

## COMPETITIVENESS AND EMPLOYMENT IN FINLAND

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### INTRODUCTION

There are a variety of theoretical models for small open economies which emphasize supply side adjustments and the infinite elasticity of supply and demand abroad (e.g., Frenkel and Johnson [3] and Dornbusch [1]. Accordingly, the lack of world demand cannot be the permanent cause of unemployment. However, while there is also a nontraded sector, domestic demand has to be taken into account. If one supposes that domestic production costs compared to world market prices can be determined by income policies, including exchange rate policies, and that domestic expenditure is a function of domestic demand management, the following textbook type table can be presented to show the implications of target variables (employment and foreign trade balance) for the evaluation of the policy variables:

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Labour Market	Foreign Trade	
	<i>deficit</i>	<i>surplus</i>
<i>excess supply</i>	high costs	low expenditure
<i>excess demand</i>	high expenditure	low costs

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Although the target levels are difficult to define, there are some reasons for arguing that, on the average, the Finnish economy has experienced high unemployment (compared to the structure of labour market) and an excess deficit in foreign trade<sup>1</sup>.

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<sup>1</sup> The labour market is analyzed by Eriksson [2] and the role of the current account in the balance of payments in determining the tightness in Finland's domestic demand control is explained by Halttunen ja Korkman [4].

This combination refers to the situation where domestic costs have been too high compared to world market prices denominated in the domestic currency. This leaves us the possibility of estimating what would have been the correct levels of exogenous domestic costs to guarantee equilibrium in the labour market<sup>2</sup>.

### THE EMPLOYMENT EQUATION

Let's assume:

$$X^t = h(C_{t-1}) \quad (1)$$

X = exports

C = competitiveness

Because domestic expenditure is managed in such a way as to restrict the trade deficit, we have:

$$E_t = k(X_t) \quad (2)$$

E = domestic expenditure

Equations 1 and 2 give a reduced form

$$Q_t = f(C_{t-1}) \quad (3)$$

Q = domestic production

Let's further assume:

$$L^+_t = g(Q_{t-1}) \quad (4)$$

$L^+_t$  = optimal number of employed persons

and

$$L_t - L_{t-1} = n (L^+_t - L_{t-1}) \quad (5)$$

L = actual number of employed persons

If equations 3 and 4 are assumed to be linear, and the variable T (time) is introduced to take into account structural changes, we have the following equation to be estimated.

$$L_t = a + bT + cC_{t-2} + dL_{t-1} \quad (6)$$

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<sup>2</sup> A multiple equation model, where domestic costs are endogenous, is presented [5].

Finland's relative costs or price competitiveness is measured by comparing her competitors' GDP price indexes against Finland's GDP price index. The competitors' prices are changes into FIM-terms by using annual average exchange rates. The relative weights of the competitors are taken from the IMF's MERM-model. The data for 1962-82 gives the following results:

$$L_t = 388.54 + 3.28T + 2.86C_{t-2} + 0.67L_{t-1}, \quad (7)$$

(1.11) (2.45) (2.93) (4.06)

$$R^2 = 0.74$$

$$DW = 0.98$$

(C = 100 in 1980 and L is in 1000 persons)

If employed persons are classified by kind of economic activity, we get:

$$LI_t = 228.60 + 2.28T + 1.99C_{t-2} + 0.38LI_{t-1}, \quad (8)$$

(2.45) (2.82) (3.96) (2.56)

$$R^2 = 0.82$$

$$DW = 1.52$$

LI = secondary industries (ISIC 2 - 5)

$$LS_t = 34.61 + 8.75T + 1.79C_{t-2} + 0.69LS_{t-1}, \quad (9)$$

(0.48) (3.30) (5.41) (6.76)

$$R^2 = 0.996$$

$$DW = 2.03$$

LS = tertiary industries (ISIC 6-9)

The results were not statistically significant for labour in primary industries (ISIC 1).

## THE TARGET LEVEL OF COMPETITIVENESS

If the equilibrium level of employment is known, we can use Equation 7 (or 8 and 9) to determine the target level of competitiveness. The natural level of employment LN is assumed as follows:

$$LF_t = 1.006LF_{t-1} \quad (10)$$

LF = labour force

and

$$\bar{U}_t = 1.5 + 0.1T \tag{11}$$

$\bar{U}$  =natural rate of unemployment.

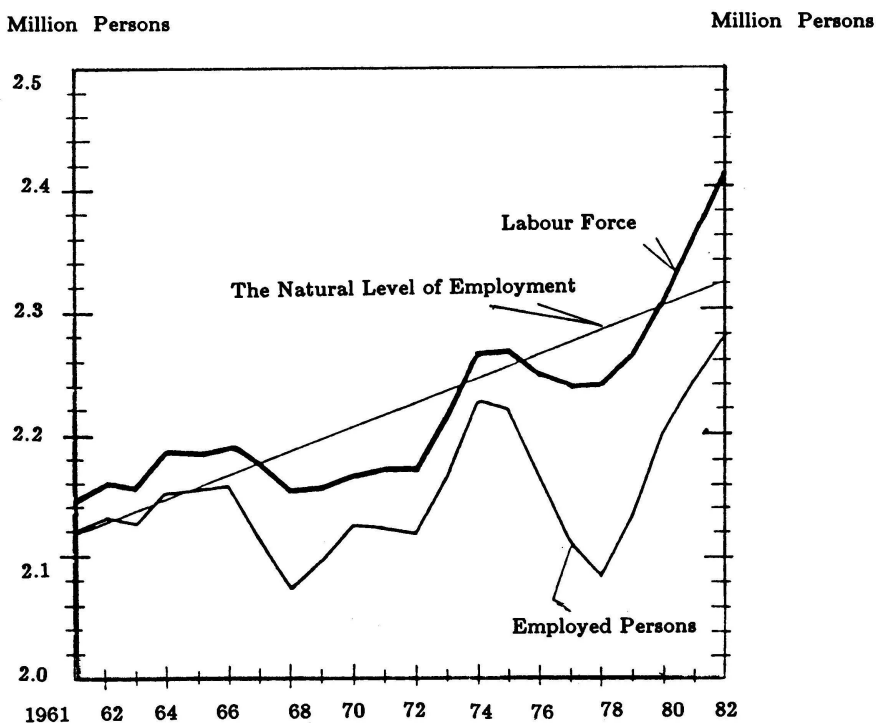
Thus:

$$LN_t = 1.005 LN_{t-1} \tag{12}$$

In other words, the natural rate of unemployment is assumed to increase from 1.16 percent in 1961 to 3.7 percent in 1982. When the labour force (LF) is given its actual number in 1961, we have:

$$LN1 = (1 - 0.016)2147 = 2113 \tag{13}$$

FIGURE 1: *Labour Force, Employed Persons and its Natural Level of Employment.*



These, to some extent, arbitrary estimates of the natural level of employment can be seen in Figure 1. Introducing  $L = LN$  into Equation 6 and taking into account equation 12 we have:

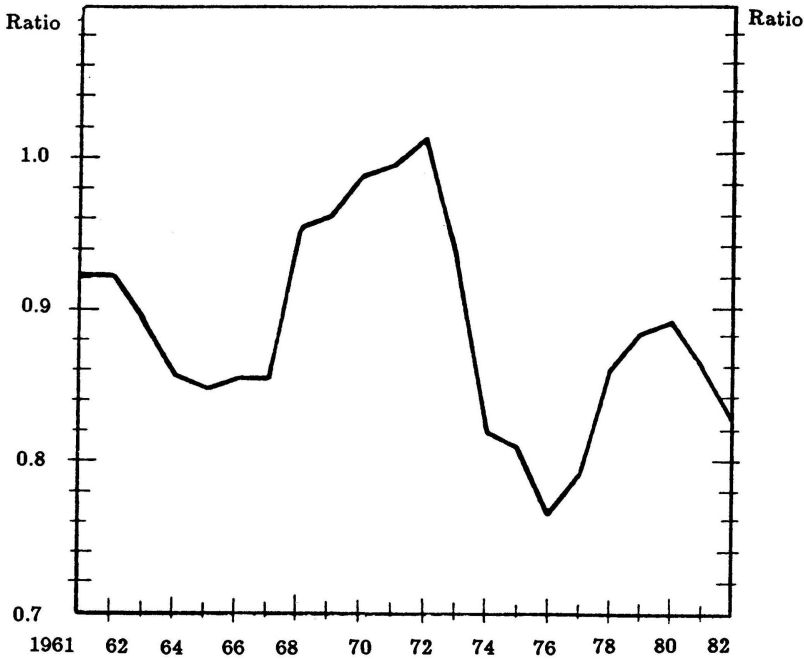
$$LN_t = a + bT + cC_{t-2} + (d/1.005)LN_t \tag{14}$$

Equation 14 can be used to give a value to the competitiveness which would guarantee the maintenance of employment at the natural level:

$$c^-_t = [(1.005 - d)/1.005c] LN_{t+2} - (a/c) - (b/c)(T+2) \tag{15}$$

The ratios between the actual and target levels of competitiveness are presented in Figure 2.

FIGURE 2: *The Ratios between the Actual and Target Levels.*



It is sometimes argued that a good competitiveness would be against the interest of consumers, as well as, of wage and salary earners. This however, seems not to be the case as the following regression results shows:

$$\ln K_t = 0.61 + 0.12 \ln C_{t-2} + 0.011T + 0.70 \ln K_{t-1} \tag{16}$$

(1.20)    (2.10)    (1.90)    (4.90)

K = volume index of consumption

$$R^2 = 0.995$$

$$DW = 2.12$$

$$\ln W_t = 0.003 + 0.24 \ln C_{t-2} + 0.007T + 0.80 \ln W_{t-1} \quad (17)$$

(0.004) (2.10) (1.90) (4.90)

W = wages and salaries/GDP price index

$$R^2 = 0.992$$

$$DW = 1.63$$

Thus, it remains to be answered why it is so difficult to carry out successful income policies. Economists have a large number of models where price expectations have an effect on actual prices. It might be that correspondingly the rate of average unemployment is a function of what the rate is assumed to be. Income policy negotiators do not recognize costs as too high if unemployment is what economists have forecast it to be for many years ahead and if that unemployment is explained to be the result of the lack of world demand. Had the high unemployment rate been explained as resulting from too high costs, the actual costs and unemployment might have been lower. A related explanation for poor performance in income policies during the last ten years may be the international demonstration effect which has given an excuse for high unemployment.

## REFERENCES

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