labour union sets French nominal wages, forming rational expectations of German nominal wages.

On this basis, the dynamic model can be characterized by a system of four equations:

$$\bar{Y}_1 = A_1 - \lambda W_1 - \mu W_2^e \quad (4)$$

$$\bar{Y}_2 = A_2 - \lambda W_2 - \mu W_1^e \quad (5)$$

$$W_1^e = W_1 \quad (6)$$

$$W_2^e = W_2 \quad (7)$$

Here is a list of the new symbols:

- $\bar{Y}_1$  full-employment output in Germany
- $\bar{Y}_2$  full-employment output in France
- $W_1^e$  the expectation of German nominal wages,  
as formed by the French labour union
- $W_2^e$  the expectation of French nominal wages,  
as formed by the German labour union
- $W_1$  German nominal wages,  
as set by the German labour union
- $W_2$  French nominal wages,  
as set by the French labour union.

According to equation (4), the German labour union sets German nominal wages, forming an expectation of French nominal wages. According to equation (5), the French labour union sets French nominal wages, forming an expectation of German nominal wages. According to equation (6), the expectation of German nominal wages is equal to the forecast made by means of the model. According to equation (7), the expectation of French nominal wages is equal to the forecast made by means of the model. That is to say, the German labour union sets German nominal wages, predicting French nominal wages with the help of the model. And the French labour union sets French nominal wages, predicting German nominal wages with the help of the model. The endogenous variables are German nominal wages  $W_1$ , French nominal wages  $W_2$ , the expectation of German nominal wages  $W_1^e$ , and the expectation of French nominal wages  $W_2^e$ .