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LABOUR DEMAND, PRICING AND INVESTMENT DECISIONS IN ITALY: An Econometric Analysis

by

Gianna GIANNELLI

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ABSTRACT

The aim of this paper is to investigate the causes of change in the formation of employment, prices and the accumulation process which occurred in the Italian economy during the 70s and the first half of the 80s. It focuses on the sector which is exposed to international competition and the sector which is sheltered from it.
Econometric estimate of the labour demand, investment and price equations, derived from the theoretical model presented, show some differences and similarities in the behaviour of the two sectors. Both sectors have been on their labour demand curve and have a profit maximizing attitude toward investment. Labour demand in the exposed sector is negatively affected by the expected real interest rate whereas in the sheltered sector this effect is not present. There is a negative correlation between current investment and labour demand of the exposed sector which might be interpreted as the effect of technological innovation in this sector during the period considered.

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INTRODUCTION

During the last decade, the supply side of the Italian economy, in line with other European countries, has undergone a process of substantial change. Within this period, the '70s have been characterized by an unprecedented increase in inflation and wage shares, together with a slowdown in the productivity of labour; the first half of the '80s, instead, has been marked by rising real interest rates, alarmingly high and rising unemployment and a recovery of the productivity of labour. Low rates of growth of the G.D.P. as compared to the '60s, and stagnation of investment have been a constant feature over the whole period.

Economists have developed several theories that aim at explaining the determinants of this rather gloomy scenario. I shall mention briefly just a few of them.

The orthodox Keynesians view the source of all troubles in the restrictive policies that have been adopted by the economic authorities. The so-called "Pigouvian" theorists, instead, claim that the rigidity of real wages in the presence of unfavourable exogenous shocks, such as the rise in the price of oil, has undermined the profitability of firms, held down their ability to invest and, therefore, is to be regarded as one of the major causes of the slump (see e.g. Bruno, 1985). Another set of theories that is mainly concerned with the labour market, examines analytically the role of social and institutional factors (e.g. trade unions and bargaining

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strategies) in the determination of unemployment (see for example Layard and Nickell, 1986). One of the most recent analyses focuses on the links between the U.S. economic policies and the performance of the European countries, and, within the framework of an open economy two-country model, assigns a crucial role to the supply effects of the real interest rate (Fitoussi and Phelps, 1987).

The present study has the aim to analyze the causes of some of the changes which occurred in the different sections of the Italian economy during the '70s and the '80s.

I focus, in particular, on the causes of the decline in employment, the stagnation of investment and the increased efficiency of capital stock in the industrial sector as opposed to the increase in employment and the expansion of capital stock in the sector which is sheltered from international competition.

My aim is to take account of some of the factors that were mentioned in my concise review of the literature. I concentrate on the behaviour of firms and build a theoretical model for a two-sector open economy in order to derive the equations of employment, investment and prices. I then proceed to test empirically the model on quarterly data for the period 1970-1984.

The paper is organized as follows. In section II some stylized facts about the behaviour of employment, investment and the cost of labour in Italy are reported. In section III, I present the theoretical framework underlying the empirical

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analysis which is developed in section IV. Section V contains some concluding observations.

II SOME STYLIZED FACTS ABOUT EMPLOYMENT AND INVESTMENT.

The aim of my analysis, as I have mentioned in the previous section, is to throw some light on the causes of change in the formation of employment and in the accumulation process which occurred in the Italian economy in the 70's and 80's. The choice of the two sectors, that is the sector which is exposed to international competition and the sector which is sheltered from it, was based on the observation that the share of value added of the industrial sector from the 70's to the 80's does not recover its peak level of 1974 and shows a substantial decrease in the 80's. The market services share of value added, instead, is characterized by a steady growth, and in '83-'84, for the first time, it overtakes the share of the industrial sector. Economists are therefore forced to analyze the causes of this change and the literature on the "deindustrialization process" and on its links with the growth of the service sector is an example of this new stream of analysis [1]. In line with that literature, which is also concerned with the increasing difficulty of the economic system to ensure a net flow of exports of manufactured goods that can keep the balance of trade in a position of long-term equilibrium, I take account of international competition as one of the determinants of this process of structural adjustment.

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For the above reasons, the choice to build a model for the sector which is exposed to international competition and the sector which is sheltered from it, seemed the most appropriate for the aims of my analysis. For the exposed sector, which I call sector 1, I use aggregate data for the energy and manufacturing industry. I represent the sheltered sector, which I call sector 2, by aggregate data for market services and the building industry. The public sector and agriculture are, therefore, excluded from the analysis. In particular, I have excluded agriculture from the exposed sector, given that its performance is strongly influenced by E.E.C. regulations. The inclusion of the building industry, for its relatively low weight in terms of the main economic variables, does not alter considerably the trend imposed on sector 2 by services.

The changes in the employment structure appear with evidence in the graphs of the employment series of the Italian exposed and sheltered sector as I have defined them (fig.1; for the definition see footnote 4).The turning point is at the beginning of 1978, when the number of employed people in the sheltered sector becomes larger than that of employed workers in the industrial sector and the year 1980 marks the beginning of the dramatic decline in industrial employment. Employment in the sheltered sector(excluding the public sector) continues its steady growth, though never compensating the decrease in industrial employment. The aggregate investment series in the period considered shows neither a pronounced trend nor extreme cyclical fluctuations (see fig.2). Looking at the disaggregate series for industry and the sheltered sector (see fig.3) the

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EMPLOYMENT
SOURCE: BANK OF ITALY
SECTOR 1 PLOTTED WITH + (THE SERIES IS NET OF C.I.G. WORKERS)
SECTOR 2 PLOTTED WITH X

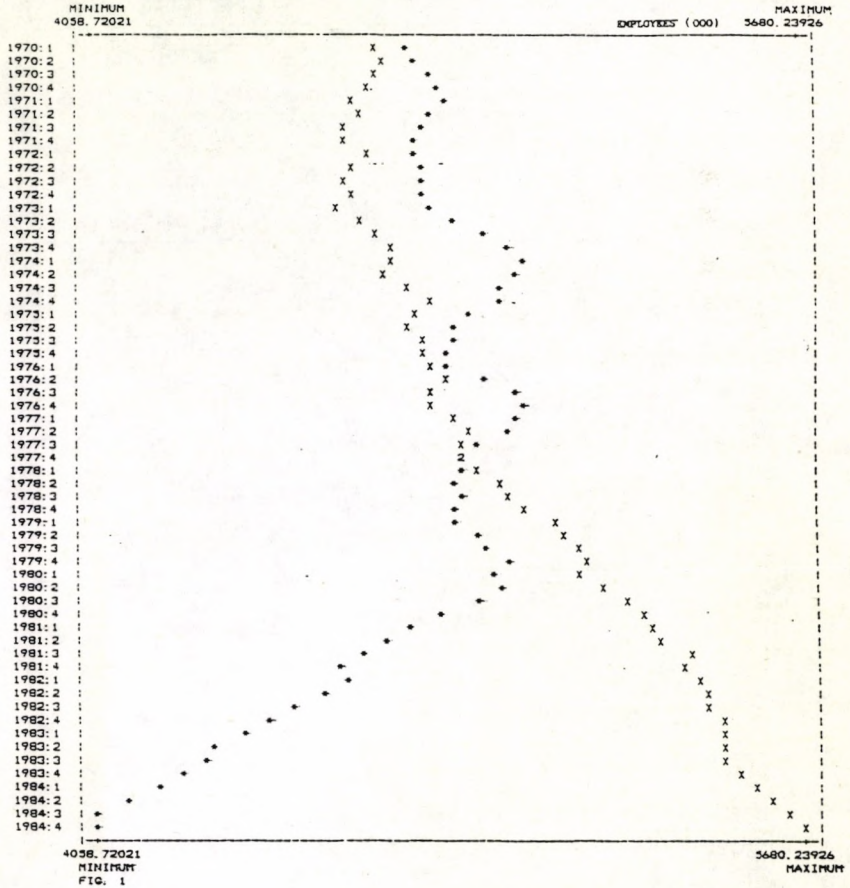

FIG. 1

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Index of total fixed investment

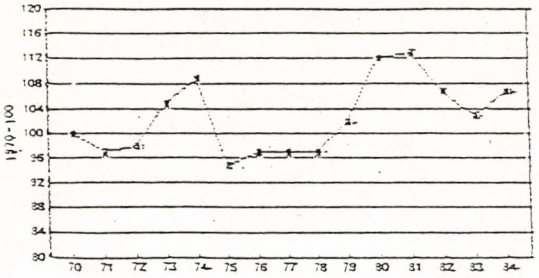

Fig. 2

Source: ISTAT

FIXED GROSS INVESTMENT (1970 PRICES)
SOURCE: OUR ELABORATION OF ISTAT DATA
SECTOR 1 PLOTTED WITH ←
SECTOR 2 PLOTTED WITH X

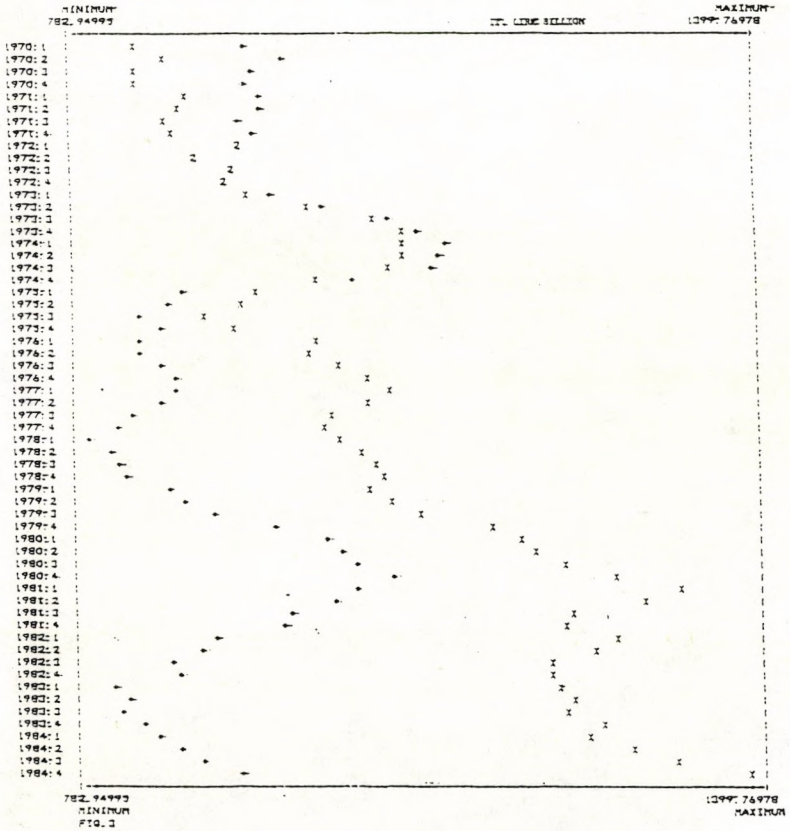

FIG. 3

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following can be noted:

1) the former exhibits a flat trend with accentuated upswings ('73-'74, '79-'80) and downswings ('71, '75', '82-'83);

2) the latter exhibits a moderately increasing trend and fluctuations which occur approximately in correspondence to those of investment in industry, but are less pronounced.

According to the results of several studies (see e.g. Barca and Magnani, 1985) the Italian industrial sector seems to be undergoing a process of substantial technological innovation, which started in 1978-79. This conclusion follows from the observed significant reduction of the average life of capital and its increased efficiency in terms of capital per unit of output. The need to start the process of substitution of the already obsolete existing capital stock, was starting to be felt during the first half of the 70's as the Bank of Italy reports (see the Bank of Italy report for the year 1975, p.89), but a series of adverse circumstances which undermined the profitability rate of firms and their competitive ability (e.g. the increase in the cost of labour and the first oil shock) contributed to delay it. The turning point, according to Barca and Magnani, was the year 1978, when firms seemed to have recovered some profitability margins that allowed them to finance investment with their resources. The second oil shock did not evidently stop this tendency, because the process of energy saving and the increase in imports of intermediate productive inputs as compared to imports of raw materials had already taken place after the first oil shock (see Heimler and Milana, 1984). Essentially, the flat trend of the industrial

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investment series might be explained with the observation that the recent investment behaviour has been more oriented towards substitution of the existing capital and less towards its expansion.

As far as investment in the sheltered sector is concerned, fig.3 shows that it was not affected so dramatically by the recession of 1974-1975 as it was in the exposed sector. From 1975 onwards, investment in this sector is always higher in absolute value than in the industrial sector, and it is characterized by an increasing trend.

This tendency is mainly due to the behaviour of investment in the market services sector. Investment in the building industry, though following the pattern of aggregate investment in industry, is a relatively small share of total investment in the sheltered sector (4% in 1970, 2.8% in 1985).

Although I am not aware of any specific analysis about the characteristics of accumulation in this sector, there are some elements which would induce us to believe that, at variance with the industrial sector, they are represented substantially by capital-widening processes. It is a fact that the pillars of accumulation in the sheltered sector have been the compartments of Communications and Trade, two sectors that have extensively expanded their capital stock in the period considered.

III. THE THEORETICAL FRAMEWORK.

In this section I derive a theoretical model for the determination of employment, investment and prices. As far as

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employment and prices are concerned the underlying framework is that of the models by Nickell (1978) and Layard and Nickell (1986).

I assume that the supply side of the economy consists of two representative firms that produce two composite commodities: firm 1 produces a tradeable good (i.e. exposed to international competition), firm 2 produces a non-tradeable good (i.e. sheltered from international competition). Demand for the tradeable good produced by firm 1 has among its arguments the price of the competing good produced abroad. Demand for the non-tradeable good produced by firm 2 is independent of foreign variables.

I choose not to give a specific functional form to the production process. This approach has the advantage of giving results that are not overly dependent on assumptions about functional forms. On the other hand, this way of approaching the problem gives only relations between the variables but does not supply a precise theoretical interpretation to each of the estimated coefficients.

The production function of the tradeable good is therefore:

$$(1) \qquad Y_1 = f(L_1, K_1, M_1, N_1, I_1)$$

where Y_1 is the supply of output, L_1 is the input of labour, K_1 is capital stock, M_1 is the input of imported raw materials and N_1 is the input of non-tradeable good, I_1 is investment and f is homogeneous of degree one with continuous first and second

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derivatives that satisfy $f_I<0$, f_K, f_L, f_M, $f_N>0$ and $f_{KK}, f_{LL}, f_{II}, f_{MM}, f_{NN}<0$.

Investment enters the production function in force of the assumption of the existence of internal adjustment costs in the capital stock (Lucas, 1967).

The production function of the non-tradeable good is:

(2) $Y_2 = g(L_2, K_2, M_2, T_2, I_2)$

where T_2 is the input of tradeable good g is homogeneous of degree one with continuous first and second derivatives that satisfy $g_I<0$, g_K, g_L, g_M, $g_T>0$ and $g_{KK}, g_{LL}, g_{II}, g_{MM}, g_{TT}<0$.

The two firms face downward sloping demand curves. Demand for the tradeable good (Y_1^d) depends on the price of good 1, on the price of good 2, on the price of the foreign competitive good (p^F), and on aggregate expenditure (z). That is:

(3) $Y_1^d = Y_1^d(p_1, p_2, p^F, z)$

Firm 2 is not exposed to international competition. I therefore assume the demand for the non-tradeable good to be:

(4) $Y_2^d = Y_2^d(p_1, p_2, z)$

I assume that the firm incurs costs which are generated by the turnover of its employees. Such costs of hiring and firing employees are connected, for example, with advertising, interviewing, training, compensation for break of contract,

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loss of output due to vacancies (see e.g. Oi 1962, Rees 1973). On the empirical side, the introduction of this assumption allows us to give theoretical foundations to the well established econometric specification of labour demand which has among its regressors the lagged dependent variable. Hence, demand for labour depends not only on current and expected exogenous variables but also on the existing "stock" of workforce. I assume that these adjustment costs have a quadratic form (Sargent, 1979).

Similarly, in order to make the accumulation decisions dependent on the existing capital stock, I have assumed that there are costs associated with adjusting the capital stock that increase exponentially with the absolute size of investment.

Under these hypotheses the maximization problem of firm 1 is the following (I omit the 1 subscript for convenience):

$$(5)\ \max V_t = \sum_{i=0}^{\infty} \prod_{j=0}^{i-1} (1+r_{t+j})^{-1} p_{t+i} [f(L_{t+i}, I_{t+i}, K_{t+i}, M_{t+i}, N_{t+i}) - \left(\frac{w}{p}\right)_{t+i} L_{t+i} - \left(\frac{w}{p}\right)_{t+i} \frac{b}{2} (L_{t+i} - L_{t+i-1})^2 - \left(\frac{p_I}{p}\right)_{t+i} I_{t+i} - \left(\frac{p^m}{p}\right)_{t+i} M_{t+i} - \left(\frac{p_2}{p}\right)_{t+i} N_{t+i}]$$

subject to the capital accumulation constraint:

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(6) $[K_{t+i} - I_{t+i} - (1-d)K_{t+i-1}] = 0$ for $i = 1, \ldots, \infty$

Where V_t is the present value of the sum of current revenue and the stream of all future revenues, w is the cost of labour per worker, p^m is the price of imported raw materials, p_2 is the price of the non-tradeable good, p is the price of output, p_I is the price of investment, r is the nominal interest rate, and b>0 is the quadratic adjustment costs parameter . Perfect foresight is assumed and the subscript t+i indicates expected values.

I assume that the output price is adjusted to equate demand of the output being produced, that is for firm 1:

(7) $Y_{1t} = Y^d_{1t} = Y^d_1(p_{1t}, p_{2t}, p_t^F, z_t)$

In other words I suppose that the firm's output price is perfectly flexible at each point in time, so that the current output flow is precisely what will be demanded. This hypothesis, even if unrealistic, is quite frequent in formal analysis. As Nickell puts it, a model with costly price adjustment, "...would have to incorporate a number of additional elements, including a theory of inventory holdings, ...which would not necessarily throw a great deal of light on fixed capital investment decisions, which are essentially a longer run problem" (Nickell, 1978,p.17).

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Holding p_{2t}, p_t^F and z_t fixed and inverting Y_{1t}^d we can solve the equilibrium condition (7) for the price of good 1 and obtain:

(8) $$p_{1t} = p[\, f(L_{1t}, K_{1t}, M_{1t}, N_{1t}, I_{1t}),\ p_{2t},\ p_t^F,\ z_t]$$

For firm 2 I assume a price relation symmetric to that of firm 1 except for the omission of the foreign variable.

Maximizing V_t subject to (6) and (8) with respect to L_t, I_t, K_t, M_t, N_t yields the following first order conditions (I omit the subscript for simplicity):

(9) $$\left(1 - \frac{1}{e_t}\right) f_{Lt} - \left(\frac{w}{p}\right)_t - \left(\frac{w}{p}\right)_t b\,(L_t - L_{t-1}) + \frac{p_{t+1}}{p_t}\,\frac{1}{1+r_t}\,\frac{w_{t+1}}{p_{t+1}}\, b\,(L_{t+1} - L_t) = 0$$

(10) $$\left(1 - \frac{1}{e_t}\right) f_{It} - \left(\frac{p_I}{p}\right)_t + \left(\frac{\lambda}{p}\right)_t = 0$$

(11) $$\left(1 - \frac{1}{e_t}\right) f_{Mt} - \left(\frac{p^m}{p}\right)_t = 0$$

(12) $$\left(1 - \frac{1}{e_t}\right) f_{Nt} - \left(\frac{p_2}{p}\right)_t = 0$$

(13) $$\lambda_t = \sum_{i=0} \prod_{j=0}^{i-1} (1+r_{t+j})^{-1} (1-d)^i\, p_{t+i}\left(1 - \frac{1}{e_{t+i}}\right) f_{Kt}$$

where :

$$\frac{1}{e_t} = [\,\delta p(Y_{1t}, p_{2t}, p_t^F, z_t) / \delta Y_{1t}]\ \frac{Y_{1t}}{p_t}$$

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Equations (8)-(13) show the relations between prices, investment, labour, raw materials, intermediate inputs and capital. In particular, they show how the current levels of investment and labour are jointly determined.

It is important to stress that, in this framework, the variables determining the demand for output affect the demands for factors of production through the price elasticity of demand for output. Note that for this result to hold, the form of the demand function must be non separable, i.e. p_t must not be separable from the other arguments of the demand function.

For sector 2 I assume the same type of maximization problem the difference being in the specification of demand (see eq.4). Equations (8)-(13) will form the basis for the econometric specification of labour demand, investment and prices that I present in the following section.

IV THE ECONOMETRIC MODEL

I shall now present the econometric specification of the theoretical model of firms' behaviour discussed in the preceding sections.

It is a two-sector quarterly econometric model of labour demand, prices and the accumulation process in Italy for the period 1970-1984. The two sectors are industry in the strict

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sense, which I call sector 1, and services plus the construction industry, which I call sector 2 [2]. They can also be regarded loosely as the sector which is exposed to and sheltered from international competition respectively. The public sector and agriculture are exogenous to my analysis. In particular, I have excluded the agricultural market from the exposed sector, given that its performance is strongly influenced by E.E.C. regulations.

The theoretical model presented in the preceding sections has primarily the aim of identifying the determinants of employment, investment, prices under a specific set of hypotheses. This being my main target, I have not specified any functional form for the technology of production or the demand for goods. As for expectations, I have assumed them to be rational and invoked Sargent's (1979) technique. I am not in a position, therefore, to impose any restriction derived from the assumptions on the form of technology or expectations and I simply estimate reduced form equations.

The model consists of a system of three simultaneous equations for each sector: employment, investment and prices [3].

The specification search was carried out at the single equation level by means of instrumental variables. I started from a very general specification, estimating initially fourth-order autoregressive equations and then "testing down" to more parsimonious specifications. As far as the specification tests are concerned I have concentrated mainly on three major characteristics an estimated equation might show and that are

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all connected to the problem of misspecification. They are: serial correlation, predictive failure and correlation of instruments with the residuals. The method I have followed, developped by Desai and Weber (1986) and Sargan and Weber (1986), is based on the analysis of estimated residuals by means of auxiliary regressions.

Table 1 and 2 list the symbols used and the descriptive and test statistics reported with each estimated equation.

Table 1

List of symbols.

[The subscript i=1,2 refers to sector 1 (industry in the strict sense) and sector 2 (private services + construction industry).]

L_i: number of employees;

K_i: capital stock;

I_i: gross investment;

cl_i: cost of labour per employee (inclusive of employers contributions, tl);

w_i: gross earnings per employee i.e. cl= w (1+t2);

p_i: value added deflator;

p^m: index of prices of imported raw materials in liras (index in dollars multiplied by the exchange rate liras per dollar);

p^F: index of prices of imported competing goods in liras (index in dollars multiplied by the exchange rate);

${}_tR_{t+i}$ real interest rate expected next period. It is the difference between the rate of interest on bank loans and next period expected rate of inflation of the sectoral value added deflator;

p_I: deflator of investment in machinery;

ER: domestic exchange rate (liras per dollar);

: households consumption deflator;

tl_i: taxation rate on employers;

$t2_i$: direct taxation rate on labour income;

REXP: real final expenditure.

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Table 2

List of descriptive and test statistics

S.E.R. : standard error of regression;

M.O.D.V.: mean of dependent variable;

$\bar{R}^2$: corrected R^2.

D.W. : Durbin Watson.

N.OBS. : number of observations.

SC(x) : Sargan criterion for independence of errors of instrumental variables in the sample period. The x in parenthesis is the number of instruments minus the number of regressors.

GC(p) : Godfrey criterion for serial correlation. In parenthesis is the order of the correlation.

CC(y) : Chow criterion for predictive failure. In parenthesis is the number of predicted quarters.

LM(p) : Lagrange Multiplier test for serial correlation; p is the order of the correlation.

CT(y) : Chow test for predictive failure; y is the no. of predicted quarters.

The numbers in parenthesis beside the coefficients are t statistics.

Even if in the theoretical model I have assumed no specific functional form, for estimation purposes I assume here that the production function is such that the log-linear specification for the demand for labour in sector 1 is the following (I omit the subscript 1 for simplicity) :

$$(1) \qquad \ln(L/K)_t = a_o + a_1 \ln(L/K)_{t-1} + \sum_{i=o}^{n} a_{2i} \ln(I/K)_{t-i} + \sum_{i=o}^{n} a_{3i} \ln(cl/p)_{t-i} + \sum_{i=o}^{n} a_{4i} \ln (p^m/p)_{t-i} +$$

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$$+ \sum_{i=o}^{n} a_{5i} \ln(p_2/p)_{t-i} + \sum_{i=o}^{n} a_{6i}(p^F/p)_{t-i} +$$

$$\sum_{i=o}^{n} a_{7i} \ln REXP_{t-i} + \sum_{i=o}^{n} a_{8i} R^e_{t-i}$$

and the specification for investment is :

(2) $$\ln (I/K)_t = b_0 + b_1 \ln(I/K)_{t-1} + \sum_{i=o}^{n} b_{2i} \ln(p_I/p)_{t-i} +$$

$$\sum_{i=o}^{n} b_{3i} \ln(cl/p)_{t-i} + \ldots$$

and all the other explanatory variables of the labour demand (1).

Therefore, in sector 1 I have imposed, after testing, long-run constant returns to scale. The test on the form of adjustment costs of capital was carried out including investment between the explanatory variables of labour demand. For labour demand in sector 1 I have not rejected the hypothesis of internal adjustment costs for capital, as it will be seen from the estimated investment equation.

The log-linear specification for labour demand in sector 2 is (I omit the subscript 2 for simplicity):

(3) $$\ln L_t = c_o + c_1 \ln L_{t-1} + \sum_{i=o}^{n} c_{2i} \ln(cl/p)_{t-i} +$$

$$\sum_{i=o}^{n} c_{3i} \ln (p^m/p)_{t-i} + \sum_{i=o}^{n} c_{4i} \ln(p_1/p)_{t-i} +$$

$$\sum_{i=o}^{n} c_{5i} \ln REXP_{t-i} + \sum_{i=o}^{n} c_{6i} R^e_{t-i}$$

and the specification for investment is:

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$$(4) \qquad \ln I_t = d_0 + d_1 \ln I_{t-1} + \sum_{i=0}^{n} d_{2i} \ln(p_I/p)_{t-i} + \sum_{i=0}^{n} d_{3i} \ln(cl/p)_{t-i} + \ldots$$

and all the other explanatory variables of the labour demand (3).

The crucial difference between (1) and (3) is the presence in (1) of current investment as explanatory variable of current labour demand. The test for this sector led me to reject the hypothesis of internal adjustment costs for capital. Demand is represented by real expenditure only, since I assume that sector 2 is sheltered from foreign competition (which I have proxied by p^F/p_1). To conclude with the specification issue, I present the specification for the price equation:

$$(5) \qquad \ln p/cl_t = e_0 + e_1 \ln p/cl_{t-1} + \sum_{i=0}^{n} e_{2i} \ln p^m/cl_{t-i} + \sum_{i=0}^{n} e_{3i} \ln p^F/cl_{t-i} + \sum_{i=0}^{n} e_{4i} \ln K_{t-i}.$$

where the reparameterization into p/cl comes from the assumption on the homogeneity of the cost function.

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IV.I. Econometric results: labour demand equation.

IV.I.I. The exposed sector: industry in the strict sense.

The employment series I use for my regression (see table 3) is the number of dependent workers net of the employees who are in the wage supplementation fund (Cassa Integrazione Guadagni).

Table 3

LABOUR DEMAND EQUATION, QUARTERLY, 1971(I)-1984(IV)
Sector 1

Independent variables	Dependent variable $\log (L/K)_t$
constant	-.07 (-2.3)
$\log L_{t-1}/K_t$	1.33 (10.4)
$\log L_{t-2}/K_t$	-.36 (-2.7)
$\log (cl/p)_{t-4}$	-.067 (-2.7)
$\log (p^m/p)_{t-3}$	-.033 (-3)
$\log (p^F/p)_t$	.044 (2.1)
$\log (I/K)_t$	-.04 (-3.2)
R^e_{t-1}	-.084 (-3.5)
S.E.R.	.0064
M.O.D.V.	-2.03
$\bar{R}^2$	.99
D.W.	1.98
N.OBS.	56
SC(3)	4
GC(4)	4.8
CC(8)	19.15

Instruments: $D\log(p^F/p)_{t-2}$, $\log (I/K)_{t-1}$, $\log ER_{t-1}$, $\log p_t^{*F}$, $\log p_{t-1}$.

These workers are kept idle but are still considered as employees in the ISTAT (Italian National Institute of

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Statistics) employment series. I have used, instead, the employment series supplied by the Bank of Italy, which, after estimating the number of workers subject to the C.I.G., gives the net series.

All the variables are in natural logarithms except the expected real interest rate so that the coefficients are elasticities.

The coefficient on ${}_tR_{t+1}$ can be interpreted as the elasticity of employment with respect to $(1+{}_tR_{t+1})$ since ${}_tR_{t+1} \cong \ln(1+{}_tR_{t+1})$.

The equation performs rather well. I reject both the null hypotheses of serial correlation and of instrument correlation with the residuals.

The Chow test, instead, is between the 2.5% and 1% tresholds. This outcome was, in a way, expected since the graph of the series for industrial employment reveals a conspicuous turning point approximately in correspondence with the second quarter of 1981. Up to that point the series exhibits fluctuations around a nearly flat trend; from that point on the trend is strongly negative and the cyclical fluctuations disappear. Since the value of the Chow test is not so strongly against the specification and the period for which a different set of coefficients would be appropriate is quite short, I do not reject the equation. I take into account for further research, however, that around 1981 there is a structural break.

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Turning now to the coefficients themselves I note that they are all significant at the 97.5% confidence interval.

The coefficients on the relative price of sector 1 and on real expenditure were not significant and I have estimated the equation excluding these two explanatory variables. The real expenditure variable might have introduced serious multicollinearity problems given its high correlation with the cost of labour variable. Both of them, in fact, are highly trended.

The lagged employment coefficients indicate a fairly slow response to changes in all the independent explanatory variables.

Employment reacts to a change in the cost of labour after one year (the short-run elasticity is -.067) and it takes on average 6 years for a change in cl/p to be transmitted to employment (the mean lag is approximately 24 quarters).

The adjustment process with respect to the other independent variables has more or less the same speed (the shorter mean lag is that of competitiveness with 20 quarters).

The long-run elasticities of the independent variables are given in table 4 below. Wald's test for the restriction on the long-run coefficient of the capital stock is given in parenthesis.

These results give an indication for a more than proportionate responsiveness of employment to changes in its explanatory variables, changes that are achieved at a slow rate of adjustment.

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Table 4

LABOUR DEMAND EQUATION, QUARTERLY, 1971(I)-1984(IV)
Sector 1
Long-run estimated elasticities of employment w.r.t.
a 1% point change of the independent variables.

Independent variables	Dependent variable L
cl/p	-2.23
p^m/p	-1.1
p^F/p	1.5
I	-1.3
$1+R^e$	-2.8
K	1 (1.5)

Note: the number in parenthesis is a Wald test in its t-ratio form of the unit long-run elasticity of capital restriction.

My specification contains some standard and some new elements when compared with the employment equations available in other studies on the Italian labour market that I shall see later. The standard explanatory variables are the cost of labour and the price of imported raw materials. My empirical analysis suggests that producers in the industry sector have been on their labour demand curve and that there is complementarity between the inputs of labour and the inputs of imported raw materials.

This is in line with the results obtained by Heimler and Milana (1984) with a completely different approach, that is an input-output analysis of the demand of productive factors in

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Italian industry for the period 1956-1982. One of their findings is that after the 1973 increase in the relative prices of raw materials with respect to the intermediate inputs, the Italian producers were led:

> "... to a vertical disintegration of the productive processes, causing an increase in the demand for intermediate labour-incorporating inputs and a relative decrease in the demand for labour itself." (Heimler and Milana, p.145).

The demand effect in my equation is represented by the coefficient on competitiveness, which is defined as:

$$p^F / p = ER^* (p^{F*} / p)$$

where p^{F*} is the index in dollars of the price of imported competing goods. This coefficient measures the employment effects of terms of trade changes. It says that, in the period studied, the Italian industrial producers when faced by a one percentage point increase in ER or in p^{F*}/p or in the sum of their changes, have increased their demand for labour by .044% in the short-run and 1.5% in the long-run.

The novelty elements are represented by the introduction of the real interest rate and investment in the employment equation. The negative coefficient on current investment can be interpreted as the effect of technological progress on employment.

The impact on employment of the more technologically advanced new vintage of capital has a negative effect on employment. The contemporaneity of the demand for labour to new investment,

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however, might be questioned. A plausible explanation might be that the wage supplementation fund (C.I.G.) has allowed industrial producers, especially in the '80s, to have a higher degree of flexibility. The C.I.G. in fact, allows to suspend employees from work quite rapidly, when the need of restructuration has been ascertained for the firm who has asked the C.I.G. intervention.

IV.I.II. The sheltered sector: services and the construction industry.

I turn now to the employment equation of sector 2 whose estimate is given in table 5. The equation was estimated for the period 1971:1 1984:4. All the variables are expressed in natural logarithms. The included variables, that are significant at the 97.5% confidence interval, are the real cost of labour, real expenditure and capital. The equation passes all the specification tests. The lagged employment coefficient indicates a fairly rapid response to changes in the exogenous variables, but the long-run elasticities are considerably lower than the corresponding elasticities for sector 1, as is shown in table 6.

The fact that the employment elasticities in this sector are lower than in the industry sector is to be expected, given the far higher degree of openness of the latter.

The real expenditure term which represents the pressure of demand on employment, is significant and it has a more rapid and larger effect than the real cost of labour.

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Table 5
LABOUR DEMAND EQUATION, QUARTERLY, 1971(I)-1984(IV)
Sector 2

Independent variables	Dependent variable $\log L_t$
constant	.60 (1.9)
$\log L_{t-1}$	.74 (10.4)
$\log (cl/p)_{t-4}$	-.077 (-2.6)
$\log REXP_{t-1}$	.094 (2)
$\log K_t$	.076 (2.4)
S.E.R.	.005
M.O.D.V.	8.5
$\bar{R}^2$	.99
D.W.	2.12
N.OBS.	56
SC(8)	- 0
GC(4)	.282
CC(8)	3.57
Instruments: $\log K_{t-1}$	

Table 6

LABOUR DEMAND EQUATION, QUARTERLY, 1971(I)-1984(IV)
Sector 2
Long-run estimated elasticities of employment w.r.t.
a 1% point change of the independent variables.

Independent variables	Dependent variable L
cl/p	-.30
REXP	.36
K	.29

I have assumed that the production function of this sector is characterized by adjustment costs in the inputs of labour and capital. my results might be interpreted in the sense that

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these adjustment costs are external for both labour and capital, since investment does not turn out to be a significant explanatory variable of employment.

Moreover, the raw materials price shock which occurred in 1973 and 1979 has left the employment level in this sector unaffected.

The problem with this equation is that the real expected interest rate is not significant in this sector. This seems in contrast with the assumption of the existence of adjustment costs in the input of labour. It might be the case, for example, that ${}_tR_{t+1}$ is not relevant for the demand for labour in this sector and the relevant interest rate is a long-term rate. Given the difficulty of finding a good measure for the real expected interest rate relevant for this sector, I prefer to leave this issue unsettled at this stage.

As far as I know, only one other model of the Italian economy exists which distinguishes between the sheltered and the exposed sector (Zandano et al.,1982). It is estimated on quarterly data over the period 1968:1 1976:4 and it is based on theoretical assumptions that differ from mine, so that any comparison is impossible.

The majority of the existing models estimate employment equations for the whole economy or for the manufacturing sector only.

Modigliani, Padoa Schioppa and Rossi (1986), in their model on unemployment in Italy, estimate an aggregate employment equation on annual data for the period 1960-1983. Their

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equation as well differs strongly from mine. It can be noted, however, that their long-run elasticity of the cost of labour with respect to employment is -.346 (and the mean lag is 5.1 years). This value is slightly higher than the value I have estimated for the sheltered sector. This discrepancy with the elasticity I have obtained for the industry sector is to be expected, since Modigliani's equation explains aggregate dependent and independent employment, whereas my equation explains only dependent employment in industry. The need of disaggregated studies on such important issues as employment finds, therefore, a further confirmation.

The result by Modigliani is confirmed also in two other studies that present an aggregate employment equation for Italy based on O.E.C.D. yearly data (Bean, Layard and Nickell, 1986; Newell and Symons,1985). They report a long-run employment elasticity with respect to the real cost of labour of -.37 (1953-1983) and -.37 (1963-1981) respectively.

M. Bruno (1985) estimates an employment equation for the Italian manufacturing industry for the period 1965-1982. The employment elasticity with respect to the real cost of labour is -1.01. This result is nearer to mine, but it still differs substantially, presumably because of the different sample period and specification of the equation.

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IV.II. Econometric results : the investment equation.

IV.II.I. The exposed sector.

I present in table 7 the investment equation for sector 1. The dependent variable is $(I/K)_t$, that is real gross investment

Table 7

INVESTMENT EQUATION, QUARTERLY, 1971(II)-1984(IV)
Sector 1

Independent variables	Dependent variable $\log (I/K)_t$
constant	-.26 (-1.9)
$\log (I/K)_{t-1}$	1.17 (15.5)
$\log (I/K)_{t-3}$	-.35 (-4.8)
$\log (cl/p)_{t-3}$	-.19 (-3.5)
$\log (p_I/p)_t$	-.24 (-2.2)
$\log (1+R^e)_{t-2}$	-.15 (-1.5)
$\log [1+(DREXP/REXP)]_{t-4}$	.51 (1.4)
S.E.R.	.033
M.O.D.V.	-3.7
$\bar{R}^2$	.95
D.W.	2.22
N.OBS.	55
SC(3)	.274
GC(4)	1.26
CC(8)	7.3

Instruments: $\log (p_I/p)_{t-1}$, $\log (p_I/p)_{t-2}$, $\log (p_I/p)_{t-3}$, $\log (p_I/p)_{t-4}$.

over the capital stock, since I have imposed constant returns to scale in this sector. All the variables are in natural

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logarithms. The equation was estimated for the period 1971:2 1984:4. It passes all the specification tests proposed.

The coefficient on the real cost of labour and the investment deflator [4] are fully significant, whereas the coefficients on the real interest rate and the change in real expenditure are significant at the 95% confidence interval.

The lagged investment coefficients indicate a fairly rapid response to changes in all the independent explanatory variables.

Table 8 reports the long-run elasticities. Looking at the size of the short-run coefficients it emerges that the variables representing profitability have a major role in determining the changes in investment. In particular, it turns out that the real cost of labour has a relatively small direct role in the slowdown of industrial capital accumulation, while changes in aggregate demand played a more substantial role in the profit squeeze and resulting contraction in investment.

Table 8

INVESTMENT EQUATION, QUARTERLY, 1971(II)-1984(IV)
Sector 1
Long-run estimated elasticities of investment w.r.t.
a 1% point change of the independent variables.

Independent variables	Dependent variable I/K
cl/p	-1.05
p_I/p	-1.3
$1+R^e$	-.83

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IV.II.II. The sheltered sector.

Table 9 reports the estimated investment equation for sector 2 and table 10 the long-run elasticities.

The dependent variable is real gross investment and the sample period is 1971:1 1984:4. All the variables are in natural logarithms. The equation passes all the specification tests. The first thing I note is the absence of the real investment deflator. I tested the inclusion of p_I/p, but this

Table 9

INVESTMENT EQUATION, QUARTERLY, 1971(I)-1984(IV)
Sector 2

Independent variables	Dependent variable $\log I_t$
constant	-1.46 (-2.3)
$\log I_{t-1}$	.735 (8)
$\log (cl/p)_{t-3}$	-.38 (-2.8)
$\log (1+R^e)_{t-1}$	-.29 (-1.7)
$D^2 \log REXP_t$	1.54 (1.8)
$\log K_t$	.38 (3.1)
S.E.R.	.031
M.O.D.V.	6.98
$\bar{R}^2$	.94
D.W.	1.84
N.OBS.	56
SC	- 0
GC(4)	.15
CC(8)	6.5

Instruments: $\log K_{t-1}$, $D^2 \log REXP_{t-1}$.

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Table 10

INVESTMENT EQUATION, QUARTERLY, 1971(I)-1984(IV)
Sector 2
Long-run estimated elasticities of investment w.r.t.
a 1% point change of the independent variables.

Independent variables	Dependent variable I
cl/p	-1.4
K	-1.4
$1+R^e$	-1.1

was insignificant. This outcome was to be expected since, presumably, the investment deflator which is relevant for sector 2 is that of private non-residential investment, for which, unfortunately, data are not available.

As for the other variables, I observe the significant role of real expenditure changes and of the real cost of labour as determinants of real gross investment.

I can compare my results with those by Faini and Schiantarelli (1984) who follow an approach which is very similar to mine.

They estimate the investment equation for the industrial sector in the period 1969-1980. They constrain the long-run elasticity on the price of investment and nominal wages to be the same (that is they use the p_I/w ratio as regressor and estimate a long-run elasticity of -.4). This results is therefore in contrast with mine, since I estimate a negative coefficient for the real cost of labour. Their long-run elasticity on the expected real interest rate, which they

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define as the nominal interest rate minus the rate of expected wage inflation, is negative and higher than ours (-1.7). No demand variables appear in their equation, but they claim that this effect is caught by the expected rate of growth in production over the next quarter.

In another recent study by the Bank of Italy, (Magnani and Valcamonici, 1984) the authors estimate an accelerator model and a profit-maximizing model of aggregate investment in Italy (excluding constructions) for the period 1970:1 1982:4. Their results show that a "pure" accelerator model with distributed changes in value added as explanatory variables is not sufficient to explain the Italian accumulation process and has a limited forecasting capacity. The introduction of the expected real interest rate improves the equation considerably and the authors cannot reject the hypothesis of a profit-maximizing model of investment fitting the Italian case [5].

Unfortunately, I am not aware of any study on investment in the service sector that could allow a comparison with the results obtained fot the sheltered sector.

IV.III. Econometric results: the price equation.

IV.III.I. The exposed sector.

The price equation for sector 1 was estimated over the period 1971:1 1984:4. The results are reported in table 11. It is a very simple equation. It performs well, passing all the tests for serial correlation and parameter stability. The

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coefficients are all significant at the 95% confidence interval.

Table 11

PRICE EQUATION, QUARTERLY, 1971(I)-1984(IV)
Sector 1

Independent variables	Dependent variable $\log (p/cl)_t$
constant	11.7 (4.8)
$\log (p/cl)_{t-4}$	.256 (2.1)
$\log (p^m/cl)_{t-4}$	.14 (3.5)
$\log K_{t-1}$	-.84 (4.8)
S.E.R.	.036
M.O.D.V.	4.78
$\bar{R}^2$	.93
D.W.	1.97
N.OBS.	56
Durbin h	.27
LM(4)(autocorrelation)	2.4
Chow test(8), F(8,52)	.27
p^m/cl elasticity (long-run)	.2
K elasticity (long-run)	-1

Notes: There are no current endogenous variables on the right, so estimation is by OLS.

The estimated price equation reflects the assumed pricing rule I have discussed in section III, according to which prices are determined with a mark-up over unit costs.

Strictly speaking, since I am explaining the industrial value added deflator, I should not have included in the equation the index of prices of imported raw materials. Nonetheless, I have put it between the explanatory variables,

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in order to take into account the degree and velocity of adjustment of domestic prices to international prices of raw materials (which in the 70's have represented the major component of international inflation). Its long-run elasticity is, in fact, quite low, but fully significant and the adjustment is completed in $1\frac{1}{4}$ years.

I did not find any effect of the demand variables, real expenditure or competitiveness, on industrial prices.

The empirical results suggest that the Italian industrial entrepreneurs apply a demand invariant mark-up over unit costs. The constancy of the mark-up is implied, at a theoretical level, by the assumption that the price elasticity of demand depends on the determinants of demand (p^F, REXP). This price equation is therefore consistent with the specification of industrial labour demand where competitiveness appears as a significant explanatory variable.

This equation does not show any element of novelty as far as its specification is concerned, and is consistent with the evidence supplied by other studies on industrial pricing in Italy [18].

IV.III.II. The sheltered sector.

The price equation for sector 2 was estimated for the period 1971:1 1984:4. The results are reported in table 12. It passes all the specification tests.

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It must be noted, first of all, that the final specification gives the estimate for the quarterly rate of change of p/cl. The coefficient on $(p/cl)_{t-1}$ is in fact approximately equal to one. I also find an influence of the rate of acceleration of sectoral price inlation, which, in the long-run, can be assumed to be equal to zero.

As far as the coefficient on the price of imported raw materials is concerned, the same observation as for sector 1 applies, except that here the coefficient is even smaller.

Table 12

PRICE EQUATION, QUARTERLY, 1971(I)-1984(IV)
Sector 2

Independent variables	Dependent variable $\log (p/cl)_t$
constant	-1.3 (-1.67)
$\log (p/cl)_{t-1}$	1.02 (22.3)
$\log (p^m/cl)_{t-4}$	.04 (2.37)
$\log REXP_{t-1}$	.1 (1.99)
$DD \log p_t$	.443 (5.16)
S.E.R.	.011
M.O.D.V.	4.88
$\bar{R}^2$	.99
D.W.	1.99
N.OBS.	56
SC	.459
GC(4)	.8
CC(8)	5

Instruments: $\log p_{t-1}$, $\log p_{t-2}$.

I find in this sector a small influence on prices of real expenditure. This is consistent with the theory since I have

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not ruled out a priori the dependence of the mark-up on demand variables.

Note that the capital stock is not present in the equation as it should be. Complications might have arisen because of the high degree of correlation between the real expenditure variable and the capital stock.

CONCLUDING OBSERVATIONS

In this paper I have presented a model of firm's behaviour where I have assumed imperfect competition in the product market and the existence of adjustment costs for the inputs of labour and capital.

Econometric estimation of the equations of labour demand, investment and prices derived from the model and based on Italian data for the sector which is exposed to international competition and the sector which is sheltered from it has allowed me to analyze the differences between the main causes of change in these two sectors, thus giving some insight into the question of structural change.

My estimated equations track the data for the sample period 1970-1984 quite accurately. As far as employment is concerned, I note that firms in both sectors have been on their labour demand curve.

The real cost of labour is, therefore, to be regarded as one of the main determinants of employment in the period considered. More specifically, my analysis was oriented to measure the different speed and degree of adjustment of employment in each

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sector to changes in the real cost of labour. Even if the short-run impact of the cost of labour on employment is approximately of the same size (-.067 and -.077 in the exposed and sheltered sector respectively), the lagged employment coefficients indicate a fairly slow response of sector 1 as compared to sector 2. Moreover, the long-run elasticity of employment with respect to the cost of labour is far higher in the exposed sector (-2.2) than in the sheltered sector (-.3).

Proceeding further with the supply side effects, the empirical analysis suggests that the rise in the price of imported raw materials has contributed to the decline in industrial employment, since labour and raw materials appear to be complementary factors of production. As it was reasonable to expect, moreover, I did not find any significative effect of the price of imported raw materials on employment in the sheltered sector.

A test on the form of the adjustment costs of capital in the industrial sector led us not to reject the hypothesis of internal adjustment costs, that is costs that are interrelated with the production process. A consequence of this assumption is that investment appears between the explanatory variables of employment.

The empirical finding of a negative relation between current investment and employment can be interpreted as the effect of the intensive labour-substituting capital-deepening processes that have characterized industrial accumulation from the late '70s onwards, so as to be considered, by some economists, one of the major causes of the structural decline of employment in

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industry. Note that I do not get a similar effect in the sheltered sector, but I do not have enough elements to draw any conclusion on this result.

The last supply effect I want to mention is that of the expected real interest rate ($_tR_{t+i}$, i= 1,..n). This effect might be the result of different mechanisms. Just to mention two examples, an increase in $_tR_{t+i}$ might lead the firm to make a more intensive use of productive capacity today, since future revenues are more heavily discounted. In this case, employment might increase, but its cumulative change depends on the effect on capital. Alternatively, an increase in the expected real interest rate might discourage production and affect negatively employment in firms that expect to suffer from credit rationing.

In my model, the employment effect of the real interest rate is derived from the assumption that the firm is subject to costs of adjusting its labour stock that are external to the productive process. According to this hypothesis, the firm's marginal cost is the sum of additional wage costs and the cost connected to changing its workforce. The latter is assumed to be more than proportionately increasing with the level of employment. In this framework, an increase in $_tR_{t+i}$ decreases the flow of expected marginal revenues and the equilibrium condition of the profit maximizing firm is affected. The employer, in order to re-equate marginal cost and marginal revenue, decreases employment until the loss in revenue is exactly compensated by the reduction in the cost of replacing

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the vacancies (the assumption of increasing marginal adjustment costs is therefore crucial for this result).

The econometric analysis has given evidence of a strong negative employment effect of the expected real interest rate in the industrial sector. No effect, instead, has been found in the sheltered sector.

Turning now to demand variables, they affect employment in the theoretical model if imperfect competition and a variable price elasticity of demand is assumed in the product market.

My econometric estimates seem to support these hypotheses. competitiveness is the crucial variable that influences industrial employment through demand for tradeable goods. This result is in line with the predictions of the theory on the "deindustrialization process", according to which the low degree of competitiveness of the Italian tradeable goods in the period studied has some part in the transformation of a slowdown in employment growth in this sector in a merely structural decline.

In the sheltered sector, real expenditure conveys the positive employment effect of changes in demand for non-tradeable goods. It must be stressed, moreover, that, at variance with sector 1, real expenditure is the major cause of change in employment in this sector.

As far as investment is concerned, my results show that profitability has had a major role in determining investment decisions in both sectors. As in the case of employment, demand variables, proxied here by real expenditure changes, enter significatively both our investment equations.

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A last observation concerns prices. My estimates seem to show that prices in sector 1 are the result of a demand invariant mark-up over unit costs. In sector 2, instead, a small influence of demand on price changes can be observed. All these results, therefore, support the hypothesis of a variable elasticity of demand for goods trough which demand affects the decisions of firms.

Footnotes

1 See e.g. Momigliano and Siniscalco (1980, 1982, 1984); Valcamonici (1985); Bruno and Sachs (1982).

2 Each productive sector of the economy has been attributed either to tradables or non-tradables according to the imports and exports shares over its GDP. For this classification I have referred to the work by Caramelli, Rossi, Siesto (1978) which is based on input-output tables of the Italian economy. See the Statistical Appendix for the time series used.

3 In order to justify the fact that I am not deriving the demand equation for the other variable inputs, I assume optimal use of M_1 and N_1 (see Bruno,1978).

4 Note that p_I is the deflator of investment in machinery. Data on the price of private investment in constructions net of residential investment are not available in the Italian statistics even on a yearly basis.

5 An estimation of a profit-maximizing investment equation of the Italian manufacturing sector from 1965 to 1982 can also be found in Bruno (1986).

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APPENDIX

DATA AND STATISTICAL SOURCES

PLOTS OF ACTUAL, FITTED VALUES AND RESIDUALS OF THE REGRESSIONS

SECTOR 1 : ENERGY + MANUFACTURING INDUSTRY
SECTOR 2 : MARKET SERVICES + BUILDING INDUSTRY

ALL SERIES ARE DESEASONALIZED

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PRAW: INDEX OF PRICE IN DOLLARS OF IMPORTED RAW MATERIALS 70=100
SOURCE: PROMETEIA
PMF : INDEX OF PRICE IN DOLLARS OF IMPORTED MANUFACTURED COMPETING GOODS 1970=100
SOURCE: PROMETEIA
ER : INDEX OF THE LIRA/US$ EXCHANGE RATE 1970=100
SOURCE: BANK OF ITALY
P1 : VALUE ADDED DEFLATOR OF SECTOR 1 70=100
SOURCE: OUR ELABORATION ON ISTAT DATA
P2 : VALUE ADDED DEFLATOR OF SECTOR 2 70=100
SOURCE: OUR ELABORATION ON ISTAT DATA

	PRAW	PMF	ER	P1	P2
1970:1	99.38599	98.74300	100.32999	93.50978	95.61113
1970:2	100.37999	101.56000	100.29997	98.54605	98.81898
1970:3	100.53999	101.56999	100.00998	102.52844	100.96803
1970:4	99.69299	98.12700	99.33298	105.50465	104.41776
1971:1	102.14999	98.75999	99.35298	102.34473	103.61955
1971:2	102.31999	99.52499	99.37198	102.75230	105.89645
1971:3	101.56000	102.17999	98.62099	112.23987	108.11879
1971:4	101.62000	101.89000	97.08698	108.85457	110.12376
1972:1	107.56999	109.01999	93.55899	108.54440	109.12715
1972:2	108.20000	109.81000	92.83699	110.92168	112.89137
1972:3	110.84000	111.45999	92.68098	115.46172	114.80888
1972:4	114.70000	112.48000	93.05698	111.03481	119.05669
1973:1	136.88998	119.64999	92.20999	116.77708	120.60527
1973:2	149.42999	130.47998	94.34099	116.95862	123.64799
1973:3	169.98999	143.42999	91.32399	128.03973	127.08800
1973:4	181.00000	146.12997	93.79398	130.85480	129.65253
1974:1	198.03000	149.51999	102.93999	136.65833	137.43692
1974:2	217.21997	166.62997	101.80997	140.21100	143.96881
1974:3	222.03000	176.62997	104.19998	154.75583	152.19952
1974:4	224.87000	180.25998	105.85999	162.72928	162.16504
1975:1	223.53000	189.64999	101.68997	170.58203	170.94049
1975:2	213.37000	187.69998	100.23999	173.54575	176.09613
1975:3	202.53998	179.88998	105.97998	191.32214	181.24512
1975:4	200.28998	177.16998	108.43999	182.41452	186.21024
1976:1	189.72998	164.12000	121.74998	209.31027	200.23727
1976:2	206.82999	182.56000	137.41998	205.98401	206.65341
1976:3	213.44998	185.18997	133.87997	215.32999	210.36594
1976:4	223.34000	190.75998	137.56998	205.92499	217.05408
1977:1	226.87000	189.93997	140.74997	237.95047	228.70081
1977:2	230.59000	195.59000	141.31998	246.34677	239.21017
1977:3	228.84000	198.07999	140.74997	247.54715	251.03836
1977:4	222.16998	199.28000	140.01999	255.64087	260.46649
1978:1	237.84998	211.56000	137.42996	266.33478	263.22815
1978:2	234.07999	217.32999	137.51996	273.54468	271.50317
1978:3	236.81000	222.45999	133.62000	275.37708	285.08105
1978:4	249.73999	228.48999	132.73999	300.70258	291.93127
1979:1	277.83997	246.81998	133.80997	296.55017	304.22443
1979:2	296.57996	253.95999	135.06998	315.89624	316.81207
1979:3	315.35999	266.19995	130.22998	316.49744	329.64032
1979:4	321.33997	276.12994	130.86997	347.62677	344.03900
1980:1	340.79895	292.83899	131.64999	361.79675	374.28184
1980:2	335.46295	288.27399	135.26999	381.09875	388.13391
1980:3	344.91699	303.32300	134.53998	378.11768	406.68207
1980:4	338.25696	297.49298	144.16998	394.73663	421.66400
1981:1	322.36597	296.31696	159.77997	403.02893	452.67438
1981:2	321.68696	279.46198	180.85999	424.48352	461.16150
1981:3	318.85797	287.34796	193.79999	435.90448	476.07922
1981:4	319.30396	282.58295	191.09998	454.41266	495.20294
1982:1	310.32697	277.79596	201.21997	485.76385	520.30396
1982:2	274.14398	270.16998	210.54996	502.11938	537.84790
1982:3	267.45398	277.39294	222.22995	507.77924	558.92310
1982:4	263.60297	259.78894	228.77997	530.96155	591.09766
1983:1	267.95996	280.40594	223.15997	567.68872	616.85925
1983:2	264.04797	243.13599	235.64996	583.34033	629.89575
1983:3	260.19299	252.04099	251.04999	581.16272	647.43542
1983:4	256.39496	236.09698	259.12994	611.41968	672.83154
1984:1	256.75397	243.37299	265.10992	629.20593	692.26123
1984:2	254.40997	244.28098	267.17993	652.77942	713.17505
1984:3	251.79700	234.74298	287.03998	629.57715	715.15735
1984:4	248.92200	220.36798	301.48993	670.30322	739.82764

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RPRAW1 : (PRAW*ER)/P1

RPRAW2 : (PRAW*ER)/P2

COMP : (PMF*ER) /P1

PCD : DEFLATOR OF HOUSEHOLDS' CONSUMPTION '70=100
SOURCE: ISTAT

PI : DEFLATOR OF FIXED GROSS INVESTMENT IN MACHINERY '70=100
SOURCE: ISTAT

	RPRAW1	RPRAW2	COMP	PCD	PI
1970:1	106.63478	104.29115	105.94489	97.74149	99.75819
1970:2	102.16655	101.88437	103.36755	99.20761	99.44987
1970:3	98.07037	99.58600	99.07507	100.63054	97.86874
1970:4	93.86128	94.83830	92.38689	102.35432	102.94093
1971:1	99.16394	97.94394	95.87305	103.51512	106.41801
1971:2	98.95390	96.01587	96.25084	104.65854	109.57335
1971:3	89.23698	92.63837	89.78175	106.11725	112.15746
1971:4	90.63449	89.58992	90.87531	107.61760	113.44102
1972:1	92.71910	92.22397	93.96892	109.07161	113.03606
1972:2	90.55905	88.97900	91.90656	110.58878	114.31401
1972:3	88.97113	89.47705	89.46881	113.05214	116.18529
1972:4	96.12874	89.65170	94.26817	116.13039	118.32379
1973:1	108.09161	104.66063	94.47850	119.78549	124.73550
1973:2	120.53300	114.01215	105.24756	124.30553	132.55246
1973:3	121.24489	122.15288	102.30106	128.34708	138.04184
1973:4	129.73700	130.94006	104.74290	131.91534	141.15652
1974:1	149.16913	148.32407	112.62822	139.70761	157.86676
1974:2	157.72769	153.61075	120.98332	147.16376	165.08936
1974:3	149.49692	152.00784	118.92824	156.71127	176.98007
1974:4	146.28427	146.79324	117.26421	166.60785	191.71567
1975:1	133.25412	132.97470	113.05707	172.51529	194.11758
1975:2	123.24246	121.45755	108.41547	176.76352	198.64429
1975:3	112.19394	118.43179	99.64731	181.49106	203.17117
1975:4	119.06641	116.63936	105.32227	186.63013	207.92090
1976:1	110.36067	115.36125	95.46405	194.56268	214.83478
1976:2	137.98434	137.53738	121.79291	207.23309	230.48398
1976:3	132.71109	135.84271	115.14064	215.58038	240.22406
1976:4	149.20422	141.55405	127.43887	229.50522	249.76501
1977:1	134.19577	139.62323	112.35130	236.83716	258.21753
1977:2	132.28088	136.22736	112.20271	246.42813	272.87085
1977:3	130.11346	128.30399	112.62401	255.31866	274.16315
1977:4	121.68726	119.43279	109.14992	262.35760	285.97845
1978:1	122.73167	124.18016	109.16592	269.47113	287.13611
1978:2	117.67976	118.56462	109.25899	278.21350	288.97205
1978:3	114.90627	110.99492	107.94327	287.60156	297.31219
1978:4	110.24342	113.55579	100.86298	294.55737	308.61902
1979:1	125.36752	122.20505	111.37062	305.08698	317.06946
1979:2	126.81078	126.44420	108.58746	316.54388	323.67151
1979:3	129.76196	124.58830	109.53395	330.30872	337.14728
1979:4	120.97386	122.23543	103.95378	346.96393	352.89551
1980:1	124.00934	119.84068	106.55775	365.69067	374.62341
1980:2	119.07169	116.91344	102.32208	381.02039	384.19202
1980:3	122.72667	114.10664	107.92690	398.76770	398.74127
1980:4	123.54187	115.65251	108.65361	417.49170	401.06189
1981:1	127.80130	113.78516	117.47423	436.76550	432.85956
1981:2	137.06223	126.16115	119.07056	456.86218	449.32666
1981:3	141.76193	129.79913	127.75282	474.75238	462.20966
1981:4	134.28098	123.22014	118.83823	495.09235	476.41248
1982:1	128.54800	120.01443	115.07257	513.09424	484.32532
1982:2	114.95474	107.31845	113.28836	531.56189	510.03760
1982:3	117.05142	106.34071	121.40121	557.41284	508.90283
1982:4	113.58087	102.02557	111.93750	579.82617	528.69763
1983:1	105.33578	96.93935	110.22833	600.66443	526.63672
1983:2	106.66653	98.78284	98.21880	619.53491	548.03784
1983:3	112.39786	100.89261	108.87636	637.18762	550.89600
1983:4	108.66449	98.74628	100.06187	656.23486	560.59704
1984:1	108.18085	98.32709	102.54289	674.01392	579.50439
1984:2	104.12897	95.31075	99.98320	693.48926	614.66882
1984:3	114.80055	101.06281	107.02519	706.09814	608.18127
1984:4	111.96049	101.43915	99.11743	718.00403	612.33948

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EM1 : NO. OF EMPLOYEES IN SECTOR 1 (THOUSAND)
SOURCE: BANK OF ITALY; THE SERIES IS NET OF WORKERS IN C.I.G.
OCD2 : NO. OF EMPLOYEES IN SECTOR 2 (THOUSAND)
SOURCE: ISTAT
CL1 : COST OF LABOUR PER EMPLOYEE SECTOR 1:
TOTAL LABOUR COST / EM1
MILLION LIRAS
SOURCE: ISTAT
CL2 : COST OF LABOUR PER EMPLOYEE SECTOR 2:
TOTAL LABOUR COST / OCD2
MILLION LIRAS
SOURCE: ISTAT
RCL1 : REAL COST OF LABOUR PER EMPLOYEE SECTOR 1
CL1/P1 ; MILLION LIRAS
RCL2 : REAL COST OF LABOUR PER EMPLOYEE SECTOR 2
CL2/P2 ; MILLION LIRAS

	EM1	OCD2	CL1	CL2	RCL1	RCL2
1970:1	4774.91016	4708.42969	0.58972	0.53191	0.63065	0.55633
1970:2	4792.28516	4716.51953	0.59240	0.55138	0.60114	0.55796
1970:3	4824.66211	4705.65918	0.61711	0.58189	0.60189	0.57631
1970:4	4852.24316	4685.37988	0.63865	0.60352	0.60533	0.57799
1971:1	4865.12695	4654.88867	0.65810	0.62448	0.64302	0.60267
1971:2	4833.23633	4676.65918	0.67154	0.63811	0.65355	0.60258
1971:3	4812.31934	4638.74902	0.69098	0.65605	0.61563	0.60679
1971:4	4793.39746	4633.68945	0.71364	0.66942	0.65559	0.60788
1972:1	4798.25000	4682.06934	0.74244	0.68654	0.68400	0.62912
1972:2	4813.43652	4649.78906	0.74569	0.70183	0.67226	0.62169
1972:3	4815.44434	4637.03906	0.75056	0.72481	0.65005	0.63132
1972:4	4817.50781	4655.09961	0.78912	0.75168	0.71069	0.63136
1973:1	4834.29492	4618.11914	0.79947	0.80764	0.68461	0.66966
1973:2	4892.67578	4663.37891	0.90303	0.84449	0.77209	0.68298
1973:3	4964.49316	4711.04980	0.97175	0.89498	0.75894	0.70422
1973:4	5005.83105	4743.44922	0.99984	0.93695	0.76408	0.72266
1974:1	5050.51367	4738.60937	1.04212	0.99092	0.76257	0.72100
1974:2	5035.69824	4732.80957	1.12819	1.03912	0.80464	0.72176
1974:3	4997.73145	4775.40918	1.15327	1.10974	0.74522	0.72914
1974:4	4996.71875	4829.17969	1.21277	1.17685	0.74527	0.72571
1975:1	4926.82227	4804.46875	1.33553	1.25459	0.78293	0.73393
1975:2	4884.76172	4787.01953	1.38126	1.32017	0.79590	0.74969
1975:3	4880.34766	4817.16895	1.45823	1.36325	0.76219	0.75216
1975:4	4873.31641	4807.33984	1.50398	1.41457	0.82449	0.75967
1976:1	4874.35352	4827.74902	1.52550	1.46213	0.72882	0.73020
1976:2	4955.01758	4870.82910	1.67303	1.55445	0.81221	0.75220
1976:3	5036.72363	4839.79883	1.80146	1.64060	0.83661	0.77988
1976:4	5053.64062	4841.61914	1.90694	1.72420	0.92604	0.79436
1977:1	5040.41992	4889.34961	1.91617	1.79846	0.80528	0.78638
1977:2	5018.55957	4917.63965	2.06964	1.90756	0.84013	0.79744
1977:3	4950.25000	4898.99902	2.12561	1.98503	0.85867	0.79073
1977:4	4900.23730	4914.00977	2.18585	2.05503	0.85505	0.78898
1978:1	4914.03613	4948.08984	2.29835	2.11469	0.86296	0.80337
1978:2	4896.15234	4990.38867	2.33301	2.18445	0.85288	0.80458
1978:3	4896.75293	5009.01953	2.41329	2.28154	0.87636	0.80031
1978:4	4894.41699	5052.49902	2.50181	2.36386	0.83199	0.80973
1979:1	4885.21973	5117.06934	2.61221	2.42664	0.88086	0.79765
1979:2	4940.16113	5142.29980	2.63977	2.53523	0.83565	0.80023
1979:3	4958.39453	5178.82910	2.83209	2.68363	0.89482	0.81411
1979:4	5006.22461	5189.78906	2.98560	2.81559	0.85885	0.81839
1980:1	4986.51660	5175.98926	3.11787	2.99200	0.86177	0.79918
1980:2	4988.47266	5237.03906	3.24925	3.15538	0.85260	0.81296
1980:3	4934.69281	5290.56934	3.36897	3.31093	0.89099	0.81413
1980:4	4853.36133	5328.40918	3.50666	3.46839	0.88835	0.82255
1981:1	4784.81152	5334.82910	3.71147	3.58442	0.92089	0.79183
1981:2	4716.39453	5357.36914	4.03999	3.75972	0.95174	0.81527
1981:3	4664.14355	5420.12891	4.23437	3.90515	0.97140	0.82027
1981:4	4621.57617	5411.66895	4.46837	4.09822	0.98333	0.82758
1982:1	4642.17090	5452.32910	4.57004	4.25047	0.94079	0.81692
1982:2	4585.41406	5457.97949	4.75994	4.40215	0.94797	0.81847
1982:3	4509.80762	5459.68945	5.01538	4.56865	0.98771	0.81740
1982:4	4448.28906	5502.00977	5.24480	4.77689	0.98779	0.80814
1983:1	4398.70215	5503.37988	5.35440	5.00284	0.94319	0.81102
1983:2	4323.71191	5495.80957	5.63243	5.16966	0.96555	0.82072
1983:3	4317.92773	5494.09863	5.92821	5.35748	1.02006	0.82749
1983:4	4264.05664	5538.71973	6.09293	5.49576	0.99652	0.81681
1984:1	4196.77539	5573.74902	6.36379	5.64288	1.01140	0.81514
1984:2	4139.69238	5610.33887	6.42545	5.75719	0.98432	0.80726
1984:3	4060.10645	5647.65918	6.57042	5.90432	1.04362	0.82560
1984:4	4058.72021	5680.23926	6.79377	6.04338	1.01354	0.81686

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GWE1 : GROSS WAGES PER EMPLOYEE SECTOR 1
TOTAL GROSS WAGES / EM1
MILLION LIRAS
SOURCE : ISTAT

GWE2 : GROSS WAGES PER EMPLOYEE SECTOR 2
TOTAL GROSS WAGES / OCD2
MILLION LIRAS
SOURCE : ISTAT

RGW1 : REAL GROSS WAGES PER EMPLOYEE SECTOR 1
GWE1 / PCD

RGW2 : REAL GROSS WAGES PER EMPLOYEE SECTOR 2
GWE2 / PCD

T11 : TAX RATE ON LABOUR COSTS BORNE BY FIRMS
IN SECTOR 1: % ON GWE1

T12 : TAX RATE ON LABOUR COSTS BORNE BY FIRMS
IN SECTOR 2: % ON GWE2

	GWE1	GWE2	RGW1	RGW2	T11	T12
1970: 1	0. 39823	0. 37210	0. 40744	0. 38070	48. 08401	42. 94613
1970: 2	0. 40056	0. 38547	0. 40376	0. 38855	47. 89201	43. 03888
1970: 3	0. 41727	0. 40659	0. 41466	0. 40404	47. 89201	43. 11327
1970: 4	0. 43239	0. 42198	0. 42245	0. 41228	47. 70001	43. 02023
1971: 1	0. 44771	0. 43332	0. 43251	0. 41860	46. 99203	44. 11756
1971: 2	0. 45806	0. 44193	0. 43767	0. 42226	46. 60402	44. 39056
1971: 3	0. 47194	0. 45333	0. 44474	0. 42720	46. 41202	44. 71828
1971: 4	0. 48742	0. 46233	0. 45292	0. 42960	46. 41202	44. 79256
1972: 1	0. 50346	0. 47425	0. 46158	0. 43481	47. 46801	44. 76353
1972: 2	0. 50566	0. 48491	0. 45724	0. 43848	47. 46802	44. 73349
1972: 3	0. 50897	0. 50084	0. 45020	0. 44301	47. 46800	44. 72076
1972: 4	0. 53511	0. 51944	0. 46078	0. 44729	47. 46799	44. 70904
1973: 1	0. 55124	0. 56192	0. 46019	0. 45910	45. 03201	43. 72921
1973: 2	0. 62345	0. 58778	0. 50155	0. 47285	44. 84400	43. 67452
1973: 3	0. 67089	0. 62294	0. 52272	0. 48536	44. 84399	43. 67000
1973: 4	0. 68939	0. 65198	0. 52260	0. 49424	45. 03201	43. 70870
1974: 1	0. 71858	0. 67662	0. 51435	0. 49431	45. 02400	46. 45017
1974: 2	0. 77592	0. 70596	0. 52725	0. 47971	45. 39999	47. 19252
1974: 3	0. 78608	0. 75155	0. 50161	0. 47958	46. 71201	47. 66065
1974: 4	0. 82692	0. 79617	0. 49633	0. 47787	46. 66201	47. 81477
1975: 1	0. 90332	0. 84915	0. 52361	0. 49222	47. 84800	47. 74704
1975: 2	0. 93424	0. 89305	0. 52853	0. 50522	47. 84801	47. 82653
1975: 3	0. 98695	0. 92129	0. 54380	0. 50762	47. 75201	47. 97099
1975: 4	1. 01857	0. 95522	0. 54577	0. 51182	47. 65600	48. 08943
1976: 1	1. 02927	0. 98737	0. 52902	0. 50748	48. 21200	48. 08355
1976: 2	1. 12881	1. 04684	0. 54471	0. 50515	48. 21201	48. 48896
1976: 3	1. 21625	1. 10199	0. 56418	0. 51117	48. 11601	48. 87566
1976: 4	1. 28810	1. 15938	0. 56125	0. 50517	46. 04301	48. 71722
1977: 1	1. 34667	1. 25199	0. 56860	0. 52863	42. 28999	43. 64837
1977: 2	1. 48202	1. 33386	0. 60140	0. 54128	39. 64999	43. 01044
1977: 3	1. 53120	1. 38989	0. 59972	0. 54437	38. 82000	42. 81898
1977: 4	1. 57210	1. 43833	0. 59922	0. 54823	39. 04000	42. 87592
1978: 1	1. 65029	1. 47846	0. 61242	0. 54865	39. 27000	43. 03275
1978: 2	1. 67313	1. 52681	0. 60138	0. 54879	39. 44000	43. 07342
1978: 3	1. 74320	1. 60251	0. 60612	0. 55720	38. 44001	42. 37283
1978: 4	1. 80806	1. 66216	0. 61382	0. 56429	38. 37002	42. 21642
1979: 1	1. 88621	1. 71581	0. 61825	0. 56240	38. 49000	41. 42808
1979: 2	1. 90240	1. 79159	0. 60079	0. 56599	38. 76000	41. 50684
1979: 3	2. 03997	1. 89650	0. 61759	0. 57416	38. 83002	41. 50416
1979: 4	2. 14114	1. 98744	0. 61711	0. 57281	39. 44001	41. 66897
1980: 1	2. 25410	2. 10998	0. 61639	0. 57698	38. 32001	41. 80211
1980: 2	2. 34315	2. 22370	0. 61497	0. 58362	38. 67001	41. 89773
1980: 3	2. 53497	2. 35504	0. 63570	0. 59058	32. 89999	40. 58898
1980: 4	2. 64714	2. 46931	0. 63406	0. 59146	32. 47001	40. 46026
1981: 1	2. 78221	2. 55569	0. 63700	0. 58514	33. 40001	40. 25249
1981: 2	3. 02848	2. 68021	0. 66289	0. 58666	33. 39999	40. 27686
1981: 3	3. 17419	2. 78371	0. 66860	0. 58635	33. 40000	40. 28602
1981: 4	3. 34960	2. 92160	0. 67656	0. 59011	33. 39999	40. 27334
1982: 1	3. 33093	3. 02389	0. 64919	0. 58934	37. 20000	40. 56294
1982: 2	3. 46934	3. 13137	0. 65267	0. 58909	37. 20000	40. 58224
1982: 3	3. 59990	3. 18758	0. 64582	0. 57185	39. 32000	43. 32650
1982: 4	3. 76457	3. 33256	0. 64926	0. 57475	39. 32001	43. 34006
1983: 1	3. 79556	3. 46738	0. 63189	0. 57726	41. 07001	44. 28324
1983: 2	3. 99265	3. 58288	0. 64446	0. 57832	41. 07001	44. 28791
1983: 3	4. 20232	3. 71396	0. 65951	0. 58287	41. 07002	44. 25246
1983: 4	4. 31786	3. 80898	0. 65797	0. 58043	41. 11002	44. 28448
1984: 1	4. 44641	3. 89269	0. 65969	0. 57754	43. 12199	44. 96107
1984: 2	4. 48949	3. 97140	0. 64738	0. 57267	43. 12200	44. 96631
1984: 3	4. 59078	4. 07252	0. 65016	0. 57676	43. 12202	44. 97953
1984: 4	4. 74684	4. 16826	0. 66112	0. 58053	43. 12202	44. 98591

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WED1   :  TAX WEDGE IN SECTOR 1
          (PCD*(1+T11)/P1
WED2   :  TAX WEDGE IN SECTOR 2
          (PCD*(1+T12)/P2
RBC    :  NOMINAL RATE OF INTEREST ON BANK LOANS
          %
          SOURCE : PROMETEIA
RRBC1  :  EXPECTED REAL INTEREST RATE IN SECTOR 1
          RBC - ((P1(1)-P1(-3))-1)*100
          %
RRBC2  :  EXPECTED REAL INTEREST RATE IN SECTOR 2
          RBC - ((P2(1)-P2(-3))-1)*100
          %
```

	WED1	WE02	RBC	RRBC1	RRBC2
1970:1	1.54785	1.46131	8.22000	MISSING VALU	MISSING VALU
1970:2	1.48885	1.43601	9.15000	MISSING VALU	MISSING VALU
1970:3	1.45154	1.42635	9.58000	MISSING VALU	MISSING VALU
1970:4	1.43290	1.40194	9.66000	0.21185	1.28396
1971:1	1.49673	1.43972	9.53000	5.26169	2.36795
1971:2	1.49324	1.42703	9.14000	-0.33193	2.05780
1971:3	1.38425	1.42039	8.86000	5.68496	3.39540
1971:4	1.44748	1.41497	8.60000	2.54236	3.28479
1972:1	1.48184	1.44590	8.32000	0.36945	1.71457
1972:2	1.47025	1.41781	7.91000	5.03950	1.72227
1972:3	1.44390	1.42506	7.74000	5.73711	-0.37171
1972:4	1.54236	1.41152	7.56000	-0.02462	-2.95811
1973:1	1.48768	1.42752	7.61000	2.16747	-1.91829
1973:2	1.53943	1.44439	7.56000	-3.33367	-3.13526
1973:3	1.45192	1.45093	8.57000	-9.28025	-0.32983
1973:4	1.46207	1.46217	9.51000	-7.51495	-4.44598
1974:1	1.48260	1.48870	10.09000	-9.79086	-6.34441
1974:2	1.52610	1.50459	13.02000	-7.84547	-6.73916
1974:3	1.48566	1.52038	16.38000	-7.97866	-8.69665
1974:4	1.50158	1.51864	17.37000	-7.45374	-7.00742
1975:1	1.49524	1.49108	17.90000	-5.87470	-4.41547
1975:2	1.50589	1.48387	15.92000	-7.70839	-3.16389
1975:3	1.40160	1.48172	14.26000	2.16307	-0.56761
1975:4	1.51068	1.48423	12.25000	-10.45359	-4.88859
1976:1	1.37769	1.43887	12.81000	-5.88148	-4.54261
1976:2	1.49111	1.48905	17.63000	5.08161	1.56291
1976:3	1.48288	1.52566	19.27000	6.38151	2.70601
1976:4	1.64995	1.57248	19.60000	5.91687	5.38510
1977:1	1.41624	1.48759	19.71000	0.11491	3.95572
1977:2	1.39696	1.47326	19.32000	4.35824	-0.01413
1977:3	1.43178	1.45254	18.27000	-5.87271	-1.73074
1977:4	1.42693	1.43913	17.02000	5.09134	1.92283
1978:1	1.40910	1.46425	16.50000	5.45950	3.00015
1978:2	1.41820	1.46610	16.19000	4.94773	2.62925
1978:3	1.44586	1.43632	16.06000	-1.56696	3.97983
1978:4	1.35542	1.43496	15.26000	3.91511	-0.31443
1979:1	1.42477	1.41829	15.30000	-0.18250	-1.38816
1979:2	1.39044	1.41387	15.03000	0.09762	-0.60039
1979:3	1.44888	1.41791	15.01000	-0.59485	-2.83931
1979:4	1.39174	1.42873	16.36000	-5.64187	-6.70107
1980:1	1.39809	1.38510	18.73000	-1.91048	-3.78235
1980:2	1.38641	1.39297	19.15000	-0.31943	-4.22146
1980:3	1.40158	1.37853	19.51000	5.95815	-3.05285
1980:4	1.40106	1.39070	20.25000	8.85349	-0.66249
1981:1	1.44567	1.35323	20.63000	9.24587	1.81495
1981:2	1.43575	1.38969	21.86000	6.57724	4.79577
1981:3	1.45289	1.39895	22.54000	7.42206	5.09982
1981:4	1.45342	1.40242	22.29000	1.76171	7.34999
1982:1	1.44919	1.38615	22.11000	3.82051	5.48103
1982:2	1.45245	1.38939	21.83000	5.34135	4.42872
1982:3	1.52938	1.42939	21.65000	4.80432	2.28527
1982:4	1.52142	1.40607	20.99000	4.12484	2.43252
1983:1	1.49264	1.40495	20.67000	4.49438	3.55590
1983:2	1.49823	1.41915	19.60000	5.14815	3.76377
1983:3	1.54669	1.41969	19.08000	3.92671	5.25252
1983:4	1.51453	1.40725	19.00000	8.16357	6.77647
1984:1	1.53314	1.41140	18.38000	6.47630	5.15687
1984:2	1.52049	1.40965	17.61000	9.27938	7.14997
1984:3	1.60518	1.43143	17.43000	7.79937	7.47266
1984:4	1.53307	1.40709	17.49000	MISSING VALU	MISSING VALU

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RIFLI : REAL INVESTMENT OF SECTOR 1 PRICES OF 1970
BILLION LIRAS
OUR ELABORATION ON ISTAT SERIES
RI2 : REAL INVESTMENT OF SECTOR 2 PRICES OF 1970
BILLION LIRAS
OUR ELABORATION ON ISTAT SERIES
K1 : CAPITAL STOCK OF SECTOR 1 PRICES OF 1970
BILLION LIRAS
OUR ELABORATION ON ISTAT SERIES
K2 : CAPITAL STOCK OF SECTOR 2 PRICES OF 1970
BILLION LIRAS
OUR ELABORATION ON ISTAT SERIES
REXP : REAL EXPENDITURE PRICES OF 1970
INVESTMENT+CONSUMPTION+TRADE BALANCE
SOURCE : ISTAT
UC : UNEMPLOYMENT RATE NET OF WORKERS IN C.I.G.
SOURCE : BANK OF ITALY

	RIFLI	RI2	K1	K2	REXP	UC
1970:1	935.18994	830.45996	27421.79687	25622.00000	15356.68750	5.45000
1970:2	964.92993	858.55994	27836.00000	26119.00000	15387.29883	5.55000
1970:3	938.02991	833.96997	28272.00000	26638.00000	15533.75781	5.60000
1970:4	933.62988	831.26990	28672.89844	27126.00000	15527.87891	5.50000
1971:1	948.37988	877.43994	29061.74609	27604.00000	15598.01953	5.60000
1971:2	944.16992	873.69995	29457.95703	28123.00000	15853.14844	5.70000
1971:3	924.13989	855.38989	29842.39844	28631.00000	15972.56836	5.90000
1971:4	938.14990	868.48999	30199.55859	29114.00000	16093.84766	6.30000
1972:1	923.62988	925.79993	30563.89844	29604.00000	16410.63672	6.50000
1972:2	887.70996	888.55994	30906.79687	30145.00000	16391.65625	6.70000
1972:3	918.05994	919.67993	31207.29687	30642.00000	16335.41797	6.80000
1972:4	910.67993	911.62988	31532.39844	31163.00000	16412.89844	6.70000
1973:1	954.51990	936.37988	31844.00000	31670.00000	16513.68750	7.10000
1973:2	1003.00000	986.92993	32193.49609	32194.00000	16911.86719	6.80000
1973:3	1066.79980	1053.19995	32584.79687	32763.00000	17304.95703	6.00000
1973:4	1083.69995	1075.29980	33032.49219	33390.00000	17701.92578	5.70000
1974:1	1119.09985	1080.25977	33493.59375	34031.00000	17644.87891	5.40000
1974:2	1113.49976	1075.38989	33976.29687	34669.00000	17913.37500	5.40000
1974:3	1101.89990	1063.19995	34444.19531	35294.00000	17937.93750	5.90000
1974:4	1030.49976	992.23999	34891.69531	35898.00000	17843.02734	6.10000
1975:1	873.81995	940.09998	35259.29687	36424.00000	17787.17578	6.60000
1975:2	860.73999	926.03992	35463.19531	36891.00000	17652.21484	6.80000
1975:3	831.48999	892.96997	35650.09375	37337.00000	17672.28906	6.90000
1975:4	852.71997	918.02991	35804.19531	37745.00000	17881.51562	7.10000
1976:1	830.00000	992.43994	35976.69531	38172.00000	18026.87891	7.30000
1976:2	829.38989	991.60999	36123.09375	38668.00000	17946.27734	7.30000
1976:3	849.94995	1017.44995	36266.19531	39157.00000	18667.34766	7.30000
1976:4	868.56995	1041.55981	36427.09375	39665.00000	18505.26562	7.20000
1977:1	863.73999	1065.33984	36603.49219	40191.00000	18637.44922	7.40000
1977:2	848.98999	1046.62988	36771.79687	40734.00000	18887.40625	7.70000
1977:3	822.30994	1012.34998	36922.09375	41251.00000	18944.47656	7.90000
1977:4	812.95996	998.87000	37042.89844	41727.00000	19062.75781	7.90000
1978:1	782.94995	1012.90991	37152.00000	42576.00000	19150.03516	7.80000
1978:2	800.09998	1037.69995	37229.09375	43040.00000	19401.80859	7.90000
1978:3	807.54993	1046.95996	37321.89844	43522.00000	19417.23437	8.00000
1978:4	815.24988	1057.59985	37420.29687	44008.00000	19831.50781	8.10000
1979:1	858.83997	1043.48999	37758.39844	44498.00000	19766.71875	8.30000
1979:2	873.25989	1062.46997	37862.00000	44967.00000	20274.15625	8.40000
1979:3	898.37988	1094.29980	37978.00000	45450.00000	20473.53516	8.40000
1979:4	951.67993	1162.95996	38116.89844	45958.00000	20474.92969	8.00000
1980:1	1004.79993	1189.27979	38306.19531	46528.00000	20690.64453	7.90000
1980:2	1013.79993	1202.54980	38544.89844	47117.00000	20787.26172	8.10000
1980:3	1032.39990	1227.75977	38787.79687	47712.00000	20185.33594	8.40000
1980:4	1065.89990	1273.28979	39044.39844	48324.00000	20789.54687	8.50000
1981:1	1031.00000	1338.07983	39329.49219	48974.00000	20931.98828	9.20000
1981:2	1010.00000	1304.86987	39573.89844	49680.00000	21194.79297	9.80000
1981:3	966.12000	1236.87988	39792.39844	50344.00000	21516.06641	10.20000
1981:4	957.81995	1225.56982	39962.69531	50932.00000	21589.85547	10.60000
1982:1	902.33997	1278.17993	40121.19531	51812.00000	21207.49609	10.30000
1982:2	886.28992	1254.01978	40221.09375	52426.00000	21301.12500	10.40000
1982:3	859.43994	1212.64990	40303.00000	53009.00000	21058.60937	10.80000
1982:4	861.89990	1217.38989	40355.39844	53543.00000	21262.67578	11.10000
1983:1	803.81995	1219.04980	40410.19531	54075.00000	21044.97656	11.60000
1983:2	814.31995	1238.24976	40405.79687	54602.00000	21233.74609	11.80000
1983:3	810.62000	1231.10986	40412.00000	55141.00000	21089.57422	11.80000
1983:4	828.10999	1265.59985	40414.39844	55667.00000	21716.24609	12.20000
1984:1	843.45996	1248.79980	40434.19531	56220.00000	21546.73437	12.40000
1984:2	862.90991	1290.96997	40469.00000	56749.00000	21483.91406	12.10000
1984:3	885.31995	1331.69995	40522.49219	57314.00000	21875.71484	12.20000
1984:4	917.27991	1399.76978	40598.39844	57912.00000	21868.56641	12.10000

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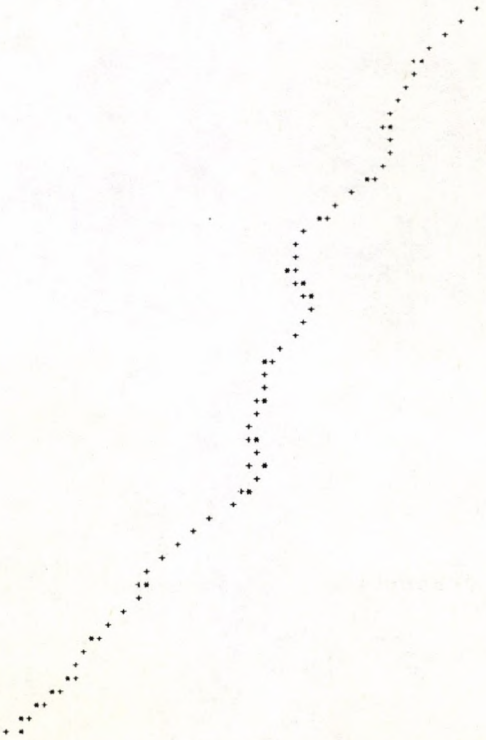
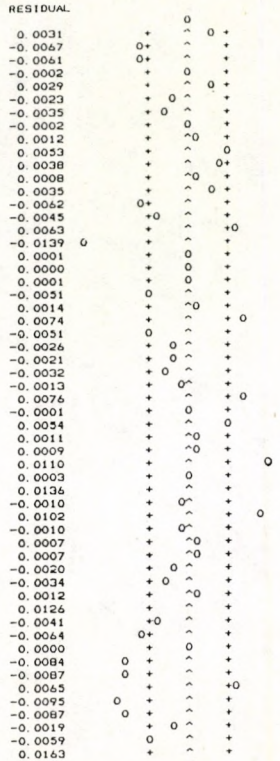
EMPLOYMENT : SECTOR 1

ID	ACTUAL	FITTED	RESIDUAL
1971:1	-1.7873	-1.7904	0.0031
1971:2	-1.8074	-1.8009	-0.0067
1971:3	-1.8248	-1.8186	-0.0061
1971:4	-1.8406	-1.8404	-0.0002
1972:1	-1.8516	-1.8545	0.0029
1972:2	-1.8596	-1.8573	-0.0023
1972:3	-1.8688	-1.8654	-0.0035
1972:4	-1.8788	-1.8785	-0.0002
1973:1	-1.8851	-1.8863	0.0012
1973:2	-1.8840	-1.8894	0.0053
1973:3	-1.8815	-1.8853	0.0038
1973:4	-1.8869	-1.8877	0.0008
1974:1	-1.8919	-1.8954	0.0035
1974:2	-1.9091	-1.9029	-0.0062
1974:3	-1.9304	-1.9258	-0.0045
1974:4	-1.9435	-1.9498	0.0063
1975:1	-1.9680	-1.9541	-0.0139
1975:2	-1.9824	-1.9825	0.0001
1975:3	-1.9885	-1.9886	0.0000
1975:4	-1.9943	-1.9944	0.0001
1976:1	-1.9989	-1.9938	-0.0051
1976:2	-1.9865	-1.9879	0.0014
1976:3	-1.9741	-1.9815	0.0074
1976:4	-1.9752	-1.9701	-0.0051
1977:1	-1.9827	-1.9801	-0.0026
1977:2	-1.9916	-1.9895	-0.0021
1977:3	-2.0094	-2.0062	-0.0032
1977:4	-2.0228	-2.0215	-0.0013
1978:1	-2.0229	-2.0305	0.0076
1978:2	-2.0286	-2.0285	-0.0001
1978:3	-2.0310	-2.0364	0.0054
1978:4	-2.0341	-2.0353	0.0011
1979:1	-2.0450	-2.0459	0.0009
1979:2	-2.0266	-2.0473	0.0110
1979:3	-2.0359	-2.0362	0.0003
1979:4	-2.0300	-2.0436	0.0136
1980:1	-2.0389	-2.0379	-0.0010
1980:2	-2.0447	-2.0549	0.0102
1980:3	-2.0618	-2.0607	-0.0010
1980:4	-2.0850	-2.0857	0.0007
1981:1	-2.1065	-2.1073	0.0007
1981:2	-2.1271	-2.1251	-0.0020
1981:3	-2.1438	-2.1404	-0.0034
1981:4	-2.1572	-2.1584	0.0012
1982:1	-2.1567	-2.1693	0.0126
1982:2	-2.1715	-2.1674	-0.0041
1982:3	-2.1902	-2.1838	-0.0064
1982:4	-2.2052	-2.2053	0.0000
1983:1	-2.2178	-2.2094	-0.0084
1983:2	-2.2349	-2.2262	-0.0087
1983:3	-2.2364	-2.2428	0.0065
1983:4	-2.2490	-2.2394	-0.0095
1984:1	-2.2654	-2.2566	-0.0087
1984:2	-2.2799	-2.2780	-0.0019
1984:3	-2.3006	-2.2948	-0.0059
1984:4	-2.3029	-2.3192	0.0163

PLOT OF ACTUAL(*) AND FITTED(+) VALUES



PLOT OF RESIDUALS(O)



VII

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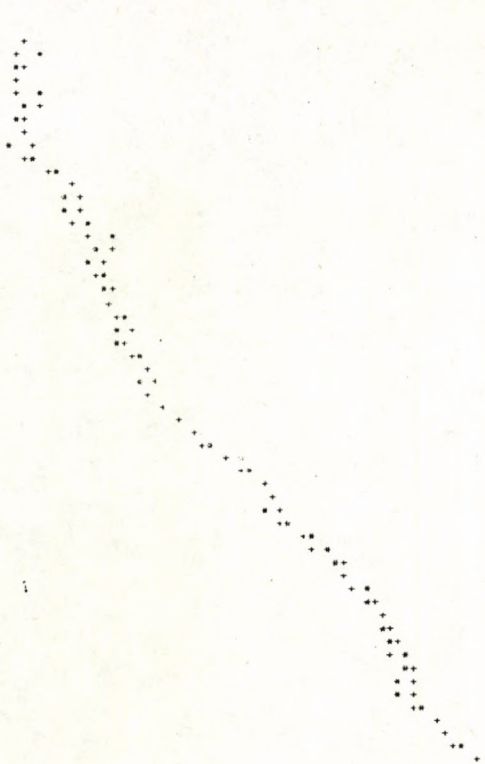
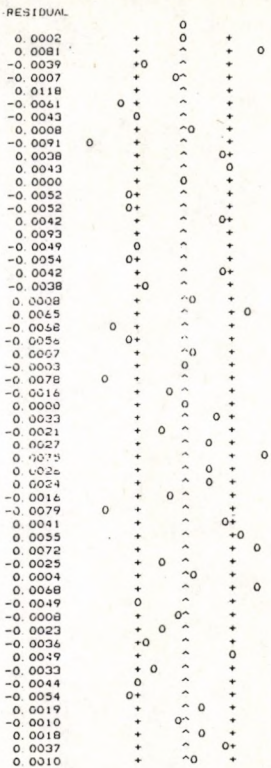
EMPLOYMENT : SECTOR 2

ID	ACTUAL	FITTED	RESIDUAL
1971:1	8.4457	8.4454	0.0002
1971:2	8.4503	8.4422	0.0081
1971:3	8.4422	8.4461	-0.0039
1971:4	8.4411	8.4418	-0.0007
1972:1	8.4515	8.4397	0.0118
1972:2	8.4446	8.4507	-0.0061
1972:3	8.4418	8.4462	-0.0043
1972:4	8.4457	8.4449	0.0008
1973:1	8.4377	8.4469	-0.0091
1973:2	8.4475	8.4437	0.0038
1973:3	8.4577	8.4533	0.0043
1973:4	8.4645	8.4645	0.0000
1974:1	8.4635	8.4687	-0.0052
1974:2	8.4623	8.4675	-0.0052
1974:3	8.4712	8.4670	0.0042
1974:4	8.4824	8.4731	0.0093
1975:1	8.4773	8.4822	-0.0049
1975:2	8.4737	8.4790	-0.0054
1975:3	8.4799	8.4757	0.0042
1975:4	8.4779	8.4817	-0.0038
1976:1	8.4821	8.4813	0.0008
1976:2	8.4910	8.4846	0.0065
1976:3	8.4846	8.4914	-0.0068
1976:4	8.4850	8.4906	-0.0056
1977:1	8.4948	8.4941	0.0007
1977:2	8.5006	8.5008	-0.0003
1977:3	8.4968	8.5046	-0.0078
1977:4	8.4998	8.5015	-0.0016
1978:1	8.5068	8.5067	0.0000
1978:2	8.5153	8.5120	0.0033
1978:3	8.5190	8.5211	-0.0021
1978:4	8.5276	8.5249	0.0027
1979:1	8.5403	8.5328	0.0075
1979:2	8.5453	8.5426	0.0026
1979:3	8.5523	8.5499	0.0024
1979:4	8.5544	8.5560	-0.0016
1980:1	8.5518	8.5597	-0.0079
1980:2	8.5635	8.5594	0.0041
1980:3	8.5737	8.5682	0.0055
1980:4	8.5808	8.5736	0.0072
1981:1	8.5820	8.5845	-0.0025
1981:2	8.5862	8.5858	0.0004
1981:3	8.5979	8.5911	0.0068
1981:4	8.5963	8.6012	-0.0049
1982:1	8.6038	8.6046	-0.0008
1982:2	8.6048	8.6072	-0.0023
1982:3	8.6051	8.6087	-0.0036
1982:4	8.6129	8.6080	0.0049
1983:1	8.6131	8.6164	-0.0033
1983:2	8.6117	8.6162	-0.0044
1983:3	8.6114	8.6169	-0.0054
1983:4	8.6195	8.6176	0.0019
1984:1	8.6258	8.6268	-0.0010
1984:2	8.6324	8.6306	0.0018
1984:3	8.6390	8.6353	0.0037
1984:4	8.6447	8.6437	0.0010

PLOT OF ACTUAL(*) AND FITTED(+) VALUES



PLOT OF RESIDUALS(O)



VIII

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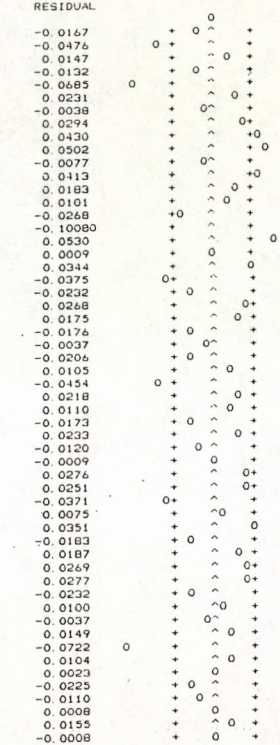
INVESTMENT : SECTOR 1

PLOT OF ACTUAL(*) AND FITTED(+) VALUES

PLOT OF RESIDUALS(O)

ID	ACTUAL	FITTED	RESIDUAL
1971:2	-3.4404	-3.4237	-0.0167
1971:3	-3.4748	-3.4273	-0.0476
1971:4	-3.4717	-3.4864	0.0147
1972:1	-3.4993	-3.4861	-0.0132
1972:2	-3.5501	-3.4815	-0.0685
1972:3	-3.5261	-3.5492	0.0231
1972:4	-3.5446	-3.5408	-0.0038
1973:1	-3.5074	-3.5368	0.0294
1973:2	-3.4688	-3.5117	0.0430
1973:3	-3.4192	-3.4694	0.0502
1973:4	-3.4125	-3.4048	-0.0077
1974:1	-3.3988	-3.4401	0.0413
1974:2	-3.4182	-3.4364	0.0183
1974:3	-3.4423	-3.4524	0.0101
1974:4	-3.5222	-3.4954	-0.0268
1975:1	-3.6976	-3.5969	-0.10080
1975:2	-3.7185	-3.7715	0.0530
1975:3	-3.7583	-3.7592	0.0009
1975:4	-3.7374	-3.7718	0.0344
1976:1	-3.7692	-3.7317	-0.0375
1976:2	-3.7740	-3.7508	-0.0232
1976:3	-3.7535	-3.7803	0.0268
1976:4	-3.7362	-3.7537	0.0175
1977:1	-3.7466	-3.7291	-0.0176
1977:2	-3.7684	-3.7648	-0.0037
1977:3	-3.8044	-3.7838	-0.0206
1977:4	-3.8192	-3.8297	0.0105
1978:1	-3.8597	-3.8143	-0.0454
1978:2	-3.8401	-3.8619	0.0218
1978:3	-3.8333	-3.8443	0.0110
1978:4	-3.8265	-3.8092	-0.0173
1979:1	-3.7834	-3.8066	0.0233
1979:2	-3.7695	-3.7574	-0.0120
1979:3	-3.7442	-3.7433	-0.0009
1979:4	-3.6902	-3.7177	0.0276
1980:1	-3.6408	-3.6660	0.0251
1980:2	-3.6381	-3.6010	-0.0371
1980:3	-3.6262	-3.6337	0.0075
1980:4	-3.6009	-3.6360	0.0351
1981:1	-3.6414	-3.6232	-0.0183
1981:2	-3.6682	-3.6869	0.0187
1981:3	-3.7181	-3.7451	0.0269
1981:4	-3.7310	-3.7587	0.0277
1982:1	-3.7947	-3.7714	-0.0232
1982:2	-3.8151	-3.8251	0.0100
1982:3	-3.8491	-3.8453	-0.0037
1982:4	-3.8463	-3.8612	0.0149
1983:1	-3.9175	-3.8452	-0.0722
1983:2	-3.9044	-3.9147	0.0104
1983:3	-3.9091	-3.9114	0.0023
1983:4	-3.8878	-3.8653	-0.0225
1984:1	-3.8699	-3.8590	-0.0110
1984:2	-3.8480	-3.8488	0.0008
1984:3	-3.8225	-3.8380	0.0155
1984:4	-3.7901	-3.7893	-0.0008



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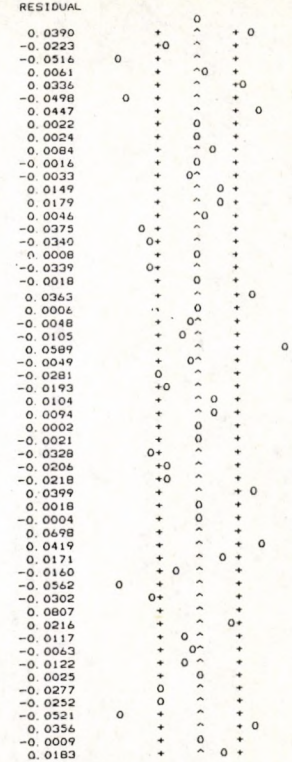
INVESTMENT : SECTOR 2

ID	ACTUAL	FITTED	RESIDUAL
1971:1	6.7770	6.7380	0.0390
1971:2	6.7727	6.7950	-0.0223
1971:3	6.7516	6.8031	-0.0516
1971:4	6.7668	6.7606	0.0061
1972:1	6.8307	6.7971	0.0336
1972:2	6.7896	6.8394	-0.0498
1972:3	6.8240	6.7793	0.0447
1972:4	6.8152	6.8130	0.0022
1973:1	6.8420	6.8396	0.0024
1973:2	6.8946	6.8862	0.0084
1973:3	6.9596	6.9612	-0.0016
1973:4	6.9804	6.9837	-0.0033
1974:1	6.9850	6.9701	0.0149
1974:2	6.9804	6.9626	0.0179
1974:3	6.9690	6.9644	0.0046
1974:4	6.9000	6.9375	-0.0375
1975:1	6.8460	6.8800	-0.0340
1975:2	6.8309	6.8302	0.0008
1975:3	6.7946	6.8285	-0.0339
1975:4	6.8222	6.8240	-0.0018
1976:1	6.9002	6.8638	0.0363
1976:2	6.8993	6.8987	0.0006
1976:3	6.9251	6.9298	-0.0048
1976:4	6.9485	6.9590	-0.0105
1977:1	6.9710	6.9122	0.0589
1977:2	6.9533	6.9583	-0.0049
1977:3	6.9200	6.9481	-0.0281
1977:4	6.9066	6.9259	-0.0193
1978:1	6.9206	6.9102	0.0104
1978:2	6.9448	6.9353	0.0094
1978:3	6.9536	6.9535	0.0002
1978:4	6.9638	6.9659	-0.0021
1979:1	6.9503	6.9831	-0.0328
1979:2	6.9684	6.9889	-0.0206
1979:3	6.9979	7.0197	-0.0218
1979:4	7.0587	7.0188	0.0399
1980:1	7.0811	7.0793	0.0018
1980:2	7.0922	7.0926	-0.0004
1980:3	7.1129	7.0432	0.0698
1980:4	7.1494	7.1075	0.0419
1981:1	7.1990	7.1819	0.0171
1981:2	7.1739	7.1898	-0.0160
1981:3	7.1203	7.1766	-0.0562
1981:4	7.1112	7.1414	-0.0302
1982:1	7.1532	7.0725	0.0807
1982:2	7.1341	7.1125	0.0216
1982:3	7.1006	7.1123	-0.0117
1982:4	7.1045	7.1108	-0.0063
1983:1	7.1058	7.1181	-0.0122
1983:2	7.1215	7.1189	0.0025
1983:3	7.1157	7.1433	-0.0277
1983:4	7.1433	7.1685	-0.0252
1984:1	7.1299	7.1821	-0.0521
1984:2	7.1631	7.1275	0.0356
1984:3	7.1942	7.1951	-0.0009
1984:4	7.2441	7.2257	0.0183

PLOT OF ACTUAL(*) AND FITTED(+) VALUES

PLOT OF RESIDUALS(O)



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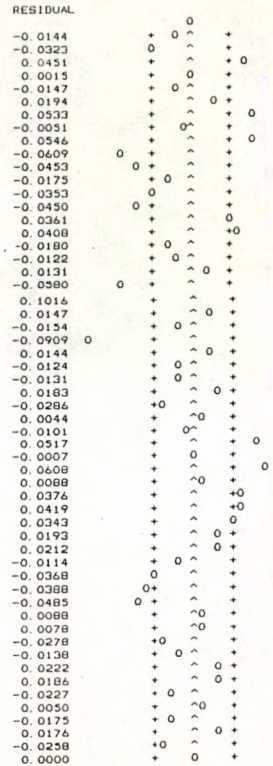
PRICES : SECTOR 1

ID	ACTUAL	FITTED	RESIDUAL
1971: 1	5.0467	5.0612	-0.0144
1971: 2	5.0305	5.0628	-0.0323
1971: 3	5.0903	5.0452	0.0451
1971: 4	5.0274	5.0259	0.0015
1972: 1	4.9850	4.9996	-0.0147
1972: 2	5.0023	4.9828	0.0194
1972: 3	5.0359	4.9826	0.0533
1972: 4	4.9467	4.9518	-0.0051
1973: 1	4.9841	4.9294	0.0546
1973: 2	4.8638	4.9247	-0.0609
1973: 3	4.8810	4.9263	-0.0453
1973: 4	4.8742	4.8917	-0.0175
1974: 1	4.8762	4.9115	-0.0353
1974: 2	4.8225	4.8675	-0.0450
1974: 3	4.8992	4.8631	0.0361
1974: 4	4.8992	4.8584	0.0408
1975: 1	4.8499	4.8679	-0.0180
1975: 2	4.8334	4.8457	-0.0122
1975: 3	4.8767	4.8637	0.0131
1975: 4	4.7982	4.8362	-0.0380
1976: 1	4.9215	4.8199	0.1016
1976: 2	4.8132	4.7984	0.0147
1976: 3	4.7836	4.7990	-0.0154
1976: 4	4.6820	4.7729	-0.0909
1977: 1	4.8217	4.8073	0.0144
1977: 2	4.7794	4.7917	-0.0124
1977: 3	4.7575	4.7707	-0.0131
1977: 4	4.7618	4.7435	0.0183
1978: 1	4.7526	4.7812	-0.0286
1978: 2	4.7643	4.7599	0.0044
1978: 3	4.7371	4.7472	-0.0101
1978: 4	4.7891	4.7374	0.0517
1979: 1	4.7320	4.7327	-0.0007
1979: 2	4.7847	4.7239	0.0608
1979: 3	4.7163	4.7075	0.0088
1979: 4	4.7573	4.7197	0.0376
1980: 1	4.7539	4.7121	0.0419
1980: 2	4.7646	4.7304	0.0343
1980: 3	4.7206	4.7013	0.0193
1980: 4	4.7236	4.7024	0.0212
1981: 1	4.6876	4.6990	-0.0114
1981: 2	4.6546	4.6914	-0.0368
1981: 3	4.6342	4.6730	-0.0388
1981: 4	4.6220	4.6705	-0.0485
1982: 1	4.6662	4.6574	0.0088
1982: 2	4.6586	4.6508	0.0078
1982: 3	4.6175	4.6454	-0.0278
1982: 4	4.6175	4.6312	-0.0138
1983: 1	4.6637	4.6415	0.0222
1983: 2	4.6402	4.6217	0.0186
1983: 3	4.5853	4.6080	-0.0227
1983: 4	4.6087	4.6037	0.0050
1984: 1	4.5938	4.6113	-0.0175
1984: 2	4.6210	4.6034	0.0176
1984: 3	4.5625	4.5883	-0.0258
1984: 4	4.5917	4.5917	0.0000

PLOT OF ACTUAL(*) AND FITTED(+) VALUES

PLOT OF RESIDUALS(O)



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PRICES : SECTOR 2

PLOT OF ACTUAL(*) AND FITTED(+) VALUES

PLOT OF RESIDUALS(O)

ID	ACTUAL	FITTED	RESIDUAL
1971:1	5.1116	5.1203	-0.0088
1971:2	5.1117	5.1085	0.0032
1971:3	5.1047	5.0948	0.0099
1971:4	5.1029	5.0859	0.0170
1972:1	5.0686	5.0734	-0.0048
1972:2	5.0805	5.0709	0.0096
1972:3	5.0651	5.0547	0.0104
1972:4	5.0650	5.0535	0.0115
1973:1	5.0062	5.0348	-0.02860
1973:2	4.9865	4.9902	-0.0037
1973:3	4.9558	4.9680	-0.0122
1973:4	4.9300	4.9348	-0.0049
1974:1	4.9323	4.9347	-0.0024
1974:2	4.9312	4.9170	0.0142
1974:3	4.9211	4.9282	-0.0071
1974:4	4.9258	4.9190	0.0067
1975:1	4.9145	4.9198	-0.0053
1975:2	4.8933	4.9039	-0.0106
1975:3	4.8960	4.8905	-0.0005
1975:4	4.8800	4.8857	-0.0057
1976:1	4.9196	4.8937	0.0260
1976:2	4.8899	4.8922	-0.0023
1976:3	4.8538	4.8726	-0.0188
1976:4	4.8354	4.8509	-0.0155
1977:1	4.8455	4.8357	0.0098
1977:2	4.8315	4.8396	-0.0081
1977:3	4.8400	4.8297	0.0103
1977:4	4.8422	4.8329	0.0092
1978:1	4.8241	4.8291	-0.0050
1978:2	4.8226	4.8304	-0.0078
1978:3	4.8279	4.8271	0.0008
1978:4	4.8162	4.8110	0.0052
1979:1	4.8313	4.8209	0.0103
1979:2	4.8280	4.8261	0.0020
1979:3	4.8108	4.8231	-0.0122
1979:4	4.8056	4.8087	-0.0031
1980:1	4.8293	4.8238	0.0055
1980:2	4.8122	4.8103	0.0019
1980:3	4.8108	4.8163	-0.0075
1980:4	4.8005	4.8036	-0.0030
1981:1	4.8386	4.8163	0.0222
1981:2	4.8094	4.8156	-0.0062
1981:3	4.8033	4.8153	-0.0120
1981:4	4.7944	4.8062	-0.0138
1982:1	4.8074	4.8015	0.0059
1982:2	4.8055	4.8039	0.0015
1982:3	4.8068	4.8128	-0.0061
1982:4	4.8182	4.8161	0.0020
1983:1	4.8146	4.8146	0.0000
1983:2	4.8027	4.8019	0.0008
1983:3	4.7945	4.8030	-0.0084
1983:4	4.8075	4.7947	0.0128
1984:1	4.8096	4.7996	0.0099
1984:2	4.8193	4.8062	0.0131
1984:3	4.7968	4.8037	-0.0069
1984:4	4.8075	4.8081	-0.0007

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