Terms of Trade and Italian Economic Growth: Accounting for Miracles *

A. Interpretations of Italian Economic Growth in the Post-War Period

The transformation of Italy from a semi-industrial to an industrial state is a relatively recent phenomenon. It took place in the twenty-five years that run from the late 1940's to the end of the 1960's. Italian economic reconstruction from the economic ruins of the second world conflict was so successful that in less than fifteen years the performance of the economy was classified as a "miracle". But almost as magically as such conditions arose in the late 1950's and early 1960's they began to wane in the late 1960's. The transition from fast and relatively steady non-inflationary economic growth to cyclical inflationary conditions had already occurred when the oil crisis of 1973 hit the industrialised world. Since then the performance of the Italian economy has mirrored that of most other European Countries, remarkable only for its resilient underground reservoir of economic activity.

The growth performance of the Italian economy in the post-war period has attracted wide-spread attention and been subject to numerous analyses. Until recently the various explanations placed emphasis on unique determinants which, in isolation, fail to offer a coherent and convincing explanation of the whole period. The early explanatory models may be summarised under three broad headings: a) unlimited supply of labour models, b) export-led growth models and c) "neo-Ricardian" interpretations (D'Antonio [1973]). The latter fit less neatly into the overall category of single determinant explanations, as they

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carried the seeds of some of the subsequent, more general interpretations, but they are classified here for expository convenience.

According to the analyses of Italian economic growth in the post-war period which have their theoretical underpinning in the two-sector model of W.A. Lewis (see, for example, Kindleberger [1967]), the critical factor is represented by the low wage levels that prevailed in Italy, as compared to other European countries, which were the result of the vast reservoir of labour existing in the agricultural sector of the economy. But, if the relatively low wages of the 1950's — due to the "unlimited" supply of agricultural labour — go some way in explaining the mechanisms of Italian economic growth in this period — high profits in the manufacturing sector, high investment and rapid growth of output — neither the reversals of the 1960's can be attributed in their entirety to the wage increases that occurred nor can the latter be explained by the "drying up" of the labour reservoir in the traditional sector of the economy. Excess supply conditions did in fact still persist in the agricultural sector, labour migration continued and, particularly in the underdeveloped south, unemployment and underemployment persisted.

The wage tensions of the early 1960's in the presence of conditions of overall excess supply in the labour market can only be explained by resorting to the notion of market segmentation, due to stronger unionisation and scarcity of skilled labour, or the notion of minimum "critical" differentials in labour incomes necessary to extract labour from the traditional to the modern sector (Pettenati [1974]).

Complementary to explanations of Italian economic growth which emphasise the importance of low wages and excess labour supply, are those that stress the importance of export growth in the post-war period. The leading role of external demand, helped by the "low" costs of exports, determined in turn by "low" labour costs, has been emphasised in several analyses (Fuà [1965], Stern [1967], Graziani [1969] and others). In this explanation it was the opening up of the Italian economy that led to the expansion of export production, to reductions in production costs via economies of scale, to greater competitiveness in export markets and to further expansion of production and exports. The export-induced productivity gains thus helped to offset the impact of higher wages on profit margins and prolonged the virtuous circle of high accumulation, high investments and high growth of output. In the mid to late 1960's, however, this "virtuous circle" was broken, yet the impulse of external demand continued unabated. Even the "complementary" value of the export-led growth explanation diminishes drastically in light of the performance of wages in the 1960's.

Some of the same authors who have stressed the critical role played by external demand in Italian economic growth in the post-war period, have also noticed the negative side-effects of this type of export-led development on the industrial structure, such as the creation of an industrial dualism in an economy already characterised by territorial dualism, generating some of the very conditions that would lead, in the mid to late 1960's, to the breakdown of the growth process (Graziani [1969].

The end of the economic "miracle" is attributed by the "neo-Ricardians" and by the Bank of Italy to the changes in the relationship between labour costs, labour productivity, profits and investments in the manufacturing sector that prevailed in the 1950's (Napoleoni [1964] and Bank of Italy [1963] and [1964]). According to this line of thinking, wage growth in excess of productivity growth in the early 1960's brought about declining profit margins and consequently a reduction in investment. Income redistribution in favour of labour stimulated private consumption at the expense of investment expenditure, tightening the balance of payments constraint. In the absence of policies aimed at compressing "opulent" consumption and various types of "parasitic rents" capital formation never recovered to the levels required to insure steady, non-inflationary economic growth (Napoleoni [1964]). Although severely criticised in their economic logic (Modigliani and La Malfa [1966]), the "neo-Ricardian" analyses of Italian economic development have helped to shift the emphasis from the search for principal determinants, such as low wages or external demand, to the identification of a more general analytical framework.

The explanatory models of the economic growth of Italy that have become available in more recent years have in common the rejection of single factor explanations, a more careful consideration of the underlying economic structure and a greater appreciation of the role played by fiscal and monetary policies (see for example, Sylos-Labini [1972], De Cecco [1972] and Ciocca-Filosa-Rey [1973]). Still centered around the idea that wage increases in excess of productivity have tended to squeeze profit margins and, consequently, investments, Sylos-Labini focuses on the reaction of entrepreneurs and workers to the new situation. The former, according to this view, followed in the 1960's adjustment strategies to rising labor costs that were centered on the increase in the rate of exploitation of existing labor and capital equipment, minimizing new investments and employment creation. The reaction to this "rationalization" of the productive processes was increasing union militancy. The insufficient autonomous growth of aggregate demand — since employment was not rising — would have in the end nullified the possible longer term positive effects of the partial restoration of profit margins on investment, brought about by the "rationalization" of the production processes implemented in the manufacturing sector of the economy.

The monetary and fiscal policies followed by the government further reduced the possibility of a faster rate of capital accumulation. Over-preoccupied with inflation and balance of payments problems, monetary authorities reduced the expansion of the monetary base, at the same time that expansion of current expenditure was widening budget deficits whose financing required an increasing share of total available credit. The net effect of these policies was to discourage new productive investments and to create unfavorable expectations in the business sector which promptly became self-fulfilling, given the increasing militancy of the labor unions.

Ciocca, Filosa and Rey [1973] emphasise the role played by insufficient aggregate demand in the 1960's, which had earlier been stressed by Ackley [1963] for the 1950's, albeit with a different perspective. According to this view, the expansionary effects of the creation of the Common Market had worn off by the mid to late 1960's. From that time onwards the Italian economy would have needed explicit expansionary policies to supplement the limited endogenous growth capacities. The fiscal and monetary policies actually implemented were thus just the opposite of what was required.

The changes that had occurred in the industrial structure in the previous decade and particularly the increasing reliance of the manufacturing sector on export demand along a very narrow path of price competitiveness, would have been responsible for the insufficiency of the endogenous impulse to growth. Increased dependency on exports, in very price competitive markets, reduced the propensity of the manufacturing sector to invest in the face of increasing labor cost pressures. Instead of "risking" new investments, the business sector opted — according to this analysis — for a more intense utilization of existing productive capacity without expanding employment.

In the view of Pivetti and De Vivo [1980] the growth slowdown of the 1960's was almost completely caused by government economic policy. Their position is that the critical feature of the 1960's — the divergence of the rate of growth of exports above that of domestic demand — was due to the policies of rapid integration of the Italian economy with the rest of the industrialised world backed up by a "conscious" government policy to restrain the growth of internal demand.

Finally, a number of models also include reference to changes in market structures, in particular labour and product markets. Such changes are not, however, generally of an autonomous nature and have particular causes, e.g. the effect of slack labour demand on participation rates or the importance of production for export leading to advantages for larger firms introducing production techniques dictated by international competitive rather than internal cost conditions. The relation of the labour market and certain political phenomena has been stressed by Salvati [1975] among others.

Exceptions notwithstanding, single determinant explanations of Italian economic growth have been almost totally abandoned in the most recent attempts to analyze the causes of "the years of depression" of the mid-to late 1960's. Graziani's [1975] analysis of this period stresses not the growth of external demand but the growing conflict between labour and capital and between large and small firms facing the urgent needs of restructuring their existing production processes. In this framework, the degree of openness of the various productive sectors to foreign competition and their dependence on exports simply becomes one of the multiple factors that dictate different responses to the market and economic policy stimuli.

However, even with this new focus on structural responses of industrial sectors to increased internal social tensions, to economic policies and external impulses, Graziani recognizes the difficulties and lack of coherence faced by his and others' explanations of the growth process of the Italian economy over the entire post-war period. Such difficulties increase when the analysis of the decade of the 1960's is extended into the 1970s. Single elements of the previous analysis maintain some relevance, but the explanation of developments in the Italian economy becomes less clear cut than in the previous decade.

B. Terms of Trade and Italian Economic Growth: A Reinterpretation of Old and New Miracles

Any attempt to discuss Italian post-war economic growth in general and the so-called "economic miracle" in particular, must recognize the close interaction of political and economic conditions. Political decisions taken within Italy and by the Allied Powers after World War II had determinant implications for Italian post-war development. Just as the U.S. had strongly argued in favour of rapid restoration of exchange convertibility and free trade in goods as the basic objectives of the international monetary institutions discussed at Bretton Woods, the decision by De Gasperi to exclude left wing representation in government and accept participation in the European Recovery Program (ERP) was only consistent with these objectives.

Much importance has been attached to the decision to abandon autarchy, but with little attempt to assess the alternatives that were then available. Not only did participation in U.S. reconstruction aid through ERP require it, Italy's meagre natural resources and low ratio of arable land to population made it an obligatory alternative to the failed dream of an Italian Empire. Unlike some European countries who chose this path because of their needs for gold and dollar reserves to provide the financial basis for reconstruction purchases, Italy's decision was based on more than short term reconstruction considerations. Since Italy had neither the natural resource nor industrial base of the more northern European countries the post-war period offered not only the possibility for political change, it offered the possibility for a new economic construction. Within this context the devaluations of the Lira in 1947 and 1949 were coherent decisions to create the appropriate initial conditions for survival in the open, competitive trading environment envisaged by the U.S. at Bretton Woods and which was given concrete support in the ERP. Of course, this was the precise opposite of the pre-war aspirations of a self-sufficient Empire; indeed, the very failure of those aspirations had left the Italian economy as laggard in terms of European industrial development.

The response of Italian manufacturing industry to the changed competitive conditions would determine two decades — 1950-1970 — of post-war development and produce sharp contradictions with the results of the political decisions that brought about these changes.

Italy's traditional position as a producer of excess labour, as well as the impact that Fascist corporate structure had produced on labour organisation, meant chronic excess supply of relatively low-skilled labour. In combination with a ready supply of relatively low cost internationally traded raw materials whose importation was encouraged by the liberalisation of trade, and chronic shortages of acceptable international settlement currencies this encouraged expansion in the area of primary transformation of raw materials. This was achieved by means of the application of already existing, readily available, low capital intensity production methods. A direct implication of this was a predominance of relatively low value-added processes in manufacturing industry.

The introduction of production techniques which were well-tried and widely available at relatively low cost required little advanced investment planning; nor were research and development significant factors in their adoption. Thus, while low wages may have discouraged the expansion of consumption goods production, there were few obstacles to rapid investment in these types of transformation processes.

The recognition of the effect of low-cost, easily available raw materials on the development of the industrial structure, in addition to the factors that have been traditionally stressed in explanations of the Italian post-war growth experience, allows the development of a more comprehensive structure capable of a consistent analysis of growth performance, as well as a clarification of certain "myths" concerning that performance. Some of the latter can be dispensed with directly. For example it is important to note that the post-war liberalisation of trade was carried out in the context of precise proposals for economic programming, structural changes in the steel industry, establishment of the Cassa per il Mezzogiorno, agricultural reform, and stabilisation of the Lira. Vanoni and La Malfa were the apparent authors of what could be called the first programme for growth dating from the early 1950's. Liberalisation of trade did not imply relinquishing the economy to the forces of the free market.

It is also important to point out that, while Italian industrial wages were relatively low in the context of Europe (aided by the pre-1950 devaluations which reduced the Lira from 225/$ to 625/$), they increased steadily, often exceeding increases in output per man, which implies increasing labour costs per unit of output, the relevant measure for international profitability and competitiveness (Table 1).

TABLE 1

RATES OF INCREASE OF NOMINAL LABOR EARNINGS (1)
AND PRODUCTIVITY (2)

	(1)	(2)	(1)-(2)		(1)	(2)	(1)-(2)		(1)	(2)	(1)-(2)
1956	7.1	4.2	= 2.9	1964	9.7	1.9	= 7.8	1972	11.2	5.4	= 5.8
1957	4.6	3.5	= 1.1	1965	3.9	6.7	= −2.8	1973	22.9	8.5	=14.4
1958	5.3	4.1	= 1.2	1966	8.2	7.6	= 0.6	1974	23.6	3.2	=20.4
1959	4.6	7.7	= −3.1	1967	11.0	5.9	= 5.1	1975	22.5	− 8.5	=31.0
1960	8.8	6.9	= 1.9	1968	7.8	6.6	= 1.2	1976	23.3	10.0	=13.3
1961	8.7	6.3	= 2.4	1969	8.0	3.4	= 4.6	1977	21.0	1.8	=19.2
1962	14.5	6.7	= 7.8	1970	19.4	4.4	=15.0	1978	14.7	2.7	=12.0
1963	20.1	4.6	=15.5	1971	11.6	1.3	=10,3	1979	18.3	6.6	=11.7

Source: CSC Rapporto I, p. 96, p. 106, *CSC Rapporto III*, p. 126.

Over the period 1954-61 the rise in unit labor costs in the manufacturing sector was nonetheless only about .8% as an annual average. But with wholesale prices of industrial products falling by −0.2% and export prices rising by .3% little margin remained for supporting internal accumulation and expansion. Yet, investment in the industrial sector was expanding at 9.3% per annum, employment rose by 2.3% per annum and value added per employee expanded at a 5.8% annual rate during this period.

It is our contention that such performance can be adequately understood only against the background of the supply and price behavior of raw materials and semi-manufactured inputs utilized by Italian industry.[1] During the post-war period, technical change and investment led to conditions in which greater ouput was available at decreasing costs in agriculture as well as in extraction industries, conditions which were reinforced by the relative political stability and steady economic expansion of the 1950s that also reduced the cyclical behaviour of prices and producer incomes. Finally, the relative monetary stability limited speculative influences on prices. In fact, from 1954 to 1961 raw material input prices fell at an annual rate of .7% per annum in nominal terms.

The development of these conditions served to reinforce and consolidate the specialization of the industrial sector of Italy in the primary transformation of raw materials: over the period 1955-68 output of the petroleum derivate industries increased at an annual average rate of 12.8%, chemicals 12.3%, steel 11.1% and paper and related products 10.2% while total manufacturing sector output increased by 8.2%. Table 2 shows Italy's industrial performance relative of European and other countries.

It was this same development that provided the groundwork for the period of exceptionally rapid growth from 1958-63 known now as the "economic miracle" which produced average GDP growth of 6.6% per year, annual expansions of industrial production of 9.2%, growth of exports of goods and services at 14.3% per year and real wage rises in excess of 6% per annum. Industrial wages rose during this period at an 11.2% annual rate, while the implicit price deflator grew at only 3.7% per annum against productivity increases of 6.4% and gross profits in industry of 8.4% per annum.

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[1] Italy also benefited from advantageous long-term energy contracts concluded by the ENI group under Enrico Mattei. See RONCAGLIA (1983).

TABLE 2

INDUSTRIAL PRODUCTION 1955-1968 - AVERAGE ANNUAL RATES

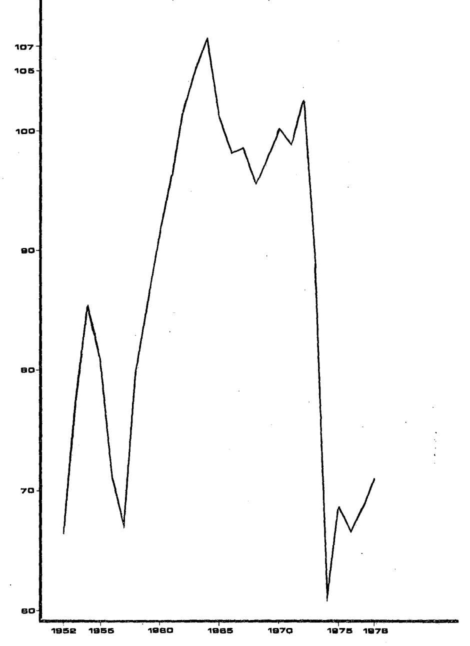
Country	Basic Metals	Chemicals, Rubber Petroleum Derivatives and Coal	Total Industry
Italy	9.9	13.2	8.2
France	3.7	8.3	5.5
Germany	3.8	11.0	5.7
U.K.	1.2	5.9	2.7
U.S.A.	1.8	7.8	4.7
Japan	16.1	19.2	14.4
Total OECD	3.4	8.7	5.3

Source: OECD, *Industrial Production Statistics,* (various issues).

FIGURE 1

ITALY'S BARTER TERMS OF TRADE* MOVEMENTS: 1952-1979

(1970=100)



* Ratio of export unit values and import unit values.
Source: ISCO data.

Figure 1 gives a striking testimony to the effect of raw material prices on the industrial sector specializing in primary transformation techniques. Over the period 1958-63 export prices for Italian manufactured goods rose by 3.8% per annum while the costs to Italian producers of imported raw material and semi-manufactured inputs fell by 2.0% per annum. While these figures do not fully "explain" why the "miracle" occurred they do show the objective conditions which made it possible. It was only a miracle to the extent that these conditions were determined by external factors. It also appears no more than obvious that the simultaneous rise in real wages and industrial sector profits which gave rise to the sustained capital accumulation (the external or export aspect cited by Graziani and others) was not unaffected by the rapid improvement in the industrial sector terms of trade over the period. Indeed, the same effect, while less marked, can be seen operating over the entire 1954-61 period with imported raw materials prices falling at 0.7% per annum and export prices rising at 0.3% annually, against the background of industrial sector unit labor costs rising at 0.8% per annum (Tables 3 and 4).

These developments, imposed on the initial conditions of low relative wages and an industrial sector specializing in primary transformation processes for export, simply tended to reinforce the initial tendencies which culminated in their final accentuation in the years of the miracle. They also made the contradictions inherent in the political and economic spheres especially damaging to its perpetuation.

In the 1960's each one of the particular factors which had been combined to sustain Italian growth were altered or eliminated one after the other, without compensating adjustment from other factors, such as the "buffer" provided by the steady, and at times, dramatic, improvements in the industrial terms of trade in the 1950's and 60's.

In the 1960's the political decisions taken during the post-war reconstruction took on economic consequence. In particular, the decisions to exclude left-wing parties from government and to foster trade union "competition" to weaken the hold of the Communist Party via the General Confederation of Italian Labor combined to create unsatisfied political expectations which eventually surfaced in wage demands. In the 1962-64 period labor costs rose at more than double the average rate of the 1954-61 period (14.7% against 6.6%) and rates of increase of unit costs jumped to a 9.8% average annual increase against .8% from 1954 to 1961. Yet, a sharp monetary constraint imposed by the Bank of Italy was sufficient to moderate wage and price behaviour and generate productivity increases which, in conjunction with continued improvement in the terms of trade, kept the economy on an expansionary path.

Whereas the 1962 wage negotiations had been dominated by tight market conditions for certain categories of skilled labor, the second

TABLE 3

UNIT LABOR COSTS IN THE INDUSTRIAL SECTOR 1954-68
(Average Annual Rates of Change)

Period	Cost per Employee	Gross Product Per Employee	Unit Cost
1954-61	+ 6.6	+5.7	+ 0.8
1962-64	+14.7	+4.4	+ 9.8
1965-68	+ 7.7	+6.7	+ 0.9
1954-68	+ 8.6	+5.7	+ 2.7
1969-72	+12.5	+3.6	+ 8.6
1973-77	+22.4	+2.6	+19.3

Source: CSC Rapporto I, pp. 14, 16 and 20.

TABLE 4

RELATIVE COST AND PRICE PERFORMANCE 1954-1977
(Average Annual Rates of Change)

Period	Raw Material Import Prices	Industrial Sector Labor Cost per Unit of Output	Wholesale Prices of Industrial Sector Output	Export Prices	Export Goods	Implicit GNP Price Deflator
1954-61	− 0.7	+ 0.8	− 0.2	+ 0.3	13.8	+ 2.4
1962-64	+ 0.7	+ 9.8	+ 3.6	+ 6.4	6.1	+ 7.0
1965-68	+ 1.6	+ 0.9	+ 0.6	− 0.6	8.9	+ 2.8
1954-68	− 0.2	+ 2.7	+ 0.9	+ 1.4	11.6	+ 3.5
1969-72	+ 4.1	+ 8.6	+ 4.5	+ 5.5	4.8	+ 6.1
1973-77	+35.9	+19.3	+21.6	+21.9	8.3	+16.7
1954-77	+ 8.7	+ 7.5	+ 6.0	+ 6.5	10.9	+ 6.8

Source: CSC Rapporto I, p. 89.

wage explosion produced by the "autunno caldo" of 1969 was a more directly politically related event and put a definite end to the stable wage behavior and real wage growth that had characterized the 1950's and a good part of the 1960's. More importantly however, this change in the behavior of wages occurred at the same time as the industrial terms of trade began to deteriorate. The 1969-72 experience pushed the inflation rate, which after a burst in 1962-64 (7% per annum) had settled back to a 2.8% annual rate for 1965-68, back up to a 6.1% average annual rate (Table 4). These figures do suggest, however, that unlike previous experience, the failure of prices to keep pace with rises in wage costs would not be absorbed by the buffer of improved industrial terms of trade reducing imported input costs, but rather by reductions in profitability.

Thus, Italy entered the oil crisis with historically high rates of increase in wages, raw materials prices (all at rates nearly double their 1954-1968 averages), and deteriorating profitability. Yet, it was not the oil crisis which spelled the end of the Italian growth "miracle". Rather this was brought about by the continued steep rise in raw material costs other than oil (between 1973 and 1977 food costs increased by 20.9%, non-food raw materials by 26.5%, and semi-manufactured goods prices by 24.9%), combined with the effects of the *scala mobile* (wage indexation) which assured that wage costs would closely follow these rates of increase. From 1970 to 1973 the terms of trade fell from 100 to 80; the oil crisis price increases contributed only an additional 10 point decline (to 70.4) which had been almost totally recovered by 1975. The most direct expression of the changed conditions was the necessity to accept exchange parity adjustment in 1973, well before the mid-east crisis. Thus, although the oil crisis cannot be accorded the status of a major cause of the disintegration of the propitious conditions for Italian growth it certainly tended to reinforce the other factors producing the growing tendency toward increasing costs and lower profitability.

Of greater import were the aggregate negative effects on international economic policy and the slump in world demand and trade which started in late 1974. Indeed, the more visible impact of these factors was on sales, profits and investment as most national economic policies — Italy being no exception — moved to restrictive monetary policies to fight inflation. This sharply raised the cost of short-term distress borrowing (and eliminated the possibility of long term finance) to finance declining cash flow positions. Thus by 1977 the industrial sector was experiencing historic high rates of increase in *all* components of input costs: wages, raw materials, energy, finance, in the face of stagnating internal *and* external markets. It is not surprising that economists were led to suggest that "structural" solutions would be necessary for recovery. But such conditions were being experienced in most industrialised countries. It was not the oil crisis which created the basic structural problem, but rather the industrial structure that had evolved in the post-war period. This problem had already been recognized in the 1950's and 1960's with the decisions concerning the nationalisation of steel, electricity and telecommunications and the encouragement given to the newly created Montedison to move into petrochemicals. Unfortunately, this attempt to move to a more technologically advanced, higher value-added industrial structure was predicated on the stability of a particular commodity terms of trade: oil. The oil crisis put an end to this attempt at restructuring the composition of Italian industrial output along more "European" lines.

The Italian economy in the late 1970's thus faced two types of structural problems. The first, common to all industrialised countries, was related to dependence on cheap energy inputs. The second was linked more closely to dependence on cheap raw materials and simple production technologies. Although this structure had proved capable of providing very rapid improvements in real labour incomes it was also dependent on movements in the terms of trade and thus outside direct policy control.

The comportment of the strategic factors outlined did not offer an optimistic outlook for the growth prospects of the Italian economy in the 1970's. They do, however, demonstrate clearly the reasons why growth exceeded expectations during some periods of the 1970's.

With the new agreements on the *scala mobile* of 1975 taking full effect over the subsequent two years, the behaviour of wages became increasingly independent of internal labour market or international competitive conditions. At the same time, with net investment at negligible levels and manning levels set by strict agreements initiated in the Statuto dei diritti dei Lavoratori (Labour Code), changes in productivity were limited to the effects of increasing capacity output and thus to the influence of changes in external demand for Italian exports. Unit costs and output thus were primarily governed by external factors via the *scala mobile* and foreign demand and prices. At the same time monetary policy took on an increasingly exogenous nature as the Bank of Italy under the new Governor enunciated a policy of "indexing" savings by means of positive real rates of return on savings thus producing "equity" with indexed wages. This indexing was less rigid than that applied to wages for in practice interest rates continued to be set in conjunction with internal policy requirements and international monetary conditions — in particular the behaviour of exchange rates.

It is thus not surprising that conditions in 1977 suggested to policy makers that external equilibrium would allow at best zero growth in national income. Yet, real GNP grew by nearly 2% in 1977, 2.6% in 1978 and 5% in 1979 while the foreign balance experienced a sharp improvement and net investment seemed poised for the first real expansion since the 1960's. This unexpectedly good growth performance, which was also accompanied by a sharp reduction in the rate of inflation and improvement on the balance of payments made it appear as if the Italian economy had rediscovered the combination of factors which had produced the first economic "miracle". Some commentators went so far as to baptise the late 1970's as Italy's second "economic miracle".

In one respect this opinion might be supported, for just as in the period of the previous "miracle", the sharp improvement in the external account and firm liquidity was associated with a marked improvement in the industrial sector's terms of trade. As in the earlier period these changes were independent of any explicit policy actions adopted by the government. Yet, there was a crucial difference from the earlier experience which had produced decreases in relative real costs of imported industrial inputs resulting from prevailing real conditions in international markets. Rather, in the late 1970's international monetary conditions were such that the Bank of Italy could follow an exchange rate policy which allowed the Lira to appreciate with respect to the U.S. dollar and depreciate with respect to the currencies of Italy's major European trading partners. Since most raw materials are invoiced in dollars (about 45% of total imports) and about 2/3 of Italian exports are sold in European markets, the effective exchange rate of the Lira implied improvement in the industrial terms of trade and a recreation of the conditions that had prevailed in the late 1950's. This, coupled with the effects of the exchange rate adjustment of 1976, which had sharply increased dollar costs and reduced export earnings, but which had offset part of the sharp rises in wages in the 1960's and provided for increases in profitability in exports and in international competitivity, led to the "miraculous" recovery from the "structural" problems which in 1977 were supposed to condemn Italy to zero growth. In 1979 Italy's GNP growth was second only to Japan.

This experience led a number of commentators to the conclusion that the free market had stepped in to provide the structural adjustment that government policy had failed to produce. Closer examination of the available data however, suggest that there has been little or no change of a structural nature in Italian industry, either in the use of energy or of other productive inputs (Table 5).[2] Rather, there has been an adjustment in the sectoral composition of Italian output and exports which has reduced the relative proportion of high energy using sectors

[2] A more recent study (HEIMLER and MILANO, 1982) finds evidence of long-period substitution to be more widespread in the latter than the former.

TABLE 5

VALUE ADDED, INDUSTRIAL OUTPUT (1970 PRICES)

Sectors*	71	72	73	74	75	76	77	78	79
A. High Energy Use	32.19	33.13	33.54	33.20	32.42	32.84	32.32	32.89	32.52
B. Av. Energy Use	31.62	30.41	30.74	31.73	31.52	30.12	30.87	31.07	30.11
C. Low Energy Use	36.19	35.96	35.72	35.07	36.07	37.04	36.82	36.04	37.36
	100	100	100	100	100	100	100	100	100

* Sector A: Chemicals (excluding Pharmaceuticals), Non-metalliferrous Minerals, Rubber and Plastics, Paper, Printing and Publishing, Ferrous and Non Ferrous Metals.

Sector B: Metal Products excluding Plant Equipment, Electricals, Agricultural and Industrial Machinery, Office Machines, Transportations.

Sector C: Food, Drink and Tobacco, Textiles, Clothing and Shoes, Wood and Wood Furniture, Other Industrial Products.

Source: CSC Rapporto III, p. 91.

and increased the proportion of labour intensive and raw material dependent primary sectors. Indeed, it was precisely the expansion of these latter sectors, aided by small size and the growing extent of black market transactions, which accounted for the rapid expansion in output and exports. This tends to suggest that while the Italian economy has a much more technologically advanced industrial sector than that of 1950, its basic characteristic of relying on cheap raw materials, widely available reliable technology and low unit labour costs has not appreciably changed over the last quarter century. This also implies that the performance of Italian industry will be strongly influenced by the leeway that improvements in the industrial terms of trade generate for improving real wages at rates equivalent to those of the more technologically advanced European countries with higher levels of capital accumulation without reducing profitability below the level crucial to the continued improvement of productive technique and accumulation of productive capacity. Studies of the period 1970-1978 suggest that Italy's international competitors are increasingly the newly industrialised developing countries which enjoy either extensive indigenous supplies of raw materials or relatively cheap labour or both (Tables 6 and 7). If Italy is to continue to be competitive in these markets, investment is vitally necessary to assure that Italy remains at the technological frontier of these sectors in order to maintain competitive costs and prices.

This also suggests that exchange rate policy will be of vital importance. Of course, among the reasons the "miracle" of 1977-1979 came to an end was the decision to join the European Monetary System. This effectively eliminated any further exchange adjustment vis-à-vis EEC export markets and made the Lira/$ exchange subordinate to the EMS/$ rate. The ability of the Central Bank to seek improvements in the currency terms of trade was thus circumscribed. Given the pattern of trade outlined above, there may be a more appropriate unit than the ECU to peg the Lira exchange rate.

C. Summary and Policy Implications

The preceding analysis argued that post-war political and economic conditions led to the rejection of the pre-war policy of autarchy in favour of an open economy. This decision had implications not only for

TABLE 6

MANUFACTURED EXPORTS: 1970-78

Sector	OECD			ITALY		
	% Change 1978/1970	Shares 1970	Shares 1978	% Change 1978/1970	Shares 1970	Shares 1978
Chemicals	313.5	12.2	12.7	313.8	8.3	7.9
Low Level Transformation Products	261.6	26.6	24.2	407.8	23.6	27.9
Mechanical Products	309.7	49.0	50.5	278.1	44.4	38.9
Others	313.4	12.2	12.6	361.6	23.7	25.3

Sector	Developing			NICS*		
	% Change 1978/1970	Shares 1970	Shares 1978	% Change 1978/1970	Shares 1970	Shares 1978
Chemicals	293.9	10.5	5.8	405.3	3.2	2.6
Low Level Transformation Products	419.3	36.2	27.3	363.1	31.4	23.6
Mechanical Products	852.2	17.0	24.0	879.0	15.9	25.3
Others	608.0	36.3	42.9	503.0	49.5	48.5

* Newly Industrialized Countries: Brazil, Mexico, Korea, Taiwan, Hong Kong, Singapore, Malaysia, India, Philippines.

Source: CSC Rapporto III, p. 104.

TABLE 7

ITALY'S EXPORTS STRUCTURE: DEGREE OF HOMOGENEITY WITH INDUSTRIALIZED AND DEVELOPING COUNTRIES, 1970 AND 1978
(homogeneity indexes*)

		EC	OECD	LDCs
Italy	1970 (1978)	21.3 (26.8)	23.0 (30.1)	54.5 (36.9)
EC	1979 (1978)		5.1 (7.5)	64.7 (63.7)
OECD	1970 (1978)			67.6 (67.0)

* Ranging from 0 (complete similarity in export structures) to 200 (complete difference).
Source: CSC Rapporto III, p. 105.

external trade and payments, but more importantly for the very structure of the Italian industrial sector. Since Italy had neither the heavy industrial base of her northern neighbors to *re*construct, nor the natural sources of energy and raw materials that they possessed within their national boundaries, the process of post-war industrialization produced a manufacturing sector in which primary transformation of imported inputs was predominant. This was a marked difference from Italy's eventual EEC partners.

The performance of this emerging industrial structure was thus conditioned by the performance of the prices of imported raw material, and subsequently semi-manufactured industrial inputs and the prices at which the final products could be sold in export markets. This relation has been called the industrial terms of trade. It is this concept which has been combined with the previously existing explanations of post-war growth to provide a coherent analysis of the performance of the Italian economy in the post-war period that does not have to rely on "miracles" as explanation. It has also allowed the explanation of certain myths concerning the nature of the economy.

No great originality is claimed for the discovery of this concept. It is, however, interesting to note that none of the widely-known explanatory models treats the problem of structure or analyses the behaviour of the terms of trade in relation to the growth process. A partial exception may be found in Lutz [1962] who points out the importance of the improvement in the terms of trade in producing a surplus on goods and services trade in the early years of the "miracle"; 1958 and 1959. She credits this surplus, however, in "substantial part ... to reduced quantities" imported and goes on to discuss the "paradox" of a surplus on the balance of payments producing a strong currency and high international competitiveness in the face of extreme capital shortage in industry (p. 294). It is precisely the integration of the concept of the industrial terms of trade in explaining Italy's industrial structure which provides the possibility of explaining such paradox.

At the same time, the analysis has suggested that the decisions on post-war industrialisation which led to successes such as the economic "miracle" also implied inherent contradictions which have had increasing influence on the performance of the economy. On the one hand the increasing division between political representation in government and the representation of power in the economy has hindered the actuation of economic policy measures which require co-operation between the use of political and economic power. On the other hand is the increasingly dependent character of the economy on international economic conditions. This is something more than the simple recognition of the impact of OPEC on the western industrialized economies. It is rather the logical consequence of the decision to pursue an open economy, subsequently within the framework of a customs union; increasing interdependence among economies is the avowed goal of such action.

These two facts are, however, frequently overlooked when judging the ability of economic policy measures to influence the performance of the economy.

For example, the analysis presented here suggests that the very stabilisation policies which have been adopted in the past (e.g. 1962-1965) and are being used today are in effect largely neutralised because the major factors: unit labour costs, capital costs and raw and semi-manufactured materials costs are largely determined by factors outside the control of policy makers. Given the operation of the *scala mobile* the numerator of unit labour costs is linked to the rate of change of world prices, given the exchange rate; while the denominator is increasingly determined by the rate of growth in international trade. It no longer seems possible to regard the growth of Italian exports as independent of the rate of growth of world demand. The costs of finance and rates of return are also internationally influenced, the former by world money markets and the latter by world trade and inflation, given the slow adjustments observed in production coefficients in Italian industry. These factors have only been strengthened by the creation of the EMS and the necessity to stabilise exchange rates. Thus capital costs in their dual aspect of rate of return and rate of interest are also conditioned by events outside the direct control of policy makers. The same arguments obviously apply, with even more force, to the determinants of raw material and semi-manufactured input prices. During the period 1977-1979 the exchange rate served as the one available "degree of freedom" in operating on the relation of prices to costs. As previously stated, the EMS has limited the flexibility of the exchange rate as a policy tool and recent U.S. monetary policy has all but eliminated any remaining leeway. But, these are just conclusions that follow from the fact that in an increasingly interdependent world economy internal policy measures of all but the dominant countries tend to become decreasingly effective. Economic policy must be geared to producing more independence in the behaviour of the factors of cost and demand within the context of an integrated international trading system.

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