Chapter 1
Simultaneous Decisions: Cold-Turkey Policies

This chapter deals with competition between the European central bank, the American central bank, the German labour union, and the French labour union. So far we have assumed that the central banks and the labour unions decide sequentially. First the central banks decide, then the labour unions decide. Now we assume that the central banks and the labour unions decide simultaneously and independently.

As a point of reference, consider the static model. It can be represented by a system of three equations:

$$Y_1 = A_1 + 1.5M_{12} - 0.5M_3 - 1.2W_1 - 0.3W_2 \tag{1}$$

$$Y_2 = A_2 + 1.5M_{12} - 0.5M_3 - 1.2W_2 - 0.3W_1 \tag{2}$$

$$Y_3 = A_3 + 3M_3 - M_{12} + 0.5W_1 + 0.5W_2 \tag{3}$$

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, M_{12} is European money supply, M_3 is American money supply, W_1 is German nominal wages, and W_2 is French nominal wages. The endogenous variables are German output, French output, and American output.

Obviously, an increase in European money supply of 100 causes an increase in German output of 150, an increase in French output of equally 150, and a decline in American output of 100. An increase in American money supply of 100 causes an increase in American output of 300, a decline in German output of 50, and a decline in French output of equally 50. An increase in German nominal wages of 100 causes a decline in German output of 120, a decline in French output of 30, and an increase in American output of 50. Correspondingly, an increase in French nominal wages of 100 causes a decline in French output of 120, a decline in German output of 30, and an increase in American output of 50. Further let full-employment output in Germany be 1000, let full-employment

output in France be equally 1000, and let full-employment output in America be 2000.

At the beginning there is unemployment in Germany, France and America. More precisely, unemployment in Germany is high, and unemployment in France is low. The primary target of the European central bank is price stability in Europe. The secondary target of the European central bank is high employment in Germany and France. The specific target of the European central bank is that unemployment in Germany equals overemployment in France. In a sense, the specific target of the European central bank is full employment in Europe. The instrument of the European central bank is European money supply. The European central bank raises European money supply so as to close the output gap in Europe.

The target of the American central bank is full employment in America. The instrument of the American central bank is American money supply. The American central bank raises American money supply so as to close the output gap 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 German labour union lowers German nominal wages so as to close the output gap in Germany. The target of the French labour union is full employment in France. The instrument of the French labour union is French nominal wages. The French labour union lowers French nominal wages so as to close the output gap in France.

We assume that the central banks and the labour unions decide simultaneously and independently. In step 1 the European central bank, the American central bank, the German labour union, and the French labour union decide simultaneously and independently. In step 2 there is an output lag. In step 3 the European central bank, the American central bank, the German labour union, and the French labour union decide simultaneously and independently. In step 4 there is an output lag. And so on. For a small-scale model see Carlberg (2004) p. 137.

Let initial output in Germany be 940, let initial output in France be 970, and let initial output in America be 1910. In each of the countries there is unemployment. Step 1 refers to the policy response. First consider monetary