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STUDY

ON THE POSSIBLE PART PLAYED
BY CERTAIN PRIMARY NON-EMPLOYMENT INCOMES
IN THE INFLATIONARY PROCESS
IN ITALY

*prepared for the Commission of
the European Communities
by*

Professor Francesco INDOVINA
Professor of Economics at the University of Venice
in collaboration with
Fabio Arcangeli, Agostino Nardocci e Massimo Pinchera

It is well accepted that policy measures on prices and wages are insufficient for the realisation of non inflationary economic growth. It seems necessary, in the future, to complete the economic policy measures with policies taking into consideration developments of primary non-salary incomes.

To prepare this kind of measure, this study tries to analyse the importance of some primary non-salary revenues in Italian inflationary developments. This study was forwarded to the Commission by the Committee of medium-term economic policy at its April 26, 1972 meeting.

This study was made by Professor Indovina. It begins with an analysis of the inflation process in the Italian economy after the second world war.

The second chapter tries to examine the relationships between prices and productivity on the basis of data for 7 and 22 economic sectors. Chapter III develops a sectoral analysis of prices, wages and other revenues, the relationships among sectors vis-à-vis price and revenue developments form the object of Chapter IV. This analysis underlines the importance of the service sector in the inflationary process. Chapter V concentrates on an attempt to explain the role and the structure of the service sector in the formation of prices.

COMMISSION OF THE EUROPEAN COMMUNITIES

CEF 7/13

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PREFACE OF THE COMMISSION

It is today generally accepted that action taken solely on prices and wages is insufficient to maintain a non-inflationary growth policy. For these reasons, the Commission has deemed it useful to have independent experts study, in the different member countries, the possible part played by certain primary non-employment incomes in the inflationary process.

Given that it is an important subject just as much from the economic viewpoint as the political, thereby justifying as wide a discussion as possible, the Commission is publishing in the current brochure the complete stuby presented by Professor Indovina. The opinions expressed are the sole responsability of the author and should not be taken to be the attitude of the Commission concerning the many questions involved.

CONTENTS

THE STUDY

SUMMARY OF PRINCIPAL FINDINGS

The first chapter analyses the trend of the Italian economy which, since the war, has been marked by persistent bouts of inflation of varying intensity, with differing features and different causes. Two approaches were initially adopted in seeking to identify the extent and rate of inflation.

First, on the basis of data and information supplied from official sources, the upsurge of prices was considered in the actual form which it took, both overall and under the various sub-headings into which it can be divided.

Secondly, the literature available on the subject was studied. This revealed the existence of a possible link between the course of inflation in general and the growth of the economy as a whole.

For example, a first period of more or less stable prices accompanied by rapid expansion of the means of production contrasts with a second period of inflationary pressures (particularly severe in the early and late 1960s) associated with stagnation in the formation of capital.

These different overall movements and their specific features in the various sectors involved can be attributed to the special 'dual' structure of production which in turn stems from the leading role of exports (especially of durable consumer goods) in final demand; this, in fact, has been the pattern of development in Italy since the Second World War. In other words, a high rate of inflation affecting all countries has had an exceptionally severe impact, with multiplying effects, on the Italian economy, thus aggravating structural difficulties which are themselves the consequence of economic growth.

Against this background, the aim of this study is to describe briefly and systematically the processes by which prices are set on the different types of market in the various sectors, and the effects of some typical features of our economy on price movements and trends.

Special stress is therefore laid on the consequences, first of all of the existence of a modern industrial sector, with a firm footing on international markets, side by side with sectors characterized by the existence of true economic rent (e.g. buildings and land) or of rent in the broad sense (as in many service branches and public administration). Secondly, the consequences of the

distribution of incomes as a result of trade union policy and industrial action, brought about by the special circumstances of the labour market during the 1960s. And, lastly, the consequences of government economic policies and monetary policies in particular.

The second chapter seeks to identify possible causal relationships underlying the differing inflationary potential of individual sectors, by investigating whether there is any link between sector price and productivity trends. The underlying assumption is that of an economy tending to polarize in two directions:

1) one part, made up of manufacturing industries which are linked with foreign markets, use the most advanced techniques and are capital-intensive as compared with the rest of the economy. In this case, the rapid growth of productivity combined with the pressure of international competition will tend to contain price increases.

2) a second part, comprising sectors which are almost entirely linked with the domestic market. In this case, the absence of international competition favours the continued existence of more traditional and relatively labour-intensive methods. In addition, the markets served by this part of the economy are highly monopolistic (for example, monopoly of location, customs barriers, rent-earning position, etc). These sectors will tend to increase the final prices of their own goods and services more than proportionately to their costs: in other words, productivity will increase more slowly and price pressures will be stronger.

In order to check that the hypothesis of an inverse relationship between prices and productivity was correct, regression equations of the cross-section type were estimated for various periods. The sectors were broken down in two different ways:

- at a first stage, industrial activities were considered to form part of a single aggregate while the service sector was broken down in greater detail;

- at a second stage, the secondary sector was also included.

The various values adopted for the variables and the different structures used in order to check the assumed relationship, produced satisfactory estimates for the years 1951-1963. With the more detailed breakdown into 22 sectors, the hypothesis was also confirmed for the period 1963-1971; however, whereas during

the first period the variation of price movements as between sectors could largely be explained by differences in productivity trends, the proportion attributable to this factor was much lower during the second period, showing that new inflationary factors had come into play. Again, the composition of the sectors at either end of the range of variation of the variables partly confirmed the hypotheses adopted. In general, the most inflationary factors were the use of labour-intensive techniques and the existence of predominantly domestic market outlets, while the opposite was true at the other end of the scale. When this simplified model failed to provide an explanation after 1963, the analysis was extended to include other possible variables.

Chapter III considers how inflation is affected by the two main components in the distribution of incomes, namely employees' incomes and other incomes. Both cross-section regression equations and time series were used for this analysis.

With the equations, a significant relationship was found between sector prices and other gross incomes over all the periods studied; the sectors in which movement of both variables was most sustained were the building industry and some service branches. These findings confirm that the various sectors are polarising in the manner already described. On the other hand, no relationship was established between price movements and employees' incomes, at least with the most detailed breakdown (22 sectors).

The time series seem to suggest that prices react to increases in both components of earnings; this is only generally true, however, because these models provide only a somewhat limited explanation.

These, together with the previous findings, lead to the conclusion that, in the short run, wage increases are translated into prices but that this phenomenon is independent of the long term influences.

Chapter IV considers jointly the inflationary impact of the differing movements of productivity and of other gross incomes in the various sectors (after again checking that wage movements are not statistically significant). Taken together, the two variables explain a very high proportion of inflation, amounting to 94% over the whole period 1951-1963 and 63% for the period 1963-1971.

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The analysis was then carried further by using the national input-output tables for the Italian economy. An estimate of the specific effect of the movement of non-wage earnings in each sector on the general index of private and public consumption prices produced a particularly interesting result. This estimate was made for the period 1965-69, assuming prices to be influenced by no other factors: on that assumption, non-wage earnings from commerce alone would appear to account for a 3.3% increase in the general index of retail prices out of a total of 13.5%.

In other words, about one quarter of inflation would seem to originate in this sector. The same applies to "miscellaneous services and liberal professions" which alone seem to account for a 3.2% increase; this is followed by renting of residential accommodation at 2.1%, agriculture with 1.5%, transport with 0.7% and the textile, clothing and footwear industries with 0.6%.

With the commercial sector accounting for such a large share of overall inflation, attention was concentrated on the internal features of this sector. An analysis of the part played by distribution in the formation of final prices revealed the following points:

) Wholesale price increases are the main reason for this sector's contribution to inflation; it is of course true that, in the long run at least, wholesale prices follow the movements of production prices fairly closely. At the same time, if the percentage relationship between wholesale and production prices of individual items tends to remain unchanged over a period, this means that any inflationary pressures generated in the productive sectors tend to be amplified. In other words, wholesalers' absolute gross margins automatically increase as prices rise because markets in the wholesale trade sub-sector tend to be oligopolistic.

2) Retail commerce, which in Italy is characterized by very large numbers of small units and very little rationalization, plays a major role in determining the absolute levels of final prices. But if, instead of price levels at a given point in time, changes over a period are considered, it is then found that this sub-sector plays a much smaller role. According to the movement of wholesale prices, retail prices will behave as follows: when wholesale prices fall or rise slightly, retail prices will tend to remain steady, thus setting a floor or lower limit to overall rates of inflation; on the other hand, when wholesale prices

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are rising sharply, retailers' ability to recover their own margins is limited: as a result, prices will rise less sharply than would otherwise be the case and there will be a time lag before retailers can restore their previous trading margins.

These phenomena,which we have been able to check and demonstrate,are at odds with the more frequent explanation that retail commerce and its out-of-date structure are the main cause of inflationary pressures in Italy or at least a critical aggravating factor.

The argument that the causes of inflationary pressures should be sought at a stage prior to the retail sector does not,however,deny that final prices are heavily influenced by the margins which retailers tend to maintain.

This last aspect can be attributed to the backwardness of the sector which has to add very high margins to enable individual businesses to survive economically with a very small turnover, and which cannot absorb pressures from wholesale prices and overheads by increasing productivity. The structure of Italian commerce is analysed in detail in Chapter V: the various different approaches (performance over a period, territorial distribution, comparison with other European countries) all clearly showed that there is still no systematic move towards the rationalization of this sector in Italy.

This is not simply a matter of delay in taking action to modernize structures and bring them into line with the growth of the national economy; on the contrary, it would seem that this particular sector, and government policy towards it, reflect the problems and contradictions which have resulted from the special part played by the labour market in the development of the Italian economy since the war.

In fact, Italian industry as a whole and manufacturing industry in particular has never been able, even when expanding most rapidly (and especially, therefore, over the ten years up to 1973 when investment was virtually stagnant), to absorb all the additional labour created by the arrival of young workers on the market and the loss of jobs in agriculture. In this context, economic policy for the commercial sector, far from promoting a process of restructuring which would have limited its capacity to absorb labour, rather encouraged the uncontrolled expansion of employment in the sector, particularly of the independent kind which is often marginal from the point of view productivity. A specific remark therefore applies to this sector (and is also valid in many respect for other branches of the

service sector): from the standpoint of controlling inflation, any action taken to raise productivity sharply in this sector will at the same time create serious social tensions and add to unemployment, unless such measures form part of a plan to widen the base of production and employment.

Chapter I

CHARACTERISTICS AND PRINCIPAL INTERPRETATIONS
OF INFLATION IN ITALY

Since the last war, the progress of Italy's economy has been marked by
persistent inflation, the successive stages of which have varied in rate and
severity, have shown different features and have had different causes.

Any detailed analysis seeking to provide a consistent, overall interpretation
of inflation in Italy must take account of the various periods of expansion and
crisis through which our productive system has passed and therefore of certain
crucial questions regarding government economic and monetary policies, the
structure and transformation of the labour market and the growing degree of
international integration of our country.

A detailed study of these questions is beyond the scope of this investigation:
at the same time, it would be as well to start with a few general remarks on the
most obvious empirical aspects of price movements and to summarize some of the
leading theories put forward to explain the special features of inflation in Italy
since the war. Among the many theories which have so far been advanced, we
shall consider some typical examples of the most original schools of thought on
the subject together with theories which lay more stress on some of the basic
problems underlying inflationary movements.

1.1 Price movements over the twenty years

ithin the overall rate of inflation, the trend has not been the same all
the time and a number of separate periods can be identified. When the data
summarized in Table 1 (percentage variations of implicit gross national product
prices) and Table 2 (percentage annual variation of implicit domestic private
consumption prices) and illustrated in Graph 1 (percentage annual variation of
GNP prices at factor cost) and Graph 2 (percentage annual variation of domestic
private consumption prices) are analysed, the whole post-war era can be divided
into a number of significant periods.

First, there were ten years (1951-1961) of moderate inflation confined to
a few areas of the economy, followed by a second period (1962-1973) of general

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inflation, which was especially severe at the start and end of the period. It should be noted that the first period coincided with the years when the whole economy was expanding most rapidly and prices could therefore be relied on to remain fairly stable; during the second period, inflationary pressures were accompanied by a series of economic bottlenecks and social conflicts, resulting in inadequate growth of the economy with sharp recession alternating with short periods of recovery.

Secondly, in order to identify the phases of most severe inflation more clearly, the second period can be sub-divided into three secondary periods: 1962-64, 1965-68 and 1969-73.

The following average annual figures showing percentage price variations will give a better idea of what happened during each period:

	Agriculture	Industry	Services	GNP at factor cost	Private consumption
1952-61	1.3	0.3	4.3	2.5	2.3
1962-73	5.3	4.9	5.7	5.7	5.0
1962-64	5.6	6.4	7.1	7.3	6.1
1965-68	0.7	1.3	4.0	2.7	2.9
1969-73	8.9	6.9	6.3	7.1	6.0

The various periods can therefore be summarized as follows:

(1) 1951-61: period of economic growth and relatively stable prices;

(2) 1962-73: period of severe inflationary pressures and virtual stagnation.

The second period can be further divided into three phases:

a) 1962-64: faster-rising prices; allowing for the explicit supply of labour, this can be regarded as a period of almost full employment;

b) 1965-68: return to the level of inflation of the 1950s, accompanied by lower investment and employment;

c) 1969-73: rising prices in a climate of recession.

These periods will now be analysed in greater detail, with comments on the main facts observed concerning price movements and the various ways in which they are interpreted.

1.2 Period 1951-1961

Table 3 shows the extent to which the various sectors (with a more detailed breakdown for the service sector) contributed to the rise of implicit gross national product prices at factor cost. Their weight is calculated by means of the formula:

$$\frac{\dot{p}_i}{\dot{p}} \quad : \quad \frac{VA_i}{VA}$$

where: $\dot{p}_i$ = percentage annual increase of implicit prices in sector added
value;

$\dot{p}$ = the same for gross national product at factor cost;

VA_i = sector added value at current prices;

VA = gross national product at factor cost at current prices.

Table 4 shows the weight of the various consumption items in the increase in implicit domestic private consumption prices; this weight was calculated by deflation, with the increase in the price of each item weighted according to its weight in total private consumption each year.

During the first period (1951-61), agriculture exerted strong inflationary pressure in 1953 and 1954, when value added by this sector accounted for about 30% of total inflation; conversely, over the years 1957-60, the influence of agriculture was nil or deflationary; finally, in 1961, this sector was again responsible for one-third of total inflation.

Industry had a deflationary effect from 1952-54 and again in 1959; as compared with its share in production, it gave an upward twist to prices only in 1957-58 and 1961 (see Table 5).

Over this period, the inflationary effect of the commercial sector was slightly higher than its share in production, with peaks in 1956 and 1958.

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The contribution of credit institutions and the "liberal professions and miscellaneous services" to inflation was well in excess of their share in the gross national product; the peak was reached in 1954 when these two items were jointly responsible for about one-third of overall inflation.

Income from housing was only a small item in gross national product (see Table 5) but also accounted for one-third of total inflation in 1952-53; it also played a major role in the following years and this sector is notable for the persistence of inflation. In fact, price rises in this sector never drop below 5% per annum and their share in overall inflation never drops below 10% (over the period under review).

As the average figures quoted in the previous section show, inflationary pressures during this period can mainly be attributed to the service sector (more particularly, the liberal professions and services and housing rents) and to public administration (which is continuously responsible for over 16% of overall inflation).

As regards the rise in domestic private consumption prices, Table 4 shows that, except in 1957 and 1959, the two items "food and drink" and "housing" account for the greater part of inflation, with a combined share ranging from half to three-quarters of overall inflation. While the degree of inflation accounted for by food is comparable with its share in consumer expenditure, housing's share in overall inflation (always more than 20%) differs very considerably (see Tables 4 and 6) from its share in consumer expenditure (between 7 and 10% over the period under review).

To complete this review of empirical data, reference should be made to the widening gap between retail prices (with a continuous rise except in 1956) and wholesale prices which remained virtually stable (see Table 7).

According to Sylos Labini, who attributes these movements mainly to the fact that wholesale and retail prices moved differently in relation to the structure of the market[1] this period offers a typical case of "structural inflation" marked by a slow but constant rise in retail prices and the cost of

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(1) P. SYLOS LABINI, Sindicati, inflazione e produttività, (Trade Unions, inflation and productivity), Bari, Laterza, 1972.

services. The explanation is sought in the different structures of production, levels of concentration and types of market found in the various productive sectors in Italy. While the agricultural market is predominantly competitive so that prices are fixed by the variations of supply and demand, industrial markets are oligopolistic. Industrial prices are therefore fixed on the basis of full cost and consequently not by the interplay of supply and demand but on the basis of production costs with an added mark-up. This kind of market differs from the first type in that prices tend to be inelastic as far as downward movement is concerned. This explains why, when productivity was rising faster than wages, the wholesale prices of industrial products did not fall over the period but remained virtually stable. Here, it may be noted that in retail commerce an imperfect market is the rule and foreign competition can do nothing to check prices. Consequently, this sector can pass cost increases on to the consumer in full; in the view of Sylos Labini, therefore:

"retail prices of goods rose mainly for two reasons: higher labour costs in the sector and higher rents. Labour costs, in turn, rose because wages (or the earnings of labour) rose more than the "efficiency' of retail commerce. And as over the ten years wages and earnings in this sector rose at much the same rate as other wages and industrial wages in particular, higher labour costs can be attributed principally to the fact that the 'efficiency' of retail commerce, as measured by the ratio of consumer goods to numbers employed, did not rise sufficiently". [2]

Sylos Labini considers that the mechanisms briefly described above represent a structural trend inherent in every present-day capitalist economy and particularly apparent in Italy during the period under review: in fact during the 1950s :

"structural inflationary pressure was in what may be called the pure state: the rate of increase of the cost of living was around the lowest possible. (...) Consequently, from 1952 to 1961 an 'incomes policy' was strictly imposed by massive unemployment, and nominal wages rose less than productivity. Despite this prices did not remain generally stable: retail prices rose and the cost of living rose even more. There were several reasons for this, building being the main culprit with an increase

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(2) P. SYLOS LABINI, op.cit., pp. 29-30

in rents not only of living accommodation but also of retail trading premises'.[3]

A number of authors consider that, while the explanatory model formulated by Sylos Labini brings certain real phenomena into focus, it is too limited in describing the whole industrial sector as one homogeneous sector with a built-in mechanism for accumulating capital and increasing efficiency.   In particular, in the model suggested by Graziani, the central element is a division of Italian industry into two principal sub-sectors:

1) industries linked with foreign markets, which on average are more advanced technologically and relatively capital-intensive;   productivity therefore rises faster than wages, with the result that prices can be kept stable and a high rate of expansion and technical progress can be achieved;

2) industries and non-industrial sectors linked almost exclusively with the home market: they are not exposed to international competition, can use older technologies and are relatively labour-intensive.   Consequently, more labour is employed and productivity does not rise fast enough to absorb increased labour costs.

This of necessity affects the movement of sector prices: the overall movement of the retail prices of some groups of goods in 1961 (1953 = 100) was in fact reproduced in the general retail price index for the same year (1961).

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(3) P. SYLOS LABINI, op.cit., p. 31

RELATIVE PRICES OF SOME CONSUMPTION GOODS

Fuels and lubricants	69,5
Furniture and domestic electric appliances	77,6
Detergents, soaps, etc.	84,8
Drugs and medical supplies	85,7
Vehicles (purchase, maintenance and repair)	88,5
Clothing	90,8
Meat	102,1
Fish	102,5
Vegetables	113,7
Fresh and dried fruit	119,5
Cultural activities and entertainment	130,3
Personal services	141,8
Housing services	148,0
Rents	197,2

(Source: our figures based on ISTAT data)

As Graziani notes,

'while the prices of goods from exporting branches tended to remain stable
or to rise very slowly, those of goods from backward sectors tended to
increase much faster. Thus, the dual pattern of exporting branches side
by side with branches serving the home market was reproduced in the price
structure. In the stagnating branches, wages tended to rise more than
productivity, with the consequent inevitable inflationary pressure from
costs; in the buoyant branches the reverse was the case with the consequence
that prices tended to remain stable. The final result was a slight but
continuous rise in the productivity of the two groups of branches. It is
clear, moreover, that this increase in retail prices was in no way due to
pressure from overall demand, but was rather a typical case of creeping
inflation caused by imbalance between sectors'.[4]

A further contribution to the analysis of this period is provided by a
study in which Spaventa tried to assess not only the reasons for rising prices
but also the redistribution of incomes resulting from inflation. This author's

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(4) A.GRAZIANI in L'economia italiana: 1945-1970, Bologna, Il Mulino, 1972,
Introduction, p. 43

conclusions can be summarized.as follows: inflation worked in favour of building rents, all in earnings (employees' and other earnings) in the service sector and civil service salaries at the expense of both kinds of income in industry. The differing rates at which productivity increased in the various sectors do not seem to provide a complete explanation for these results; as Spaventa says:

> 'It might be tempting to attribute these sector movements to the fact that productivity rose more slowly than in other sectors and more slowly than wages and salaries. But this explanation does not cover buildings, which include no employed labour, or the civil service which has no price system: furthermore, in the case of the civil service, the productivity of officials cannot be regarded as a fixed element but is a major variable of government action. This explanation is also inadequate for the service sector both because it fails to explain all the price increasesand because in this sector (and in distribution in particular) the movement of productivity is not an exogenous factor but is governed by specific structural patterns which are liable to change. The inadequate growth of productivity in the civil service and the service sector is partly due to well-known pathological sources such as inefficiency, rigid structures and bottlenecks which result in 'position' rents and legislative inadequacy. As regards buildings the increase in prices (over 200% since 1953) can only be explained in part by the lifting of rent controls: all the remainder is a genuine increase in true rent. The picture which emerges from these results has a number of peculiarly Ricardian features: the rise in prices is largely due to an increase in true rents and of sector earnings which conceal forms of rent in the shape of permitted privileged positions and the continuation of inefficiency which could be eliminated; these earnings benefit at the expense of the agricultural and industrial sectors'.[5]

We can conclude our analysis of this period by recalling the factors to which price increases can be attributed:
- the different types of market in the various sectors, and particularly the oligopolistic structure of the market for industrial products and the monopoly structure of retail trade;

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(5) L. SPAVENTA. Effetti distributivi del processo inflazioni - stico in Italia nel decennio 1953-1962 (Distributive effects of inflation in Italy 1953-1962) in 'Moneta e Credito', December 1963, pp. 573-4

- the special dual productive structure of Italian industry, linked with the leading role of exports in final demand;

- the existence of true rent phenomena in the buildings-land sector and of rent in the broad sense in other branches of the service sector and the civil service.

These factors did not produce acute inflationary pressures during this first stage of economic expansion but later had more serious effects when growth came to a halt and the underlying problems were left unsolved.

1.3 Period 1962-1964

During this period, economic expansion reached its peak, then came to a halt and moved into a phase of acute recession in 1964. Simultaneously, prices rose very quickly (Graph 2 shows that retail price increase exceeded the world average during these years).

Analysis of implicit sector added value prices (see Tables 1 and 3) shows that, in contrast to the previous period, industry took over the leading role, accounting for around 40% of total inflation in 1963-64: whereas during the 1950s the biggest increase in implicit industrial added value prices had been 2.4% (in 1958), the rise amounted to 8.9% in 1963 (which was exceeded only by the figure for 1973).

In 1962, the rate of inflation was also very high in agriculture (only exceeded by the figure for 1973) but over the next two years this sector contributed only marginally to overall inflation as the pressure from industry increased.

Among the other sectors, the 'liberal professions and miscellaneous services' and the civil service were still responsible for heavy inflationary pressures but the pressure from rents of living accommodation declined.

These movements are reflected in the influence of the various items of expenditure on the trend of implicit domestic private consumption prices (see Tables 2 and 4). It will be seen that 'Food and drink' plays a major role but is of relatively less weight in 1964; 'Housing' has a declining inflationary effect and reaches a minimum in 1963; the weight of the other items such as 'Clothing and footwear' and 'Health and hygiene' increases gradually to reach a peak in 1964.

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As regards the machinery of distribution, its influence over the rate of inflation of the gross national product reached its lowest point since the war in 1962: this indicates that middlemen's margins lagged behind the growing rate of inflation; during the first half of the same year, the tendency of retail and wholesale prices to diverge was halted but was later resumed.

Detailed analysis of the movement of wholesale prices (see Table 8) confirms these findings:

- the general index of agricultural wholesale prices rose sharply in 1962-63 but fell slightly in 1964 (with the sole exception of the persistent increase in the price of animal food products);

- the index for non-agricultural products rose sharply in 1963-64 with "building materials' showing the biggest increase; there was a general increase in wholesale prices of industrial products which reversed the previous stable trend; in the particular case of chemical products, prices fell continuously until 1962 and then rose quickly to reach an inflation rate of 5.1% in 1964 (above the average for wholesale prices).

Retail price movements calculated on the same basis as for the previous period (see Table in the previous section) moved as follows:

RELATIVE PRICES OF CERTAIN CONSUMER GOODS

Fuels and lubricants	90.8
Furniture and domestic electric appliances	98.7
Detergents, soaps, etc.	91.7
Drugs and medical supplies	85.7
Vehicles (purchase, maintenance and repair)	97.1
Clothing	99.6
Meat	105.6
Fish	106.6
Vegetables	109.3
Fresh and dried fruit	99.5
Cultural activities and entertainment	106.5
Personal services	99.6
Housing services	127.3
Rents	109.1

(Source: our figures based on ISTAT data)

With a few exceptions, the divergent movement of retail prices again
reflected the dual structure of the productive system over the period 1961-64;
but the range of these variations was substantially narrowed. This results from
the emergence, over these years, of fresh inflationary pressures from the most
advanced branches of industry serving foreign markets. The steeper rise in prices
and the change in the relative position of the various sectors as causes of this
rise cannot be understood without some reference to the general development of
the Italian economy over the years in question, and more particularly to the labour
market, the distribution of incomes, the balance of payments and monetary policy.

The start of the 1960s was marked by structural changes which tended to
eliminate some of the factors underlying the previous period of growth; first
and foremost, the abundant supply of labour provided for industry by massive
transfers from sector to sector and the heavy influx of migrants[6] was no longer
available. Italy came close, therefore, to a situation of relatively full
employment, with particularly heavy pressures on the labour market in some sectors
(engineering and chemicals), in some skilled trades where demand was very high,
and in areas of very high industrial concentration. This led to a resumption
of trade union agitation and a renewed rise in wages which, for the first time
since the war, exceeded the growth of labour productivity. The consequent
compression of industrial profit margins brought about a rapid redistribution
of incomes, which triggered off a sharp rise in demand for consumer goods. With
the simultaneous marked expansion of investment[7] it is clear why, according to
some authors, excess demand was for the first time the cause of inflation. The
multiplying effect on total demand and the imbalances existing in the composition
of the supply and demand for goods and services is reflected in our foreign trade,
with the rate of growth of our exports declining and imports (particularly of
food) increasing. The balance of payments crisis was particularly violent; from

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(6) See explanation given by C.P. KINDLEBERGER, Lo Sviluppo economico europeo
e il mercato del lavoro (European economic expansion and the labour market),
Milan, Etas Kompass, 1969.

(7) Gross real investment rose by 15.8% in 1960 and 12.9% in 1961; in monetary
terms, it accounted for over 20% of the gross national product from 1960
to 1963 (it should be stressed that over the whole post-war period this figure
was only exceeded during these four years).

1962 to 1963 the deficit on visible trade rose from 880 million dollars to 1808 million, and contributed to an overall balance of payments deficit of 467 000 million lire in 1963 (this was the only year with a balance-of-payments deficit over the whole period from 1957 to 1972 and the deficit was the heaviest ever recorded until 1973).

In this context, the monetary policy followed by the Banca d'Italia passed through two phases: in 1962-63 the supply of money was increased (and this may be regarded as one of the factors leading to the spread of inflationary pressures); then the increase in the supply of money fell by 19.9% (March 1963) to 12.7% (December 1963) and even further during the early months of 1964. The failure of the supply of money to keep up with market demand was a decisive factor in the reversal of the trade cycle, which was marked by a drop in investment and employment. The policy adopted by the monetary authorities was the logical consequence of an explanatory model suggested in the Annual Reports of the Governor of the Banca d'Italia.

This model, as interpreted and summarized by F. Modigliani and G. La Malfa[8], seems to be based on two fundamental propositions:

1) the distribution of incomes has a decisive influence on investment and the volume of overall demand;

2) price movements are directly dependent on monetary policy; the monetary authorities can therefore decide the distribution of incomes at all wage levels.

The first proposition is based on two hypotheses:

a) a "classical" hypothesis that the basic variable element governing investment is the volume of profits (in this context, self-financing is of particular importance);

b) a Kaldorian hypothesis that the marginal propensity to consume varies for each category of recipients of incomes, in the sense that it is greater in the case of wage earners.

(8) F. MODIGLIANI - G. LA MALFA, "Su alcuni aspetti della congiuntura e della politica monetaria italiana nell'ultimo quinquennio" (Some aspects of the economic situation and of Italian monetary policy during the last five years) in Moneta e Credito, September 1966, pp. 211-257.

Granting these assumptions, the determining factor in the inflationary spiral is the disproportionate rise in labour costs. If this is so, wage movements constitute a basic variable in determining whether or not conditions are favourable for economic growth. All this is exactly confirmed by the previous course of the Italian economy when:

> '... unit costs tended to fall and both our prices and therefore our exports were more competitive as a result; the growth of exports attracted the factors of production to the most competitive sectors, while the fall in unit costs, only partly passed on in prices, increased profits and therefore investment in plant, which in turn increased labour productivity; as productivity rose our products became more and more competitive and demand grew; this increased the number of jobs available until there was a shortage of labour, particularly in the skilled trades required'. [9]

As Italy neared this state of full employment between 1962 and 1963, wages increased more than productivity. Growth came to a halt, first, as prices of goods increased making them less competitive on foreign markets and secondly as profit margins were compressed when cost increases were not passed on to prices in full. At the same time, the redistribution of incomes increased the aggregate propensity to consume, thus creating heavy inflationary pressures through excess demand, for agricultural products in particular; this demand was met by higher food imports to the detriment of the balance of payments. Lastly, lower profits led to a drop in investment because the main source of funds - self-financing - was reduced.

In these circumstances, the monetary authorities, wishing to maintain the volume of investment, originally opted for a strongly expansionist policy in order to maintain the existing distribution of incomes and thus counter the recessionary effects of pressure from wages. The external funds provided in this way were not, however, a perfect substitute for self-financing and market issues and did not stimulate enough new investment. Consequently, the main effect of this expansionist monetary policy was to give further impetus to price rises, resulting in heavy pressure on the balance of payments. This policy could not, therefore, be continued indefinitely without sacrificing most of the country's currency reserves: as a result, monetary policy was changed at the end of 1963.

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(9) See Governor's Report for 1964, p. 486

We may conclude our analysis of this period by stressing the growing strength of the pressures from the labour market and the consequent tendency towards a redistribution of incomes. The importance which trade union policy and industrial disputes assumed over these years in the changed conditions prevailing on the Italian labour market was maintained and even increased during the next period. The inflation inherent in these changed conditions added to and aggravated the inflationary factors identified as existing during the 1950s. In fact, the rise in prices which accompanied wage increases cannot be satisfactorily explained without reference to the structure of the market for industrial products, the dual structure of production and the rent factor.

In the first case, higher labour costs can be passed on in the prices of industrial products from the most advanced sectors because the market is predominantly oligopolistic. Wage pressures spread by example to sectors where productivity is not rising as fast and inflationary pressures then become general. In the second case, the rising cost of living, which is reflected in the amount of trade union agitation, is closely linked with the marginal role of social consumption in the process of capital formation in Italy and with the low rate of technical progress in the sectors which produce wage goods.

1.4 Period 1965-1968

These years were marked by the virtual freezing of productive investment and this was reflected in a sluggish labour market. Rationalization of the use of the labour factor and the more efficient use of plant, combined with a rising international trade cycle, quickly restored the balance of payments and triggered off a partial recovery of production led by exports. The rate of inflation fell back to the moderate levels experienced during the 1950s and the underlying trend was also downwards; the index of wholesale prices remained almost stationary in 1967-68, while the rise in retail prices fell to its lowest level of 2% in 1968.

The part played by the various sectors in the increase in implicit prices in the gross national product at factor cost (see Table 3) is made up as follows:

- the influence of agriculture was small; prices even fell in this sector in 1968;

- industry became a less important factor;

- in 1965/66, commerce had its worst inflationary effect during the whole post-war period, accounting for a peak of 20% of total inflation in 1966;

- income from housing gradually recovered and became a more important factor, until it accounted for a quarter of total inflation in 1968;

- in 1967/68, the influence of the liberal professions and miscellaneous services reached a peak for the 1960s;

- the civil service had a considerable but intermittent influence.

Domestic private consumption prices (as can be seen from Table 4) moved very sharply, with a marked difference between two main items: food, which was responsible for about 48% in 1965, played a less important role, falling to a minimum in 1968; on the other hand, housing increased in weight with a sharp rise in 1968, bringing its total share up to about 42% of overall inflation.

The divergent trend of retail and wholesale prices became more marked during these years; within wholesale prices (see Table 8), there was a tendency for increases to slow down, or even for prices to fall. The exception to this trend was the resumed increase of agricultural food prices in 1968 and the rise in the prices of building materials and fuels in 1967/68. The combination, during these years, of a worsening employment situation with falling pressure from prices and wages has given rise to a number of suggested econometric explanations for wage movements, all in line with the original concept of the so-called /'Phillips curve'.

The wage equations which have been worked out in Italy have two main features, namely, the various indicators selected to represent the degree of pressure on the labour market and the choice of additional variables designed to correct the original Phillips model.

In the first case, conditions on the labour market are generally expressed by means of the explicit rate of unemployment[10]; the main exception is a

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(10) It should be recalled that there are no vacant post figures for Italy; C. DELL'ARRINGA made a tentative estimate to meet this lack in "Occupazione, Salari e Prezzi'f (Employment, Wages and Prices), Milan, Giuffré, 1969.

variable used by Modigliani and Tarantelli[11], designed to express an assumed increase in the skills of unemployed labour during the period of expansion, resulting in a gradual shift of the Phillips curve towards the origin.

In the second case, the most frequent additional variable is the rate of increase of retail prices; this is designed to represent either the institutional machinery geared to the economic situation (whereby wages covered by agreements are indexed to the cost of living) or the feed-back effect of prices on wages linked with workers' expectations and trade-union agitation.

Up till the period under review, the models briefly summarized above seem to provide a satisfactory explanation for wage movements, but this is not the case from 1969 onwards. This disproves both Phillips' original hypothesis of the long-term stability of the curve, and the hypothesis of Modigliani and Tarantelli that the curve gradually approaches the origin. Some authors have tried to extend their econometric estimates to 1970 by introducing new explanatory variables; Tarantelli[12] for example,uses a dummy variable for 1970 together with the number of hours of strikes recorded in industry each year (thus partly following the equation previously worked out by Sylos Labini[13]). This introduction of exogenous variables,representing trade-union action to some extent, is not at all convincing because it simply records an actual move away from the origin of the Phillips curve without providing any precise interpretation. Consequently, in Italy, as in many other countries, there has so far been no satisfactory analysis based on this kind of approach.

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(11)   F. MODIGLIANI - E. TARANTELLI, "Una generalizzazione della curva di Phillips per un paese in via di sviluppo" (A general application of the Phillips curve to a country with a developing economy) in "Quaderni di ricerche" No. 9, Ente L. Einaudi, Rome, 1971.

(12)   E. TARANTELLI, "Costo del lavoro e margini di profitto industriale nel 1970" (Labour costs and industrial profit margins in 1970) in "Contributi alla ricerca economica" of the Servizio Studi della Banca d'Italia, December 1971.

(13)   P. SYLOS LABINI, op.cit. pp.98-100.

The apparent contradiction between the increased bargaining power of the trade unions and the drop in employment, which continued during the 1960s, has been resolved more convincingly by workers who have analyzed a number of structural changes in labour supply and demand.

The first analysis of these phenomena was provided by the President of ISTAT, G. De Meo[14]; he found that between 1959 and 1968, total male employment had risen by 36 000, while female employment had declined by 1 136 000. The fact that there had been no corresponding increase in explicit unemployment enabled De Meo to affirm that:

'The reduction of the labour force over the ten-year period must be largely attributed to the fact that a large number of women "freed" from agriculture "withdrew" from the labour force, together with a number of people previously chronically underemployed in marginal, casual jobs in the same sector'.

At the same time:

'technical progress in the industrial sectors raised the productivity of the whole economy on which expansion depends'.

According to De Meo, this was reflected in the labour market as follows:

'...the very rapid growth of productivity in the economy - and therefore of per capita incomes from 1951 onwards - created an advantage for undertakings which was then partly transferred to the State by taxation, partly to workers through higher wages (...) in turn the increase in real earnings presumably played some part in reducing the need for some members of families (in particular, wives, children and older members of families), to try to find employment'.

The ultimate effect of the increase in per capita incomes was to reduce the supply of labour because women leaving the agricultural labour market were able to become housewives, more young people could stay at school, and old people could actually retire when they reached pension age. At the same time, with

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(14) G. DE MEO, 'Evoluzione e prospettiva delle forze di lavoro in Italia'
(Labour trends and prospects in Italy), Rome, ISTAT, 1970.

the increased funds available, the State was able to raise the school-leaving age and to improve pensions.

This basically optimistic assessment met with a number of criticisms: in particular, it was argued that the factual observation of a simultaneous increase in per capita incomes and a reduction in employment in Italy was not sufficient to establish a causal relationship between the two. On the contrary, an analysis by regions shows a direct relationship between the two variables: employment is highest in the wealthiest regions.

Among the other models suggested as alternative explanations, those of M. De Cecco and M. Paci[15] seem to be the most effective.

The first concentrates on the means adopted by undertakings at this time to increase industrial productivity without capital expenditure. Productivity was increased chiefly in existing production plants where policies aimed at rationalizing work and increasingly full use of labour were adopted: these policies involved greater selectivity in the demand for labour not only on the basis of traditional skills but also on the basis of adaptability and mental and physical capacity to stand up to repetitive work of the kind found in factories engaged in mass production. This contributes first to the final elimination of 'weak' elements from the labour market (women, young and old people) who lack the required capabilities; secondly, the most efficient workers (middle-aged men) work relatively full time and thus increase their bargaining power, leading to a marked increase in overall wage rates.

The analysis of this trend towards a splitting up of the labour market was later carried further by Paci: in addition to the greater selectivity of demand, he stresses other factors which tend to limit the mobility of labour, such as the higher cost of moving into towns because of overcrowding, the shortage of housing and social services, higher rents in urban areas; a further factor is that with the general extension of education to the intermediate and secondary

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(15) M. DE CECCO, Una interpretazione ricardiana della forza-lavoro in Italia nel decennio 1959-68 (A Ricardian interpretation of the labour force in Italy 1959-68), in 'Note economiche' No. 1, 1972;
M. PACI, Mercato del lavoro e classi sociali in Italia (Labour market and social classes in Italy), Bologna, Il Mulino, 1973.

levels, many young workers, of working-class origin, who previously went naturally into industry, now look for employment in the service sector:

'Both the developments described (higher cost of moving into towns and spread of intermediate and secondary education) constitute factors which increase the inelasticity of the supply of manual labour on the "urban industrial" market. A qualitatively inelastic demand for labour for the industrial sector is faced by a supply of workers who either "put it off" by remaining at school longer, thus adding to the number of "intellectuals" on the market, or stay on the fringes of the real labour market, because they lack the necessary qualifications, because they cannot pay the new cost of moving to town or because (...) they find ever-increasing opportunities to survive and bring up families in this "marginal" market.

It seems reasonable to conclude: 1) that the national labour market is being divided more and more sharply into three main areas or compartments, namely, the marginal labour market, the manual labour market, and the intellectual labour market; 2) that the steady increase in the supply of labour on the first and third of these markets is accompanied by growing inelasticity of the supply of manual labour on the urban industrial market'. [16]

In conclusion, this period was chiefly marked by structural changes in the working of the labour market and by the fact that the latent inflation residing in this machinery, closely linked with inflationary factors identified in the analyses of previous periods, was about to develop its full force from 1969 onwards.

1.5 Period 1969-1973

The final period considered has two main features: the rate of inflation rose to levels comparable with those recorded between 1961 and 1964, while the Italian economy went through a major recession. The trend of production can be summarized in the following figures:

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(16) M. PACI, op. cit. pp. 221-2

Percentage increase over previous year	Gross national product at factor cost at 1963 prices	Gross industrial product at factor cost at 1963 prices
1969	5.7	6.9
1970	4.9	6.3
1971	1.6	- 0.5
1972	3.0	4.3
1973	5.9	8.0
Average 1968-73	4.2	5.0
" 51-68	5.6	7.6
" 51-63	5.8	8.3

The rate of inflation increased sharply, to such an extent that the percentage variation of implicit gross national product prices rose from about 2% in 1968 to about 11% in 1973. Table 3 shows how the various sectors contributed to this increase.

During this period, industry was again the predominant factor, as it had been in the period from 1962 to 1964; industry's contribution to overall inflation in 1969 and 1970 was the highest recorded since the war (41% and 53% respectively), but even afterwards this variable continued at about 30%.

In agriculture, inflation resumed in 1969, with some slowing-down and then a strong up-turn the following year; 1973, in fact, was marked by a record 21.7% increase in prices in this sector; in the same year, however, the percentage attributable to agriculture did not exceed 20% because inflationary pressures were universal.

After falling to an insignificant figure in 1968-69, the share attributable to commerce and the civil service rose to about 13% in 1971-72, to fall again during the subsequent price rise; the trend in this sector confirms the time-lag already noted in earlier periods as compared with price movements in the productive sectors.

During this period, inflationary pressures from industry and agriculture were so strong and persistent that middlemen were unable to restore their margins; this is confirmed by the fact that sector inflation was constantly lower than general inflation.

The influence of services and professional occupations on price movements was less than during the previous period, except in 1970.

The share attributable to housing also changed to a very marked extent; the figure was very low (about 2%) in 1972, a figure previously recorded only in 1963; during the next year, however, prices in this sector rose again to a record increase of 12.4%.

This is a very wide variation, as is clear from the fact that the only previous occasion when this level was reached was as far back as 1956, and that over the whole intervening period inflation in this sector at no time exceeded an annual rate of 10%.

The movement of implicit domestic private consumption prices can be seen from Tables 2 and 4. Analyzing these increases by item, it is seen that housing accounted for the biggest increase in 1969 and 1970 (almost double the total average increase); by contrast, communications produced the highest rate in 1972-73 with almost double the overall figure. It should be noted that this item covers mainly services provided by public undertakings or with prices controlled in some way by government authorities.

Analysis of the share attributable to the various items in the rise of implicit domestic private consumption prices shows that:

- the figure for food ranges from 30 to 45%;

- clothes and footwear account for a bigger share than in any previous period, with an average of slightly over 10% from 1970 onwards; this reflects the inflationary pressures from the industrial sectors, which are typical of the period;

- transport also accounts for a larger share than ever before, amounting to about 10% from 1970 onwards; within this category, the individual item showing the most sustained rise is the "purchase of means of transport" which again reflects the role of industry in pushing up prices;

- the percentage for housing is steady in 1969 and 1970 and then drops slightly.

Over this period, wholesale prices as a whole rose more than retail prices; in particular, they rose much more sharply than retail prices during the initial

stages of inflation, that is over the period from the last quarter of 1968 to the 2nd quarter of 1970, and then from the last quarter of 1972 onwards.

During 1974 (which is not in fact covered by this survey) the long-standing gap between wholesale and retail prices was in fact closed; taking 1951 as base year the two indices almost coincided.

The figures given below show relative price movements; as in the previous cases, the retail price indices for certain goods in 1972 (1968 = 100) are expressed as a percentage of the general index of retail prices for the same year.

RELATIVE PRICES OF SOME **CONSUMER** GOODS (1968 = 100)[17]

Drugs and medicines	88.5
Fresh and dried fruit	90.9
Rents	93.1
Soaps and detergents	93.4
Heating fuels	95.5
Furniture and domestic electrical appliances	99.6
Clothing	103.6
Meat	105.6
Purchase of means of transport	106.1
Vegetables	106.4
Footwear	106.4
Milk, eggs, dairy products	107.7
Ready-made clothes	108.5
Hotels and public catering	108.8
Recreational services	109.5
Fish	111.5
Health services	114.5
Stationery and books	116.6
Domestic services	117.8

(17) 1973 has not been included because value added tax was introduced that year and the government applied temporary controls to certain prices: as a result the indices for 1973 are not comparable with those for previous years.

It may be noted that during a period of heavy pressure from prices, the price indices varied relatively little, as also happened from 1961 to 1964 (although the items used at that time have been changed as a result of the new ISTAT classification). It must also be pointed out, however, that the relative prices of the various goods cannot be interpreted by applying the same hypotheses as for the period up to 1963. Prices of goods and services no longer show different trends according to whether they are produced by growing or stagnant branches of the economy. In particular, the prices of industrial products, such as footwear, clothes and private cars, rose more sharply than the general index during this period.

The theories put forward to explain the sharp rise in prices during these years take account both of international factors and factors internal to the Italian economy.

Because of the close interdependence established between our economy and the remainder of the Western economic system, such occurrences as the international monetary crisis, the devaluations of the dollar, the rise in raw material prices and the massive speculation which they set off, are bound to have very marked effects in Italy also. Without denying the extent of the international pressures which have marked the last few years, it must be recognized that Italy has had the highest rate of inflation among all the industrialized countries. The various interpretations put forward to account for this phenomenon have been commented on as follows:

> "For this period, it would hardly seem correct, on the surface at least, to blame demand for inflation; whereas for the years 1961 to 1963, opinions were divided between those who attributed inflation principally to excess demand and those who blamed cost increases, there is almost complete agreement that inflation from 1969-71 was due to costs, whether in the form of higher wages, higher prices of raw materials and semi-finished products, higher profit margins, or the growth of so-called "rents".
>
> Within this overall problem, the various interpretations can be classified under a number of main headings: one school of thought lays the main emphasis on the adverse consequences of higher wages, while another tends to blame higher wages either on structural changes within the labour market,

or on the inflationary element inherent in certain backward and inefficient branches of the economy.(18)

The analyses which seek the causes of increased trade union agitation and rising wages over the last few years can be carried back to the arguments developed in earlier paragraphs.

On the one hand, the structure which the labour market has now assumed gives great bargaining power to the workers in the main manufacturing industries, who act as wage leaders for other sectors, even though vast numbers of workers are unemployed.

On the other hand, the long-standing problems which have not been solved by Italian economic growth since the war (such as the imbalance between the north and south of the country, the backwardness of agriculture, the high cost of moving into towns, due mainly to the growing incidence of urban rents on living costs, and the role of commerce as a refuge for manual labour) are responsible for more pressures which fall on the labour market. In contrast, one form of analysis, like that of the first school of thought mentioned in the previous passage, tends to ignore the causes of heavy wage pressures and concentrates on stressing that higher labour costs (considered almost as an exogenous variable) shift the balance of the system towards a situation in which new investment is stagnant or inadequate.

One typical representative of this school of thought is the former Governor of the Banca d'Italia, Guido Carli, whose explanatory model is substantially the same as that used previously to explain inflation from 1961 to 1963. His analysis is still based principally on the structure and changing distribution of incomes; a sudden shift, to the detriment of earnings from capital, produced the consequences already described in the section on the period 1962-1964. The extended application of this interpretation to the period from 1969 onwards is based on considerable optimism regarding the self-expanding capacity of the Italian economic system, assuming no trade union agitation. Trade union disputes over the last few years are of the utmost strategic significance in the Governor's assessment of growth prospects. He writes:

'From 1961 to 1970, the growth of the economy was furthered, as over the previous decade, by the vital contribution of the industrial sector. Over

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(18) U. MARANI: Inflazione e depressione (Inflation and depression) 'Rassegna economica', No. 4, 1974, pp. 1009-10.

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the whole range of manufacturing industries, which are the most representative
and go-ahead section of the whole sector, value added, calculated and
constant prices, rose by an annual average of 7.2%, as compared with 7.8%
over the previous ten years. As use of the labour factor in the production
cycle, expressed as hours of work, remained virtually constant, the annual
rise in productivity was roughly the same as that of value added; (...).
The growth in productivity was achieved at a price, in the shape of harsh
working conditions and the inadequate provision of social facilities,
ultimately affecting the physical and mental health of the workers. The
trade union agitation at the end of 1969 was a result of these circumstances
and led to the conclusion of contracts laying down better standards for the
organization of work in factories. Increased employee participation in the
making of decisions concerning production methods are a step towards more
modern methods of management, but increase investment and production times.
The result is a drop in the output of all firms. As a result, the
restoration of equilibrium in companies, which has been upset by the increase
in wages, is harder to achieve, particularly against a background of
expansionist policies. In the final analysis, the level of employment
suffers.

Over the ten years under review, wages rose at a uniform rate and faster
than productivity in all branches of industry (...). Wages therefore
increased independently of productive efficiency, so that unit labour costs
did not increase to the same extent in all cases. Companies tried, with
only partial success, to maintain their share in earnings by raising prices
to the extent permitted by conditions on the domestic and international
markets."[19]

Against this background, the expansionist policies adopted by the monetary
authorities after the 1971 recession,with the declared intention of restoring
the previous distribution of incomes,can be understood not as deflationary
measures but as measures designed to allow higher costs to be passed on in prices.
The culmination of this strategy was the decision, early in 1973, to float the
lira, which was heavily devalued as a result. This raised the ceiling imposed

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(19) Report by the Governor to the Annual General Meeting of the Banca d'Italia
      in 1972.

by international competition on price levels and, at the same time, sharply increased the cost of Italian imports; both these consequences of the devaluation of the lira played a major part in the acceleration of inflation in 1973.

The conclusions of our analysis of this period offer no grounds for easy optimism. The international problems created by the monetary crisis, accompanied by a generally high rate of inflation (which went beyond all bounds with the oil crisis and the wild rise in raw material prices during 1974) are having an ever-increasing impact on our economic system. If we add to these the steady worsening of the internal structural problems for which no solution has been found by economic growth and economic policies since the war, the picture is one of an economy struggling against difficulties.

These closely interdependent factors leave us with a tangle of contradictions which it will be difficult to eliminate; failure to find a solution may jeopardize economic growth and any possibility of controlling long-term inflationary pressures.

Chapter II

SECTOR MOVEMENTS OF PRICES AND PRODUCTIVITY

Our analysis has so far concentrated on the extent to which the increase
in implicit sector value added prices has contributed to total inflation. This
chapter seeks to establish whether movements of prices and productivity in the
various sectors are linked; it is the first step in an attempt (which will be
carried further in the next chapter) to identify possible causal relationships
explaining the differing inflationary potential of the individual sectors of the
economy.

The interpretations summarized in the previous chapter revealed the
importance of the inadequate growth of productivity as a factor in the sharp
price rises in the most backward branches of the Italian economy. This being
so, a possible general hypothesis is that the movement of sector prices may be
inversely correlated with the growth of productivity; in other words, the
expectation is that the rise in implicit value added prices for any given sector
will be inversely proportionate to the increase in physical productivity per
person employed in that sector.

This hypothesis (in simplified form because it uses only two variables)
describes a situation typical of the dual type of growth observed in Italy.
It is characterized by the fact that the sectors which are least stimulated by
foreign competition to maintain continuous technical progress coincide with
highly monopolistic markets (e.g. monopoly of position, limited entry to certain
professions, rent positions, etc). These branches, which belong predominantly
to the service sector, are therefore able to increase the prices of their goods
and services more than proportionately to their increase in costs; it then
becomes plausible to assume that implicit sector value added prices are a
dependent variable.

In order to check whether the assumed relationship applied over a long
period, cross-section regression equations were estimated for various periods.
For each period, the sectors studied were broken down in two ways: first,
industrial activity was taken as a single sector, with a more detailed breakdown
of the service sector which is the most important for our check; secondly, the

secondary sector was sub-divided and the same breakdown was retained for the
service sector.

2.1 Results of estimates for seven sectors

The two correlated variables were obtained from the percentage increases
of prices and productivity recorded in each sector during each period: the
periods covered were 1951-1963, 1963-1971 and 1951-1971. The estimated equation
was therefore as follows:

$$y_i = m \; x_i + b$$

where: y_i = total percentage increase of implicit value added prices for
sector X;

x_i = total percentage increase in physical productivity (value added
per person employed at 1963 prices) in sector X.

At a first stage, the following sub-sectors were considered: agriculture;
industry; commerce and hotels and public catering; transport and communications;
credit, insurance and finance; liberal professions and services; and public
administration. The results of this evaluation (as summarized in Table 9) are
compatible with our hypothesis, in particular for the first period, 1951-1963.
The hypothesis is also acceptable for the whole period 1951-1971, but to a
lesser extent because of the movements from 1963 onwards.

At a second stage, the composition of the sectors was changed; in addition
to the general need for caution in using the figures for the national accounts
supplied by ISTAT[20], there are even more serious limitations on using the data
for public administration. In this sector, the physical productivity index is
of very little economic significance, and implicit value added prices reflect
virtually only salary movements.

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(20) See, for example, the comments in: M. CRIVELLINI, "Prezzi", doc. No. 9,
"Analisi quantitativa per la programmazione di breve periodo", ISCO,
June 1971, pp. 24-5.

The same equation was therefore repeated, eliminating this sector and dividing commerce into ｜'commerce'｜ and ｜'hotels and public catering'｜. As, over all the periods studied, public administration prices rose most, while productivity increased least, the second set of figures (see Table 9) did not confirm the hypothesis so strongly. It is acceptable only for the period 1951-1963.

In order to identify the sectors diverging most from the assumed linear relationship, the deviation of actual price increases from the expected values were calculated (for the period 1963-1971). The results obtained were as follows:

SECTORS	ACTUAL PERCENTAGE INCREASE OF PRICES LESS EXPECTED PERCENTAGE
Agriculture	0
Industry	- 5.58
Commerce	- 13.80
Hotels and public catering	- 2.28
Transport and communications	- 20.15
Credit, insurance and finance	+ 22.14
Liberal professions and services	+ 19.65

It will be seen that,after 1963, the two sectors ｜'credit and insurance'｜ and ｜'liberal professions and miscellaneous services'｜ were much more inflationary than was to be expected from the hypothesis. In contrast, prices rose less than anticipated in the two sectors ｜'commerce'｜ and ｜'transport and communications'｜.

In order to explain these deviations, other explanatory substitute or additional variables may be needed over and above the independent variable used here; this point will be considered further in the next chapter. The first step, however, was to check whether varying the specification of the variables and the structure of the assumed relationship would produce results compatible with the hypothesis.

A fresh equation was therefore estimated for the same sectors and periods, using the indices of the same variables (taken as 100 at the start of each period) instead of the percentage increases and performing a logarithmic conversion.

The assumed relationship then became the following:

$$Y_i = B(x_i)^m$$

or

$$\log Y_i = m \log x_i + b$$

where log B = b

    Y_i = index of implicit value added prices for sector X at the end of
        the period concerned (initial value = 100)

    x_i = index of physical productivity (value added per person employed
        at 1963 prices) for sector X at the end of the period concerned
        (initial value = 100).

The results of these estimates, which are set out in Table 9, show a slightly better correlation than the previous equation, but the hypothesis is still only confirmed for the period 1951-1963.

Without changing the structure of the relationship, the percentage increases of the variables were then used again instead of their indices; this produced a further improvement in the correlation coefficients, and the estimated relationship became significantly acceptable for the whole period 1951-1971. The coefficient of elasticity of the relationship identified for the periods 1951-1963 and 1951-1971 is approximately -1. On a graph, therefore, it takes the approximate form of a rectangular hyperbola; for each pair of sectors, the relationship between their price increases will tend to be inversely proportional to the relationship between their increases in productivity.

2.2 Results of estimates for 22 sectors

The original hypothesis was further checked by breaking industry down into 17 sectors, in order to extend the analysis to more cases and to check whether the imbalances observed between the various industries could be explained by our hypothesis.

22 sectors were studied in all: agriculture; mining and quarrying; food and tobacco; textiles; clothing and footwear; hides and skins; timber and furniture; metallurgy; engineering; means of transport; non-metal ores; chemicals and the like; rubber; paper; printing; miscellaneous manufacturing industries;

electricity, gas and water industries; construction; commerce and hotels and
public catering; transport and communications; credit and insurance; and liberal
professions and miscellaneous services.

Two types of equation were estimated for the periods 1951-1961, 1951-1963
and 1963-1971.

First, a linear cross-section regression equation was estimated for
percentage increases of prices and productivity; the indices for these variables
(value at the start of the period = 100) were included and a logarithmic conversion
was performed.

The results of these estimates are summarized in Table 10. It will be
seen that the breakdown into 22 sectors gave much better results and, in
particular, that the hypothesis was confirmed for the period 1963 to 1971 also.

At the same time, the results offer a much closer explanation for the
postulated relationship for the period up to 1963. The coefficient of determination
given by the equations based on the logarithms of the indices for the variables
is $R^2 = 0.7954$ for the period 1951 to 1963, and $R^2 = 0.2487$ for the period 1963
to 1971. This means that for the first period the varying sector increases
in productivity account, to a very large extent, for the variation of price
indices between sectors, but that they offer very little explanation for such
variations during the second period. It should further be noted that variations
of both independent and dependent variables are much less during the second period
than the first; in fact, the inter-sector variation of the logarithm of the
productivity indices drops from 0.0966 to 0.0083 between the two periods;
similarly, the logarithm for price indices falls from 0.1708 to 0.0229.

This narrowing of the difference between sectors can be attributed to the
typical dual development of the Italian economy up till 1963, and to the substantial
stagnation of production in the following years, which slowed down growth in
every sector. On the other hand, it must be assumed that with the halting of
growth, new inflationary factors arose which were not allowed for in the simplified
model discussed in this chapter; this would account for the different degree of
significance achieved with the estimates for the two successive periods.

It is of interest to note the sectors which performed most in line with
the postulated relationship.

The sectors with the lowest increase in productivity associated with the sharpest rise in implicit value added prices include the liberal professions and miscellaneous services, printing, and miscellaneous manufacturing industries for the period 1951 to 1963, and the liberal professions and miscellaneous services, printing, and construction for the period 1963-1971.

By contrast, the sectors with the most sustained increase in productivity and the lowest percentage of inflation (or even with lower prices, as happened up till 1963) include the metallurgical industries, chemicals, rubber, and hides and skins during the first period, and paper and non-metal ores during the second.

This differing composition of the groups at either end of the range of variation of the variables used partially confirms the hypotheses on which the relationship discussed in this chapter is based. It will be seen that the most "inflationary" sectors are characterized by the use of labour-intensive production methods and by the fact that they serve predominantly domestic markets. On the other hand, the sectors which, until 1971 at least, were less responsible for price increases, are predominantly of the capital-intensive type and are more closely linked with the movements of international prices.

2.3 Short-term relationships between prices and productivity

The structural nature of the postulated relationship does not, of necessity, apply to short-term price and productivity movements in each sector.

Simply as a check, therefore, the linear regression equations were estimated on the basis of time series for the period 1952 to 1971, using as dependent variable the annual percentage increase of the implicit value added prices of one sector and, as independent variable, the annual percentage increase of physical productivity in the same sector. The results obtained from these equations were not significant for agriculture, commerce and hotels and public catering, transport and communications, liberal professions and miscellaneous services, or public administration.

The results (as set out in Table 11) are, however, acceptable for industry and credit and insurance, which show a significant inverse relationship between the annual movements of prices and productivity. Nevertheless, the coefficient of determination is very low with R^2 = 0.2878 for industry and 0.2450 for credit.

In the case of industry, this statistical finding is linked with the fact that prices rose less sharply when productivity was increasing fastest (that is, during the 1950s and from 1965 to 1968); conversely, the periods already noted as those during which industry exerted heavy inflationary pressures coincide with the rapid slowing-down of industrial productivity. The rate of increase fell from 8.3% in 1959 to 1.7% in 1964, rose again to 8.4% in 1968 and then fell back to 0.2% in 1971.

SECTOR MOVEMENTS OF PRICES, WAGES AND OTHER INCOMES

This chapter carries further the search for variables capable of explaining the movement of implicit value added prices in each sector.

Attention is focussed principally on the divergent movements of the two components of value added in each sector, namely, employees' earnings (gross earnings and social security charges) and other gross incomes (a mixed category comprising entrepreneurs' incomes from all sources, rents, interest, dividends and profits, company reserves, income tax and amortisation payments).

The aim is to determine which of the two components in each sector moves more closely in line with the upward pressure on prices created by that sector.

After a brief description of changes in the distribution of income in the various sectors, this chapter is therefore devoted to checking the long and short-term relationship between price movements and certain indicators of the two basic components of value added at factor cost.

3.1 Distribution of income in the different sectors

The table below shows how the distribution of income within individual sectors and over all private sectors of the Italian economy taken together has varied over the post-war period.

4

PERCENTAGE OF EMPLOYEES' EARNINGS IN VALUE ADDED AT FACTOR COST

AT CURRENT PRICES

Sector Year	1951	1963	1973
Agriculture	16.79	16.41	24.24
Industry	49.97	62.78	69.04
Commerce and hotels and public catering	16.47	22.80	28.24
Transport and communications	56.77	67.04	70.69
Credit and insurance	61.92	63.76	54.29
Professions and services	58.61	56.15	60.95
Total private sectors	36.61	45.57	53.03

The sharp rise in the share of employees in total value added for the private sectors has many causes, the most important of which are an increase in the number of employees (both absolutely and in proportion to total employment) and the rise in wages.

This increase is not reflected to the same extent in every sector; for example, the share of other incomes increased in agriculture from 1951 to 1963, in the credit sector between 1963 and 1973 and in the liberal professions and miscellaneous services between 1951 and 1963. The distribution of income differs even more markedly between sectors in any given year; at both the start and the end of the period analyzed employees received the smallest share in agriculture and commerce. These two sectors of course have the highest proportion of self-employed persons in relation to total employment.

A few comments concerning changes in the composition of employment and in wage levels in the various sectors will give more meaning to the figures in the previous table. From 1951-71, numbers of self-employed in agriculture declined, from a total of 5 065 700 to 2 084 000[21]. The number of employed persons fell

(21) The figures used for calculating numbers employed were taken from ISTAT sources; a figure equal to one third of marginally-employed workers was added to that for full-time workers. The same procedure was used for all the employment data quoted in this chapter.

from 1 610 000 in 1951 to 1 284 000 in 1958, rising again to 1 463 000 in 1962 only to fall again almost continuously to 1 051 000 in 1971.

The overall consequence of the differing movement of the two components was that the proportion of self-employed in the sector fell from 75.9% to 66.5% (from 1951 to 1971); but the percentage is still the highest for any sector. The flight from the land also reduced this sector's share in total numbers of self-employed in the Italian economy; the actual drop was from 65.5% to 37.7%.

Over the same twenty years, annual wages per employee (in current terms) rose from 232 000 to 1 190 000 lire. Despite this increase, the figure was still only a little more than half average earnings per employee for the whole private sector of the economy.

In industry, numbers of self-employed first rose slightly, from 1 136 000 in 1951 to 1 241 000 in 1957. The trend was subsequently very irregular but numbers had declined to 1 117 000 by 1971. The number of employed persons rose from 4 333 000 in 1951 to 6 413 000 in 1964, fell back to 6 079 000 in 1966, increased again to 6 745 000 in 1970 but declined subsequently. The proportion of self-employed in total numbers employed in industry fell from 20.8% in 1951 to 14.3% in 1971; on the other hand, its share in total number of self-employed for the whole economy increased from 14.7% to 20.2% over the same period. Over the same twenty years, annual earnings per employee rose from 411 000 to 2 236 000 lire with a slightly lower rate of increase than the general average for the private sector of the economy.

In commerce and hotels and public catering numbers of self-employed rose more quickly over the first ten years (from 1 194 000 in 1951 to 1 491 000 in 1961) then slowly over the second decade (up to 1 664 000 in 1971); the number of employed persons moved in the same way, rising from 453 000 in 1951 to 823 000 in 1961 and 986 000 in 1971. The proportion of self-employed in total numbers employed in the sector fell slightly from 72.5% to 62.8% over the whole twenty years; by contrast, its share in total numbers of self-employed in the whole economy doubled, from 15.5% to 30.1%. This last figure is exceeded only by that for agriculture and, as already noted, the latter's proportion is falling rapidly.

Annual earnings per employee rose from 438 000 to 1 992 000 lire; this was well below the average increase for the private sector of the economy; as

a result, by 1971, the increase was the lowest for any non-agricultural sector covered by this study.

The number of self-employed in transport and communications showed the biggest relative increase (from 98 000 in 1951 to 280 000 in 1971); at the same time, the number of employed persons rose from 483 000 to 750 000. The proportion of self-employed in the sector rose from 16.9% to 27.2% and its share in total numbers of self-employed also increased (from 1.3% to 5.1%). Average earnings per employee increased by more than the general average from 1951 to 1963 and then at a slower rate; the overall increase was from 728 000 to 3 803 000 lire.

Numbers of self-employed in credit and insurance remained substantially unchanged (12 000 in 1951 and 14 000 in 1971) while the number of employees rose from 164 000 to 291 000. Average earnings per employee were the highest for any of the sectors analyzed and also maintained the most sustained increase over the whole period, rising from 1 059 000 lire to 6 925 000 lire.

In the liberal professions and miscellaneous services, numbers of self-employed rose most rapidly in the 1950s (from 223 000 in 1951 to 312 000 in 1961), then more slowly over the second ten years, to reach 374 000 by 1971. By contrast, the number of employees rose slowly until 1959, fell until 1963 (as the demand for labour for industry became heavy) and then increased particularly from 1966 onwards, to reach 1 243 000 by 1971 (from an initial figure of 1 033 000 in 1951). The proportion of self-employed rose (from 17.8% to 23.1%) in relation both to total numbers employed in the sector and to the total number of self-employed in all sectors (from 2.9% to 6.8%).

Average earnings per employee were the lowest for any non-agricultural sector in 1951 and remained so until 1971, when they rose slightly above the figure for commerce; the rate of increase was below the average until 1963, then higher in subsequent years, to give a total increase from 336 000 to 1 998 000 lire.

3.2 Inter-sector analysis of long-term movements of prices and incomes

Simple cross-section regression equations were estimated for each period since the war. The sectors included were agriculture, industry, commerce and hotels and public catering, transport and communications, credit and insurance, and liberal professions and miscellaneous services.

The independent variables introduced from time to time were: employees' total earnings in each sector, total other gross earnings in each sector, average earnings per employee in each sector and the ratio of other gross earnings to number of self-employed in each sector. The last of these variables (of less obvious significance than the others) was introduced solely as a partial approximation of the average earnings of self-employed persons in the sectors where they are found in the largest numbers; the choice of the most appropriate indicators for the purpose was made more difficult by the form in which the figures in the national accounts are presented. In the official statistics, non-wage earnings are broken down by type of income (e.g. earnings of entrepreneurs, rents, etc) for the economy as a whole and not by sectors; our analysis is however aimed at identifying the causes of price movements within each sector.

Three different regression models were tried for each period studied and for each explanatory variable introduced:

I) LINEAR MODEL BASED ON INCREASES, represented by the equation:

$$y_i = m x_i + b$$

where: y_i = percentage increase of prices in sector X;

x_i = percentage increase of the independent variable in sector X.

II) LOGARITHMIC MODEL BASED ON INCREASES, represented by the equation:

$$y_i = B (x_i)^m$$

and hence: $\log y_i = m \log x_i + b$

where: $\log B = b$

y_i, x_i as above.

III) LOGARITHMIC MODEL BASED ON INDICES, represented by the same equation as for Model II, but where:

y_i = index of prices in sector X at the end of the period studied (initial value = 100);

x_i = index of the independent variable in sector X at the end of the period (value at start of period studied = 100).

The results of the estimates for the equations where the sector total of employees' earnings is used as explanatory variable are set out in Table 12. They show that with each type of model there is a very close relationship between price movements and total wages in the various sectors during the period after 1963; the coefficient of determination is close to 0.98. The relationship is, however, not significant before 1963 or for the post-war period as a whole. This indicates that during the period when the Italian economy was stagnant total wages rose most sharply in the most 'inflationary' sectors (professions and services, credit and insurance).

The results of the estimates where other gross earnings were used as explanatory variable are set out in Table 13. They show that the relationship is not proved for the period 1951-63 but becomes significant afterwards, with the coefficient of determination varying around 0.90 in the equations estimated for the years 1963-71. By contrast with the previous case, however, there is a price feed-back on other earnings over the whole period 1951-71, giving a coefficient of determination around 0.70.

The two relationships so far analyzed are both acceptable for the period after 1963; it is therefore possible to compare the respective m parameters, which over this period are much higher for employees' earnings in all three model equations; this is due to the fact that employees' earnings rose more than other earnings in every sector.

The estimated relationships for the other two independent variables (average earnings per employee, ratio of other gross earnings to numbers of self-employed) produced no significant results: the figures are given in Table 14.

The equations which were at least partially confirmed by this first analysis were further checked on a more detailed breakdown, covering the 22 sectors

enumerated in the previous chapter. This check was confined to Model III. The results (see Table 15) show that the differences between sectors in the increase of total wages are no longer significantly correlated (even from 1963-71) with the different sector movements of prices.

On the other hand, the more detailed breakdown revealed a persistent relationship between the movements of prices and other gross earnings both before and after 1963. At the same time, both the coefficient of determination and the coefficient of elasticity (m) are higher before 1963 than afterwards.

The sectors showing the biggest increases in non-wage earnings, associated with the biggest increases in implicit value added prices, include printing, construction, and credit from 1951-63 and the liberal professions and miscellaneous services, construction, and credit from 1963 to 1971.

Sectors where non-wage earnings remained relatively stable and inflationary pressures were lower include the rubber and paper-making industries from 1951 to 1963 and the metallurgical, motor vehicle, and non-metal ore industries from 1963 to 1971.

As noted in the previous case (see section 2.2) the group at one end of the scale has almost exclusively domestic markets while most of the groups at the other extreme are highly sensitive to international competition.

3.3 Analysis of time series for prices and incomes in each sector

A number of simple regression equations based on time series were estimated to check price feed-back on the short-term movements of the components of income in each sector. The independent variables introduced were the same as in the previous section. The following models were used for each sector:

I) LINEAR MODEL represented by the equation:

$$y_i = m\,x_i + b$$

where: y_i = index of prices in year x for the given sector;

x_i = absolute value in current lire of the independent value in year x
for the given sector.

II) LOGARITHMIC MODEL represented by the equation:

$$y_i = B (x_i)^m$$

hence $\log y_i = m \log x_i + b$

where: $\log B = b$

y_i, x_i as above.

III) LINEAR MODEL BASED ON INCREASES, represented by the equation:

$$y_i = m x_i + b$$

where: y_i = percentage increase of prices in year x (as before, implicit
          value added prices) for the given sector;

x_i = percentage increase of the independent variable in year x for
          the same sector.

The results of the estimates made with the various models for the successive
periods studied are given by sectors in Tables 16 to 21.

Using the variables as defined, Models I and II gave highly significant
results for all sectors; this is due to the fact that both the dependent and
the independent variable are closely correlated with the general course of
inflation throughout the economy; consequently, the high correlation coefficients
obtained with the estimates for these first two models cannot be given any precise
economic interpretation. It is worth noting, however, that, for the 1950s, the
estimated equations for Model II are not significant either for employees' earnings
in industry and agriculture (the correlation with sector prices is not significant
for the years 1951-61 but becomes significant for the period 1951-62 and later
years) or for other earnings in industry (there is no correlation before 1960 but
a significant relationship from 1951 to 1961 and in subsequent years).

A better explanation of internal movements in the various sectors is given
by the equations estimated on the basis of Model III; in this case the annual
percentage increases of the variables (independent and dependent) show a much
more consistent deviation from the general rate of inflation as compared with the
absolute values of the same variables.

The following points may be noted concerning the agricultural sector (see Table 16). The short-term movement of total wages is linked with the movement of implicit value added prices for agriculture both during the 1960s and over the whole period 1952-73 (with an R^2 value of 0.5023); the relationship is not, however, significant for average earnings per employee (except from 1952 to 1962). This is the only sector for which this last relationship is not significant for the twenty-year period 1952-71 as a whole.

The short-term movement of gross non-wage earnings is also linked with price movements during the 1960s and over the post-war period as a whole (but not during the 1950s); the same applies to the relationship between these earnings and the number of self-employed. Agriculture and commerce are the only two sectors to show a significant relationship during the 1960s between price increases and the increase of gross non-wage earnings (both in absolute value and in relation to numbers of self-employed).

In the case of industry, there is a feed-back from prices to wages (both overall and in relation to numbers of employees) from 1962 onwards; this is the only sector, however, for which no significant results were obtained for either of the indicators for other earnings.

In commerce and hotels and public catering, the movement of total wages is not linked during any of the periods with the movement of implicit value added prices for the sector; on the other hand there is a significant relationship during the 1960s and over the period as a whole for average earnings per employee; the difference is explained by the fact that during the period of inflation in the first half of the 1960s, total wages were held in check by the levelling off of numbers employed. However (as can be seen from Table 18) if the rise of implicit domestic private consumption prices is substituted as dependent variable it is found to be linked with the rise in total employees' earnings in commerce.

Other gross earnings, both overall and in relation to numbers of self-employed, show a correlation with sector prices from 1963 onwards and over the whole period 1951-73.

The relationship between sector prices for transport and communications and employees' earnings (overall and per head) is confirmed for the first period if it is extended to include 1962-63; it is not continued over the second period but is confirmed for the whole period studied.

Other gross earnings show a correlation with prices over the whole period
1952-73 (for which R^2 = 0.2250) but not during the individual sub-periods; their
relationship with numbers of self-employed varies with price movements up to
1962 and over the whole period 1952-71 (but not in the 1960s).

Prices in the credit and insurance sector react on total wages from 1963
onwards and over the whole period studied; using per capita earnings as
independent variable, the relationship is confirmed for the whole period only
but not for the individual sub-periods. This is the only sector which shows a
significant relationship between prices and other gross earnings (either overall
or in relation to numbers of self-employed) over the first period 1952-1961;
the relationship is not confirmed for the 1960s but exists over the period as
a whole.

In the case of the liberal professions and miscellaneous services a
significant relationship was found between price and total wage movements for
the periods 1952-63 and 1952-73 only; on the other hand, average earnings per
employee were linked with prices in the 1960s as well.

Total other earnings show a link with prices from 1952 to 1963 only; other
earnings per self-employed person are correlated both during this period and
over the whole span from 1952 to 1971.

Finally, as regards the short-term relationship between prices and wages,
it may be noted that agriculture (in the case of per capita wages from 1951 to
1971) and commerce (in the case of total wages from 1952 to 1973) are the only
sectors which do not show a significant correlation coefficient (5%). This would
seem to be due to the structure of employment in these sectors as described
earlier in section 3.1.

Furthermore, while the coefficients of determination are in general fairly
low, relatively higher values are obtained with the equations where the independent
variable is earnings per employee; in this case, the value of R^2 is 0.7428 for
industry, 0.6209 for the liberal professions and services and 0.5389 for commerce
and hotels and public catering for the period 1952-71.

Lastly, in the case of other gross earnings (both in total and in relation
to numbers of self-employed), industry is the only sector failing to produce a
significant correlation coefficient for the post-war period as a whole; the

coefficients of determination are generally not very high, with a maximum R^2 of 0.4940 for total other earnings in agriculture (over the period 1952-73).

Overall, the two sectors with the highest numbers of self-employed (agriculture and commerce) are those with the closest correlation between annual variations of sector prices and non-wage earnings.

Chapter IV

INTERRELATIONSHIP OF MOVEMENTS OF SECTOR PRICES

AND INCOMES

In this chapter the hypotheses postulated in the previous chapters are
analyzed by other, different statistical techniques.

In the first part of the chapter, the successive hypotheses advanced to
explain price movements within each sector are checked jointly, by estimating
a number of multiple regression equations using cross-section data, where the
dependent variable is the index of implicit value added prices for the various
sectors.

In the second part of the chapter the hypothesis assuming the dependence
of each sector is abandoned and attention is concentrated on the productive
interrelationships resulting from trade in intermediate goods and services
between sectors.   For this purpose, the input-output tables for the national
economy compiled by ISTAT are used, in order to estimate the impact of changes
in sector incomes on the movement of prices, on the basis of a number of simplified
hypotheses.

The results obtained with these further factual checks are not without
interest.   They emphasize the part played by non-wage earnings in causing
inflation in Italy and indicate the sectors where this effect has been greatest.

4.1 Analysis of the combined influence of productivity and incomes on sector
     prices

As already noted, the Italian economy was broken down into 22 sectors and
the periods 1951-61, 1951-63 and 1963-71 were studied.

Two multiple cross-section regression equations were estimated for each of
these periods, of the type:

$$p_i = e^a q_i^b r_i^c$$

or: $\log p_i = a + b \log q_i + c \log r_i$

where by hypothesis b is zero or less,

c is zero or over;

further by definition:

p_i = index of implicit value added prices for sector x at the end of the given period (initial value = 100);

q_i = index of physical productivity per employed person (value added at 1963 prices divided by full-time workers) at the end of the period (initial value = 100);

r_i = variable with different values in the two estimated equations: it is either the wage index for sector x or the index of other gross earnings for the same sector (the indices are calculated in the same way as the other variables).

The hypotheses adopted for this trial model were explained in the two previous chapters; in this case, it is assumed that there are two principal factors governing the movement of prices in the various sectors. First it is assumed that pressures on the level of sector prices are contained by the capacity of each sector to increase per capita productivity very considerably. This factor is counterbalanced by the tendency to pass on in prices the monetary expansion of incomes (earnings of employees or alternatively of the other factors of production) within each sector.

As can be seen from the results of these estimates, as set out in Table 29, the introduction of wages into the equation as an explanatory variable is not sufficient. The coefficient for this variable does not differ significantly from zero in any of the three periods studied.

Nevertheless, the coefficient of determination for the equation as a whole is high for the two periods starting in 1951 (0.6593 for 1951-61 and 0.7955 for 1951-63) and lower, but still significantly above zero, over the period 1963-71. The explanatory significance of the equation can be attributed to price feed-back on productivity. More satisfactory results were obtained with the second equation which uses other gross earnings as an explanatory variable.

In this case, the postulated model was substantially confirmed because all coefficients were highly significant and the multiple regression offered a better explanation than did the corresponding simple regressions.

For the two periods starting in 1951, the coefficient of determination is very high, with R^2 values of 0.9376 from 1951 to 1961 and 0.9433 for 1951-63; this means that almost all inter-sector variations of the price indices are ʃexplained1 (in the statistical sense) by our equation.

The coefficients for the explanatory variables are highly significant for both periods; indeed, the coefficient with the lowest degree of significance is that for other gross earnings over the period 1951-63 but even then is acceptable at 0.036%.

For this first phase, therefore, when the Italian economy was expanding rapidly, our model matches the actual movement of prices. The estimated equations (given in detail in Table 29) were as follows:

For the period 1951-61:

$$p_i = \frac{1859 \quad r_i^{0.41}}{q_i^{0.99}}$$

For the period 1951-63:

$$p_i = \frac{2421 \quad r_i^{0.38}}{q_i^{0.98}}$$

It may be noted that during both periods the elasticity of prices in relation to productivity was higher in absolute terms than elasticity in relation to non-wage earnings; productivity is therefore a central factor in explaining relative prices and this confirms empirically the interpretations based on the dual character of the Italian economy which we mentioned in the first chapter.

The equivalent estimated equation for the period 1963-71 gives a coefficient of determination of $R^2 = 0.6317$ which is again much lower as compared with the preceding periods. The estimated equation was as follows:

$$P_i = \frac{1643 \quad r_i^{0.28}}{q_i^{0.79}}$$

During this more recent period the elasticity of prices was lower in relation both to productivity and to non-wage earnings. The coefficients for both explanatory variables are again acceptable even though their degree of significance is not comparable with those for the previous periods (which were acceptable at 1%).

Table 30 gives the actual figures for the sector indices of implicit value added prices up to 1963 (1952 = 100) and up to 1971 (1963 = 100); these are compared with the values expected on the basis of the estimated parameters used in the equations described above. The first point to note is that the equation identifies sufficiently clearly the sectors with the highest rate of inflation, which are the printing industry, miscellaneous services and the liberal professions, credit and insurance, and construction during the period 1951-63 and construction, miscellaneous services and professions, credit and insurance, and printing (in descending order) during the period 1963-71.

Secondly, in most sectors, the deviation of an actual from the expected values keeps the same algebraic sign over both periods studied; this may be due to the persistence in each sector of the specific factors which are involved in the determination of prices but were not taken into account in formulating the model tested.

Some sectors did not however show the same regular trend and of these the most noteworthy are the electricity, gas and water industries. They showed the widest deviations in absolute terms and the sign changed from one period to the other. In the specific case of construction, the actual price index was about 15 points lower than the expected value in 1963 but some 23 points higher in 1971; this may be attributed to the sharply differing pattern of productivity trends in this sector in the two periods. The first period included one of the most prolonged and extensive cycles of expanding investment and production ever experienced by the Italian building industry; but the second period was one of conflicting movements and a substantial measure of stagnation was accompanied by a wide gap between the qualitative composition of demand for and supply of living accommodation. Consequently, the failure of supply to expand enough to meet the demand from the lower-paid population groups, combined with the sharp division of demand into several components, helped to accentuate the speculative element in the fixing of housing prices (which have a major influence on the overall prices of the whole construction sector).

It was in fact commented that:

'Housing 'needs'' do not create a homogeneous demand but a demand of many
different kinds. It includes: a) demand for owner-occupied homes;
b) demand for homes for rent which is further broken down according to
family income; c) demand which cannot be postponed, created principally
by migratory movements and demand which can be postponed, created by a
desire to change the type of living accommodation; d) lastly, demand for
homes for letting as an investment (...).

Supply, on the other hand, is much more homogeneous and is directed mainly
to meeting the demand for owner-occupation. Government and credit policy
have played a part in this by making credit and finance easier to obtain at
certain income levels (...) The fragmentation of demand on the one side
and the greater homogeneity of supply on the other, combined with a demand
for rented accommodation which cannot be deferred (in view of the vast
south-north and country-to-city migration) are the factors which have
intensified speculation (in a situation where there were not only no
obstacles to speculation in urban land but both government action and town-
planning policy seemed to be directed to making speculation worse). [22]

On the other hand, in the case of the sector concerned mainly with the
production and distribution of electricity, the factor responsible for the reversal
of the trend and for the wide gap between actual and expected values is to be
found in the nationalization measures of 1963.

4.2 Analysis of sector interrelationships in price movements

Our analysis has so far been concerned with movements of the implicit value
added prices of the various sectors; this section deals, by contrast, with the
movement of production prices. The rise of production prices is not simply a
matter of inflationary pressures within the particular sector; these pressures
are in turn affected by price movements in other sectors which supply the
intermediate goods and services entering the production of each sector as inputs.

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(22) F. INDOVINA, Introduction to "Lo spreco edilizio", Padua, Marsilio, 1972.

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With a few simplifying hypotheses, the input-output tables for the Italian economy were used to estimate two factors in particular:

1) how are the relative prices of each sector (understood as production prices) affected by a homogeneous, general increase in total wages (or total other net earnings)?

2) how is the general index of retail prices of Italian-produced goods affected by an increase in other net earnings in each sector?

Our analysis of the first point aims at identifying the sectors where production prices are more sensitive to variations in the two basic types of earnings, i.e. wages and salaries on the one hand and other net earnings (excluding amortisation) on the other.

In analyzing the second point, we try to estimate how much of the increase in implicit prices of nationally-consumed (private and public consumption) Italian-produced goods is caused by the growth of net non-wage earnings in each sector.

For our analysis of the first point, we used the matrix of sector interrelationships taken from the national 33-sector input-output table for 1965. It was assumed that in all sectors other net earnings increased regularly by 10% as compared with the actual figure for 1965. Naturally, strict simplifying hypotheses were required; in particular this analysis is a matter of comparative statistics and presupposes that there are no changes in the major variables involved in determining price levels (except the postulated variation). It also has to be assumed that every sector is in a position to transfer automatically into production prices all increases (direct and indirect) resulting from increases in non-wage earnings[23].

With these ʾ ʾfications, the calculation was as follows:

$$a \; r' \quad B \; = \; \dot{p}'$$

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[23] The prototype for this type of analysis is the analysis of the American economy made by .⅃. Leontief as reported in Input-Output Economics, New York, Oxford University Press, 1966.

where:

    a = 10%, assumed increase of all net non-wage earnings per sector;

    r'= rank vector of coefficients of net non-wage earnings in the 33 sectors;

    B = inverse Leontief matrix obtained from the direct matrix for the Italian economy for 1965;

    $\overset{\bullet}{p}{}'$= vector of percentage increase of production prices in the 33 sectors.

In order, the sectors showing higher price increases are the following:

1)	Agriculture	6.33 %
2)	Rent of premises	6.10 %
3)	Salvage scrap, etc	6.00 %
4)	Commerce	5.32 %
5)	Hotels and public catering	5.19 %
6)	Fisheries	4.50 %
7)	Food industries	4.10 %
8)	Car and motor-cycle repair	4.01 %

Sectors with lower increases include the following:

30) Metallurgical industries	1.00 %
31) Public administration	0.78 %
32) Tobacco industry	0.46 %
33) Oil refining	0.25 %

Using strictly the same method, an estimate was made of the impact on relative prices of a uniform 10% increase of wages and salaries in each sector; in other words, in the previous equation, a rank vector r' was substituted

consisting of the sector coefficients for wages and salaries. The upper and lower range of production price increases were as follows:

1)	Public administration	6.39 %
2)	Communications	5.58 %
3)	Water supply	4.04 %
4)	Mining and quarrying	4.04 %
5)	Liberal professions and miscellaneous services	3.97 %
6)	Transport	3.96 %
7)	Vehicle manufacture	3.86 %
8)	Printing and publishing	3.83 %
....		.....
27)	Salvage scrap, waste, etc	1.91 %
28)	Food industries	1.91 %
29)	Agriculture	1.66 %
30)	Commerce	1.61 %
31)	Tobacco industry	0.76 %
32)	Housing rents	0.56 %
33)	Oil refining	0.45 %

In one group of sectors, therefore (comprising mainly agriculture and the food industries, commerce and housing rents), levels of production prices are very strongly influenced by non-wage earnings but very little by wages. In the cases of agriculture and commerce, this confirms the econometric analyses performed in earlier chapters and can be attributed to the high proportion of self-employed persons in these sectors; in the case of the food industries, the explanation lies in their close dependence on intermediate inputs from agriculture; lastly, there are no employees in the housing rent sector.

The position is exactly the reverse in the case of public administration where, because of the structure of employment in the sector, wages and salaries are the principal element in production prices and the influence of other earnings is negligible.

Other sectors where wages and salaries have a substantial influence are some service branches (such as transport, communications, and the liberal

professions and miscellaneous services) together with certain industries (such as mining and quarrying, vehicle manufacture, etc).

In interpreting the movement of prices in the oil refining and tobacco industries, it must be remembered that indirect taxation (net of contributions) has a major effect on production prices; it should also be recalled that the coefficients used for earnings (wages or otherwise) were those supplied by ISTAT which are based on ex-works prices (which include indirect taxes, net of contributions, added to prices at factor cost).

The second problem stated at the start of this section was that of estimating the impact of an increase in non-wage earnings in a single sector on the overall index of national retail prices. In the first stage, we used the matrix for the Italian economy for 1965 in order to evaluate the impact of a 10% increase in net non-wage earnings in each sector on implicit total retail prices. For this purpose, we had to adopt a number of simplifying hypotheses similar to those used for the previous exercise; the following model was used to estimate this impact:

$$a \, \hat{r} \, B \, c = \dot{p}_c$$

where:

a = 10%, assumed percentage increase of net non-wage earnings in all sectors;

$\hat{r}$ = diagonal matrix made up from the coefficients for net non-wage earnings in the 16 sectors covered;

B = inverse Leontief matrix for Italy for 1965 (16 sectors);

c = column vector constituted from the percentage composition of national consumption (private and public) of domestic production or from the percentage accounted for by the production of each sector in the total of such consumption;

$\dot{p}_c$ = column vector of increases in implicit aggregate consumption prices, resulting from the 10% increase in non-wage earnings in each sector.

At the second stage, the estimated theoretical coefficients were multiplied by the increase actually recorded between 1965 and 1969 in net non-wage earnings in each sector. In this way we were able to estimate the real impact over this period of the movement of non-wage earnings on prices of final consumer goods;

but this estimate is subject to a number of further theoretical hypotheses, and specifically that over the short period involved there were no changes;

- in the techniques used in the productive sectors or in the pattern of sector interdependence;

- in the composition by sectors of total national consumption.

The results of this estimate are set out in Table 31. The first point to note is that the simplifying hypotheses do not seem to have reduced the significance of the calculations; in fact, the estimated overall increase of implicit retail prices was about 13.5% (from 1965 to 1969) which was slightly higher than the increase actually recorded (about 11.5%). This difference must be attributed to increases in productivity and to changes in production techniques during the period in question.

It appears from the estimated coefficients that, other things being equal, a 10% increase in non-wage earnings in the agricultural sector alone causes a substantial increase of about 1% on the general index of total national retail prices (of home-produced goods); other sectors which show a substantial but slightly less impact are commerce (which on the same assumptions causes retail prices to increase by 0.8%), the liberal professions and miscellaneous services (0.5%), housing rents (0.4%) and the food industries (0.15%); at the other extreme are the metallurgical industries where a 10% increase in net non-wage earnings seems to have had virtually no effect on the general index of retail prices. While non-wage earnings showed widely differing trends from sector to sector between the two years considered, it was found that the estimated real impact of each sector on the general index of retail prices reflected fairly closely the order of sectors established by the coefficients mentioned above.

Indeed, from 1965 to 1969 the rise in non-wage earnings in commerce seems to have been responsible on its own for about one quarter of overall inflation on consumption goods, or, other things being equal, for a price increase of 3.3%. It is followed by miscellaneous services and the liberal professions which alone seem to have accounted for a 3.2% increase and then housing rents (2.1%), agriculture (1.5%), transport (0.7%), textiles, footwear and clothing (0.6%).

These results must be set against the analysis in Chapter 1, which is partly repeated in Chapter V (which goes further into retail price movements and analyses

the structure of the commercial sector); in a period of relatively moderate inflation such as that now under consideration, the estimates indicate that practically half the total rate of inflation for consumer goods can be attributed to the movement of net non-wage earnings in only two sectors of the Italian economy: commerce, and professions and services.   When the effect of increases in other net earnings from the letting of living accommodation is added, almost two-thirds of overall inflation is accounted for.

This analysis reveals even more clearly and strongly, the enormous inflationary potential inherent in the uncontrolled growth of profits, rents, professional fees and entrepreneurs' earnings in these three branches of the service sector.

Chapter V

Role of the structure of distribution in price formation

In this chapter the analysis of the role of the commercial sector as a cause of inflation is carried a stage further. Some of the main features of wholesale and retail price movements are analysed and the differing trends of these two elements in the distributive process are identified; the structure of the sector will then be studied to determine the causes of these trends.

In trying to establish the part played by the structure of distribution in the formation of final prices, the validity of the following hypotheses will be checked:

a) At any given point in time, the absolute level of retail prices is strongly influenced by the overall margins which the commercial sector is able to add to production prices. This is due to differing trends in the two sub-sectors (wholesale and retail);

b) Over a period, wholesale prices follow movements of production prices very closely; the fact that percentage variations of the two indices are virtually the same (at least in the long run), suggests that the relationship between the two tends to remain constant and, therefore, that wholesalers' absolute gross margins increase most when production prices are rising most rapidly; this is mainly attributable to the oligopolistic character of markets in the sub-sector;

c) Retail trading is extremely backward, as is shown by the existence of very large numbers of small units, which is explained by its being a "subsistence sector" for labour which otherwise would find no employment.

The retail sector may be responsible for high prices because mark-ups have to be very high to ensure the economic survival of every trader with a very small turnover and because increases in wholesale prices and overheads (rent, transport, taxes, etc) cannot be absorbed by increasing productivity.

It may be supposed that the rise in prices is determined substantially before the retail stage; according to the movement of wholesale prices, retail prices are likely to show the following trends:

- when wholesale prices are falling or rising slightly, retail prices
  tend not to fall but to increase the rate of inflation, either because
  the distributive system is backward or because of monopoly positions.

- when wholesale prices are rising fast, the retail sector cannot pass on
  the whole increase, so that recovery of the total increase in prices
  ahead of the retail sector is delayed.

5.1 Movements of wholesale and retail prices

The main aggregate indices of wholesale prices moved as follows over the
various periods studied:

AVERAGE ANNUAL PERCENTAGE INCREASES OF WHOLESALE PRICES

	Total	Agricultural products	Non-agricultural products	Consumer goods	Capital goods
1956-61	- 0.5	- 1.0	- 0.4	- 0.5	+ 0.1
1961-64	+ 3.8	+ 4.9	+ 3.5	+ 4.5	+ 2.7
1964-68	+ 0.8	+ 1.7	+ 0.6	+ 0.8	+ 0.3
1968-72	+ 4.7	+ 5.8	+ 4.5	+ 4.9	+ 5.5

It will be seen that all these indices follow very closely the different
phases identified in Chapter I; after a fall in prices during the second half
of the 1950s (with the sole exception of wholesale prices of capital goods due,
in particular, to the rise in prices of construction materials), the first increase
took place early in the 1960s.   Subsequently, between 1964 and 1968, the rise
in price slowed down, but there was no actual fall; finally, from 1968 onwards,
the increase was the largest during any of the periods under review.   Comparison
of the indices shows in particular that, after recording a larger fall before
1961, wholesale prices of agricultural products subsequently rose more than those
of non-agricultural products in every period; but their influence on the overall
index of wholesale prices was relatively small because these indices include
about five non-agricultural products for every agricultural product.   This is
the only reason why wholesale prices, and therefore the general process of
inflation, have not been even further aggravated by the serious situation of
agriculture.

Over the same period, the main indices of retail prices moved as follows:

AVERAGE ANNUAL PERCENTAGE INCREASES OF RETAIL PRICES

	Total	Food products	Non-food products	Services Total	Housing
1956-61	+ 1.6	+ 0.5	+ 0.2	+ 5.6	+ 11.2
1961-64	+ 6.0	+ 5.9	+ 5.6	+ 6.6	+ 8.8
1964-68	+ 3.0	+ 2.4	+ 1.7	+ 5.4	+ 3.8
1968-72	+ 4.6	+ 4.4	+ 4.6	+ 4.8	+ 4.5

(Note: for non-food products and for total services the first period covered
is 1957-61).

The figures show that products and services did not behave in the same way.

Retail prices of products (food and non-food) go through the phases previously
described for wholesale prices, thus confirming that the latter are responsible
for the rate of inflation. It should be noted, however, that retail prices did
not fall with wholesale prices during the 1950s; and after 1968 they rose more
slowly than from 1961 to 1964; this is due to the fact that during the latest
period the retail sector contained the pressure from production and wholesale
markets, instead of adding to it as previously.

The structural trend of service retail prices is very strongly upwards and
above the average for all retail prices; the rate of increase only approaches the
overall average during the last phase (1968-72). In the context of our study
of the role of non-wage earnings in causing inflation, it is of interest to note
which "service" items carry the greatest responsibility for this trend in the
various periods. The preceding table shows that up to 1964, "housing" showed
a very high rate of increase, much above the general figure for services; this
can be attributed mainly to the rise in rents, for which the index moved as
follows:

Year	Index
1953	100
1958	167.7
1961	232.3
1964	301.8

In the years immediately after 1963, health services showed the most rapid price increase as follows:

PERCENTAGE INCREASE IN PRICES OVER PREVIOUS YEAR[24]

	Retail price of health services	Implicit private consumption prices	
		Public hospitals and private clinics	Other health services
1964	n.a.	+ 13.3	+ 28.6
1965	0	+ 10.4	+ 5.7
1966	+ 1.6	+ 7.5	+ 3.5
1967	+ 40.3	+ 5.0	+ 10.1
1968	+ 3.1	+ 3.2	+ 3.4

n.a. = not available

After 1968, the rise in service prices slows down and comes into line with the increase for products; the figures show that during this latest period the rate of increase for all components of retail prices was less than during the previous period of inflation (1961-64).

Before comparing movements of wholesale and retail prices, we must first check the hypothesis that variations of wholesale prices reflect the movement of production prices. Few data are available for production prices and they are not exactly comparable with the wholesale price statistics; however, there is less difficulty in the case of agriculture, for which implicit gross saleable production prices for |'agriculture, forestry and fisheries'| can be compared with the general index of wholesale prices of agricultural products (see Table 22).

Although the annual movements of the two indices differ widely, the total increase over the twenty-year period is almost the same; taking the figures for 1953 as 100, the index of wholesale prices of agricultural products stood at 160.1 in 1972 and the index of implicit gross saleable production prices at 159.8.

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(24) Figures from two different sources are used in this table: the first series is taken from the index of retail prices by categories and the other two series from implicit national private consumption prices by category.

The same comparison for the periods already considered gives a similar result.

AVERAGE ANNUAL PERCENTAGE VARIATION

	Wholesale prices agric. products	Implicit GSP prices agriculture, forestry and fisheries	Difference: wholesale prices less implicit prices
1956-61	- 1.0	- 0.4	- 0.6
1961-64	+ 4.9	+ 5.4	- 0.5
1964-68	+ 1.7	+ 1.0	+ 0.7
1968-72	+ 5.8	+ 5.4	+ 0.4

There is a significant difference between the periods before and after 1964; before that date, wholesale prices rose less rapidly than production prices, but the situation was afterwards reversed.

A part check was also made for some industrial sectors, using the production price indices estimated from the input-output tables for the Italian economy[25]. The results are as follows:

TOTAL PERCENTAGE INCREASE FROM 1965 TO 1970

	(I) Wholesale prices	(II) Production prices	Difference (I) - (II)
Metallurgy and engineering	+ 17.2	+ 16.8	+ 0.4
Chemicals and related industries	+ 2.0	+ 2.0	0
Food and related industries	+ 7.0	+ 12.7	- 5.7
OVERALL INDEX	+ 13.4	+ 17.0	- 3.6

No definite conclusions can be drawn from these figures for the short period covered; it is indicative, however, that the wholesale prices of chemicals, and

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(25) See G. ALVARO-M. DI PALMA, Ipotesi di sviluppo dell'economica italiana, ISPE collection, Milan, Angeli, 1975, p. 85.

metallurgical and engineering products match the movement of production prices much more closely. A further point to note is that the comparison of overall indices does not cover the same list of goods because the gross saleable product of the whole economy includes many sectors (in particular service branches) producing goods and services which do not pass through wholesale markets.

From the figures available, it would seem to be a plausible hypothesis that there is some similarity between the movements of wholesale and production prices in the long run at least; this is certainly true for agricultural products and fairly well confirmed by the few data available for industrial products.

The movements of wholesale and retail prices can be compared by using total consumption goods and food consumption goods as aggregates. In view of the fact that not all consumption goods pass through wholesale markets, two different estimates were adopted; the first is based on the index of retail prices of products only (i.e. excluding services) and the second on the overall index of retail prices. Of the two, the first is considered the better even though it excludes some goods classified as "services" which pass through wholesale markets.

DIFFERENCES BETWEEN AVERAGE ANNUAL PERCENTAGE VARIATIONS

Variation retail prices less variation wholesale prices

	Food consumption goods	All consumption goods	Final consumption goods (excluding services)
1956-61	+ 1.1	+ 2.1	+ 1.2 (x)
1961-64	+ 0.8	+ 1.5	+ 1.3
1964-68	+ 1.2	+ 2.5	+ 1.4
1968-72	- 0.6	- 0.3	- 0.5

(x) period 1957-61

It will be seen that up to 1968, the retail distributive sector tends to add to inflation from preceding sectors, at the rate of about 1% per annum; the gap between retail and wholesale prices becomes wider if services are also included in the retail price index. This indicates that the final prices paid by consumers are affected even more by a number of items classified as services, than by the "inefficiency" of distribution; this applies in particular to housing and a number of consumption goods for which prices are directly or indirectly controlled by the government (e.g. electricity, gas, transport and communications).

Since 1968, retail distribution has shown the opposite trend and has checked the rise of prices; this is a first sign of the fact that, in the face of sharper inflationary pressures from production and wholesale prices, retail commerce cannot maintain its own trading margins.

The way in which retail prices lag behind when wholesale prices are rising fastest is more clearly revealed by the quarterly variations (see Table 23 and Graph 3). Retail prices rose sharply over the period 4th quarter of 1961/3rd quarter of 1962 to the 1st quarter of 1963. Afterwards they rose more slowly (and even fell during the 3rd quarter of 1968); the rate increased again from the 2nd quarter of 1969 onwards and is still high.

Wholesale prices of **consumer goods rose sharply from the last quarter** of 1961 onwards; the subsequent trend was irregular but still upwards, with a fall from the 2nd quarter of 1966 to the 3rd quarter of 1968. Since the last quarter of 1968, the movement has been continuously upwards but still irregular; a first very sharp rise occurred late in 1969 and early in 1970, to be followed, from the second half of 1972 onwards, by inflation at an unprecedented rate.

Comparison of the two indices reveals the following trends:

a) from 1961 to 1963, a first thrust from wholesale prices which rose faster than retail prices between the 4th quarter of 1961 and the 2nd quarter of 1962; in subsequent quarters, retail prices tended to add to the initial upward movement.

b) when prices were rising least (1964-65), retail prices hardened and continued to rise faster than wholesale prices (particularly in 1964);

c) during the period of moderate inflation (1966-68), the fall in wholesale prices was not passed on to retail prices, with the result that traders' margins widened;

d) when inflation resumed in the last quarter of 1968, wholesale prices again rose more sharply than retail prices (from the 4th quarter of 1968 to the 2nd quarter of 1970) and retail prices caught up later (from the 3rd quarter of 1970 to the 4th quarter of 1971); in contrast to what had happened during the 1960s, this recovery was only partial, so that the gap between the two indices narrowed;

e) the fresh round of inflation from late 1972 onwards was again triggered off by a sharper increase in wholesale prices, which has been unprecedented in both

intensity and persistence; wholesale prices continued to **outpace** retail prices
until the end of 1974.

In addition to comparing price movements in the various markets, it would
be interesting to analyze the composition of absolute price levels at a given
point in time. Such an anàlysis is virtually impossible for industrial products
because no data are available, but some research has been made into this aspect
for agricultural products. As an illustration, we give the present structure of
prices for certain products:

AVERAGE PRICES OF ASPARAGUS during the first week in June (lire per kg)			
	1972 %	1973 %	VARIATION % 1972-73
Producer (Altedo, BO)	160 32	185 31	15.6
Wholesale market (Milan)	330 66	425 71	28.8
Retail traders (Milan)	500 100	600 100	20.0

This may be taken as a fairly typical example for all fresh vegetables,
although the gap between retail and wholesale prices tends to be wider for
cheaper products (e.g. potatoes) than for dearer products such as asparagus.

It will be seen that absolute price levels are heavily affected by the
various stages in the marketing process so that the final price is three times
as high as the production price. In addition, the wholesale stage is clearly
a very major factor, both because its gross margins are high in absolute terms
and because it was very largely responsible for inflation during the two years
covered by the figures. Presenting the previous table in another form to show
gross margins, we have:

	1972	1973	% variation
Price to producer	160	185	15.6
Wholesale margin	170	240	41.2
Retail margin	170	175	2.9

This particular price machinery is made possible by the productive and marketing structures of the fruit and vegetable sector.

Agricultural production is so fragmented and so far from its markets that the wholesaler tends to have a substantial buyer's monopoly at zonal level; at the other end, he is in a position to manipulate the quantity and price of the products he offers to retailers who are very numerous and only purchase small quantities. The grip over both ends of the market does not reduce but increases the inefficiency of the system (both growing and distribution).

MARKET PRICES OF ARBORIO-TYPE RICE (lire per kg, month of April)

	1972	%	1973	%	% VARIATION 1972-73
Unhusked price to producer	123	49	167	40	+ 35.8
Polished rice (wholesale)	215	86	350	83	+ 62.8
Packeted rice (retail)	250	100	420	100	+ 68.0

This example confirms that absolute prices are very high in the processing and retailing stages (it should be borne in mind that there are only nine rice-processing firms in Italy); both these stages multiply the increase on the price paid to the producer. During the two years covered by these figures, the biggest absolute increase in gross margins occurred between the production and wholesale stages.

PRICE OF HOME-PRODUCED VEAL in 1972 (lire per kg carcass weight)

Price to producer	1.250	49.0 %
Same plus transport, slaughter, and tax	1.630	63.9 %
Wholesale price	2.000	78.4 %
Retail price	2.550	100.0 %

Here again, the original price is approximately doubled by the existence of semi-monopolistic positions in the various zones, at all successive transfers of the product.

5.2 Structure of the distributive system

The following figures show how the structure of commerce in the narrow sense[26] has varied since the war:

	1951		1961		1971	
	Local units	numbers employed	Local units	numbers employed	Local units	numbers employed
Wholesale trade	75 960	244 388	82 690	382 656	92 988	464 441
Retail trade	511 727	978 481	673 141	1 355 380	806 983	1 559 615
Mobile traders	166 784	213 858	155 961	203 733	124 749	171 014
TOTAL	754 471	1 436 727	911 792	1 941 769	1 024 720	2 195 070

The percentage variation in numbers of local units and numbers employed over the two decades was therefore as follows:

	LOCAL UNITS		NUMBERS EMPLOYED	
	1961-51	1971-61	1961-51	1971-61
Wholesale trade	+ 8.86	+ 12.46	+ 56.58	+ 21.37
Retail trade	+ 31.54	+ 19.88	+ 38.52	+ 15.07
Mobile traders	- 6.49	- 20.01	- 4.73	- 16.06
TOTAL	+ 20.85	+ 12.39	+ 35.15	+ 13.04

For the sector as a whole, the overall trend is towards an increase in the number of local units and in numbers employed; the only exception is a reduction in the size of the traditional mobile trading sector. It should be stressed, however, that what our distributive system needs is not expansion but rather major rationalization and, more especially, concentration. From this standpoint, it must be a matter of concern that after increasing slightly from 1.90 to 2.13 over the first ten years, average size (numbers employed per local unit) has since remained virtually unchanged, standing at 2.14 in 1971.

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(26) Excluding hotels, restaurants and bars, together with ancillary activities (estate agents, agencies, stores, etc). The figures for 1951 have been partly adjusted to allow for changes in classification at subsequent censuses, but there are no major differences.

It may be noted that in 1968, the comparable figure for other European countries was much higher, reaching 4.2 in France and 5.8 in Germany.

In order to carry further our analysis of Italy's distributive system, it would seem best to start by studying the various branches of commerce, to follow with a geographical breakdown of the structure of distribution and to conclude by comparing the position in Italy with the commercial systems of some other European countries.

5.2.1 Analysis by sectors

A detailed analysis of trends in the three main branches of commerce shows that:

a) in the wholesale branch, local units increased by 8.9% and numbers employed by 56.6% between 1951 and 1961, and average size increased substantially at the same time; over the next ten years, the number of local units rose by 12.5% and numbers employed by 21.4%; average size increased at the same time, but much less than in the previous ten years;

b) in the retail branch, the number of local units rose by 31.5%, and numbers employed by 38.5% over the first ten years, and average size also increased slightly; during the second ten years, local units rose by 19.9% and numbers employed by 15.1%; as the number of units rose more than numbers employed it can be deduced that numbers employed per local unit fell, which is a very bad result in view of the special structure of commerce in Italy;

c) in the case of mobile traders, who are left over from an underdeveloped form of society which still has quite a hold in some areas, numbers of local units and numbers employed both declined continuously.

To sum up, the process of rationalization slowed down in both main branches (wholesale and retail) during the second ten-year period; at the same time, opposing trends developed in these two branches; in the case of wholesale trading, numbers employed increased more than local units while the reverse was true for retail trading.   In the first case, therefore, average size increased and rationalization took place (but at a slower pace than during the 1950s); in the second, average size fell.   In other words, retail trading became a kind of 'refuge' , in the sense that people unable to find any other employment turned to

this branch for which it is still believed that a very small amount of capital, limited to a licence and premises,are all that is needed.

Clearly, average size on its own is only a partial guide to the progress of rationalization which is, however, assumed to be necessary (although insufficient). The study can be carried further by analyzing the breakdown of local units by size groups (see Table 24).

The data for wholesale trade show that the large firms (with more than 100 employees) have grown. In 1961 there were 150 with 29 013 employees; by 1971 these figures had risen to 201 and 41 125. These firms grew not only in number but also in average size, with numbers employed rising from 193.4 to 204.6

At the same time, small firms are still by far the most numerous: local units with up to 9 employees account for 89% of local units and 49% of numbers employed (in 1961 the figures were 92% and 55%). Even though the absolute number of local units and of numbers employed rose over the last ten years, their relative importance declined with the bigger drop in the case of numbers employed (down by 6%).

In the case of medium-sized firms (with from 10 to 99 employees) local units rose from 7.7% to 10.4% and numbers employed from 37.2 to 42.5%. Big firms with over 100 employees showed little change as regards the number of local units (0.3%) but numbers employed rose from 7.7% to 9.9%.

Basically, the ten years witnessed an overall shift from smaller to larger units in the wholesale branch with a drop for small firms and an increase for medium-sized and large firms. Analysis of the percentage variations by size groups shows that the groups with 10 to 49 and with 250 to 499 employees made most progress.

In the case of retail trading, the first significant figure relates to the first size group (2 employees or less) which is a typical family business. Between 1951 and 1961, this was the only group to show a relative decline within the branch, falling from 84.6% to 81.1% of local units and from 66.2% to 60.2% of numbers employed. This means that this group is growing relatively less rapidly than retail trade as a whole; indeed, the figures show that the percentage increase in numbers employed and in local units rises with the size group. This does not mean however that there was general rationalization of the whole sector

over these first ten years; even though new medium and large-sizes forms of commercial organization emerged, small businesses continued to predominate. If instead of percentage increases, we consider absolute increases in numbers employed, we find that out of 379 380 new jobs created in the sector, as many as 169 938 (or 44.8%) were still concentrated in the first size group (2 employees or less).

Between 1961 and 1971, the relative share of this group increased in the case of both local units and of numbers employed, rising to 84.1% and 61.2% respectively. This reversed the trend of the previous ten years and resistance to rationalization and concentration stiffened.

The next two groups (3-5 and 6-9 employees) also showed a reversal of the trend of the previous ten years, with a drop in both relative and absolute numbers (of local units and employees). The growth of the bigger groups continued, however. Basically, over the last period there were signs of polarization in the retail sector, with growth at both extremes (small and big businesses) and a drop affecting the medium-sized groups[27].

This development can be attributed partly to the fact that this sector acts as a "refuge" for the smallest groups and partly to rationalization in the case of the bigger size groups. The medium-sized groups would appear to be basically uneconomic; they have to bear the costs of non-family management but do not reap the benefits of the higher turnover earned by the bigger size groups.

Following the same pattern as previously, we shall now consider how each size group grew over the period; the groups which showed a decrease between 1961 and 1971 were the medium-sized groups (3-5 and 6-9) while large and small firms registered an increase (but the increase for small firms was less because they had a higher starting point). Out of a total of 204 320 new jobs created in the sector over the period, as many as 138 237 went to the first size group (2 employees or less), amounting to 67.7% of the increase in numbers employed.

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(27) The two groups (3-6 and 6-9) certainly declined relatively and the 3-5 group registered an absolute drop both in numbers employed and in local units. The absolute figures for the other group was not strictly comparable because its composition was changed between censuses from 6-10 employees in 1961 to 6 to 9 in 1971.

Overall, during the twenty years from 1951 to 1971, the relative share of
the smaller groups (up to 5 employees) in the sector declined, the share of local
units with from 6 to 10 employees remained steady and the share of the larger units
increased.

The same trends are found in the main retail branch, which is the food trade.
Over the last ten years there has been an even more marked polarization of food
shops; there has been a substantial drop of about 40 000 in numbers employed by
medium-sized firms (3 to 9 employees) offset by the creation of around 30 000 new
jobs in small businesses (2 employees or less) and 16 000 jobs in bigger businesses
(over 10 employees). Overall, therefore, the number of jobs in food shops has
remained virtually unchanged. This branch is more fragmented than retail commerce
as a whole and became more so over the whole twenty-year period 1951-71; average
numbers employed dropped from 1.88 to 1.78 and the share of the first group
(2 employees or less) rose from 85.0% to 86.7% of local units and from 69.4% to
70.5% of numbers employed.

5.2.2 Distribution by regions

It is worth looking at the distribution of the whole commercial sector by
regions in order to ascertain how far the geographical structure of the sector and
changes which have taken place over a period have been affected by the different
variables involved, in particular by the growth of per capita incomes, which
should stimulate the expansion of commerce in the most advanced regions, and by
the role of commerce as a 'refuge' for labour, which should stimulate its growth
in the less advanced regions.

Here, we are considering the sector as a whole so that ancillary activities,
hotels, restaurants and the like are lumped together with wholesale, retail and
itinerant trade.

Table 25 gives absolute and relative figures for the regional distribution
of numbers employed and numbers of local commercial units at the last two censuses.
They reveal a number of points of some interest. The region with the highest
concentration of local units and of numbers employed in commerce is Lombardy,
exactly in accordance with this region's position in the economic geography of
the country. The degree of concentration in this region is far greater if
wholesale trade is taken on its own (21.4% of local units and 27.0% of numbers

employed are then located in this region). There is clearly a close relationship
between the size of the region and the concentration of business; we felt that
it might be useful to compare, for 1971 only, the figures for the distribution of
commercial activities with those for population, not in order to confirm such an
obvious correlation but rather to ascertain whether there were any deviations from
it. This comparison (see Table 25) shows that the concentration of commercial
activities is higher than that of population over the whole of the north down to
Tuscany. From Tuscany southwards, the relationship is reversed and numbers of
local units and numbers employed in commerce are less than proportionate to
population. The only exception is Latium which joins the first regions (more
commerce than population). To summarize, it may be stated that in 1971 the
distribution of commercial activities followed the pattern of population with
what may be defined generally as a correction for 'income'. In other words,
commercial activities vary with "income" as well as with population and concentrate
more where income is higher. On this basis, we may assume that the income factor
explains the difference between the relative concentrations of population and of
numbers employed in commerce. Listed on the basis of this deviation (the figures
represent the positive or negative difference between the percentage of numbers
employed in commerce and the percentage of population out of the national total)
the regions appear as follows:

	%			%	
LOMBARDY	+ 2.6	+ 16.5	MARCHES	- 0.1	- 4.0
LIGURIA	+ 1.3	+ 37.1	ABRUZZI	- 0.2	- 9.5
EMILIA	+ 1.3	+ 18.1	MOLISE	- 0.2	- 33.3
VENETO	+ 0.8	+ 10.5	BASILICATA	- 0.3	- 30.0
TUSCANY	+ 0.8	+ 12.1	SARDINIA	- 0.3	- 11.1
LATIUM	+ 0.7	+ 7.9	CALABRIA	- 1.1	- 32.3
TRENTINO	+ 0.6	+ 37.5	CAMPANIA	- 1.5	- 16.3
PIEDMONT	+ 0.5	+ 5.8	APULIA	- 1.6	- 24.6
UMBRIA	- 0.1	- 7.1	SICILY	- 2.4	- 27.9

We feel that the hypothesis is generally confirmed with the exception of
a few details; these can be attributed to certain special features which tend
to adjust the overall figure. For example, the percentage deviation as compared
with the relative concentration of population is higher in the smaller regions
such as Liguria and Trentino, which are highly specialized in the tourist and

hotel trade (whose labour force is included in commerce in the broad sense).
This percentage deviation also shows more accurately than the absolute difference
which regions are the most underdeveloped, namely Molise, Basilicata and Calabria.
Overall, it would appear that the different distributions of numbers employed in
commerce and of population can largely be attributed to the level of available
income in the region and therefore to the higher return obtainable from commercial
activities in the differing situations or at least to the higher total turnover.

Tables 25 and 26 show the percentage increase of a number of variables
relating to commercial activities by regions.   These figures have also helped
us to explain what might be called the movement logic of the sector as a whole.
As regards the rate of increase, they seem to suggest that the regions with the
steepest rises are not the more developed but the less developed, with due exceptions
of course.   This does not contradict the previous statement, but confirms that
commerce still acts as a "refuge" and therefore tends to expand most in areas
where the supply of labour most exceeds demand.   The previous figures refer to
the actual structure existing in 1971; here, on the other hand, we are trying to
establish what is happening in the sector.   It is quite clear that the increase
in some regions - including some of the poorest in this specific case - has
exceeded the national average, thus confirming that the sector is still a /'refuge'|
in many respects.   This view is further endorsed when we consider the percentage
increase in businesses (or local units) between 1951 and 1969 and break down the
whole commercial sector in order to establish what changes have taken place in the
separate branches.

In order, the regions with the highest percentage increase in numbers of
wholesale businesses were: Basilicata (96%), Latium (61%), Abruzzi (61%),
Sardinia (55%), Umbria (54%), Apulia (52%), Calabria (48%) and Marches (39%);
over the same period, the regions showing the biggest increase in retail businesses
were: Latium (111%), Basilicata (96%), Sardinia (88%), Val d'Aosta (86%),
Marches (74%), Abruzzi (73%), Calabria (73%) and Campania (71%).

The predominance of the central-southern regions as the areas where commerce
expanded most is repeated for the increase in numbers employed; the figure for
wholesale trade is highest in the following regions: Basilicata (167%),
Umbria (132%), Abruzzi (132%), Sardinia (121%), Apulia (112%), Latium (110%),
Emilia (106%), Marches (99%); for retail trade the figures are Latium (128%),
Basilicata (116%), Val d'Aosta (110%), Sardinia (109%), Calabria (101%),
Apulia (101%), Campania (100%) and Abruzzi (98%).

The regions where numbers of commercial businesses increased less (or even fell) coincide almost exactly with the industrial triangle, with the lowest percentage change in wholesale businesses in Liguria (-3.6%), Piedmont (-2.8%), Lombardy (+5.7%) and Trentino (+ 8.0%); the corresponding list for retail commerce is Liguria (+ 34.8%), Piedmont (35.2%), Sicily (48.9%) and Lombardy (49.2%). The regions coincide in the same way in the case of numbers employed in retail trade, with the smallest increases in Piedmont (45.7%), Liguria (57.3%) Friuli/Venezia Giulia (59.8%) and Lombardy (64.0%). The same does not apply, however, to numbers employed in wholesale trade, which show the smallest increase in Trentino (3.3%), Campania (36.8%), Sicily (39.0%) and Friuli/Venezia Giulia (39.8%); this is explained by the fact that in the regions of the industrial triangle the number of wholesale businesses did not rise but the size of businesses increased by more than the national average.

The conclusion that the expansion of commerce (in particular of retail trading) follows the logic of a "refuge" sector is also substantially confirmed by a recent survey by INDIS[28]; in particular, among the 212 areas of commercial attraction into which the whole country was divided for the purpose of the study, the areas where the number of licences issued for fixed retail premises showed the biggest percentage increase between 1964 and 1968 were typically low-income areas, affected in many cases by loss of population.

(28) INDIS, Istituto Nazionale della Distribuzione, Rapporto sullo stato della distribuzione, Milan, Angeli, 1972, Vol.I

We give only a few figures for the most significant areas:

Number	Area	% variation licences 1964-69	% variation resident pop. 1964-69	Inhabitants per licence	Spending potential per inhabitant (Italy = 100)
1	Sapri	+ 40	+ 1	36	39
2	Vallo di Lucania	+ 39	- 2	44	31
3	Lamezia Terme	+ 32	- 1	47	32
38	Naples	+ 20	+ 7	60	77
44	Rome	+ 20	+ 10	53	130
	ITALY	+ 13	+ 4	50	100
126	Venice	+ 10	+ 5	49	135
145	Turin	+ 9	+ 11	59	145
183	Milan	+ 5	+ 9	55	168
210	Genoa	- 3	+ 1	53	167
211	Savigliano	- 5	+ 2	44	88
212	Pisa	- 5	+ 4	47	130

On the basis of the analyses so far made, commercial efficiency and profitability may be expected to vary appreciably between regions; a series of indicators confirming this is given in Table 27.

The first indicator is the average size of all commercial businesses in the broad sense (including hotels and ancillary activities). In both 1961 and 1971, average size was below the national figure in 13 regions and in 10 of these there were less than two employees per local unit. The latter group was made up of the same regions in both years; they were Umbria, Marches, Abruzzi, Molise, Campania, Apulia, Basilicata, Calabria, Sicily and Sardinia (i.e. all the regions to the south of Tuscany except Latium). Between the two years in question, average size for the whole country fell minimally (from 2.22 to 2.21), while 7 regions recorded an increase; in four of these - Piedmont, Lombardy, Tuscany and Latium - the figure was already over 2. The figure for three others - Umbria, Basilicata and Sicily - was and still is below 2. The regions showing a relatively greater increase are those where average size was already higher; the increase is therefore very small in all cases.

In the other regions, average size fell over the ten-year period, with the biggest drops in Trentino, Friuli, Liguria, Emilia and Campania.

If we are to explain the real position in the sector the data so far analyzed must be linked in some way with the economic situation, in order to show how the sector is wholly or partly linked with these variables. A first possible step is to calculate the number of inhabitants served by each person employed in the commercial sector as a whole. The figures in Table 27 show that, for the country as a whole, each person employed in commerce serves' 19.5 people (on the basis of the population in 1971); they confirm that the number served by each person employed in the sector increases from the regions with the highest per capita income to those with the lowest. This is only one figure but it confirms our earlier finding that the distribution of commerce follows the pattern of incomes as well as the pattern of population. The variations of structure can, in fact, be explained by two factors: first, the less 'specialized' character of commerce in the poorer regions (with therefore a proportionately lower number of employees) and secondly, the level of expenditure in each region.

The same table also gives figures for average turnover per person employed in the 'Food, drink and tobacco and 'Clothing and footwear' branches of the retail sector in each region. These are naturally only averages, with the consequence that variation from the mean may be up to 50% in either direction in each region. Actual deviation from the mean cannot,however,be computed accurately from the data available. The average figure for the food branch for the country as a whole works out at about 23 million lire. Eight regions have a figure above this national average, chiefly regions with higher incomes. The region with the highest figure is Lombardy with 25 890 000 lire which is 11% above the national average. The region with the lowest figure is Sardinia with 15 125 000 lire, which is 33% below the national average.

The national average for the clothing branch is 15 386 000 lire, with nine regions above the average; the highest figure is again that for Lombardy, with 18 170 000 lire, 18% above the national average, while the region with the lowest figure is Friuli, with 12 580 000 lire, or 18% below the national average.

The ratio of the highest to the lowest figure is 1.67 for food and 1.44 for clothing; comparison of the two shows that structural differences are less in the clothing branch. As compared with the food branch, the goods handled by the

clothing branch require more equipment and capital, with the result that although concentration and rationalization are still inadequate in the case of clothing they are less so than in the case of food.   As is common knowledge, internal differences are greatest in the food branch, resulting in a wider variety of situations;   these differences and variations are repeated between the regions.

If we know the mark-up which retailers can and do put on the goods they sell, average turnover becomes a significant figure for calculating the productivity of each person employed.   Margins are difficult to evaluate, however;   they can be fixed freely for some products but are fixed by the producer for others.   In addition, retailers make reductions according to circumstances.   This being so, any figure for average turnover per person employed can only be of general significance.

Value added per person employed is more significant (also in Table 27). The calculation relates, however, to all commerce because with the data available no calculation can be made by sectors as was done in the case of turnover.

Value added or gross product is, of course, an aggregate consisting of the difference between the value of what is produced by each individual production unit and the value of the goods and services which the same unit consumes in the course of production.   In the case of commerce, it is the difference between the value of goods purchased by each retailer and the value of the same goods when sold.   Basically, this comprises: personnel costs, rent, amortisation, interest paid, owner's profit and shareholders' profit where applicable.   In he case of commerce, rent is a very high figure in the existing state of the building sector and at one and the same time represents both a cost element and a 'position'.   In 1971, average value added for the sector was under three million lire (2 912 000 lire).   The regions with an average of more than three million were, in order, Lombardy, Liguria, Piedmont, Tuscany and Latium.   Those with an average below three million but higher than the national average were Marches and Umbria.   The other regions were below the average, with the lowest figures in Basilicata and Molise.   Even more clearly than with the parameters previously considered, it emerges that the highest figures for value added per person employed come from the wealthiest regions and the lowest figures from the poorest.   The 62% difference between the regions with the highest and lowest figures (Lombardy and Basilicata) speaks very clearly for itself.

5.2.3 International comparisons

      In this section, we compare a number of parameters relating to the structure
of commerce in Italy with those for her two main partners in the EEC (France and
Germany), in the hope of identifying the most significant features peculiar to
Italian commerce.   International comparisons are subject to limitations but
nevertheless indicate the kind of development which has occurred in the same
sector in other countries and can serve as a basis for assessing the development
which has taken place in Italy.   The INDIS study to which reference has already
been made was followed very closely.

      A first comparison can be made of the number of businesses and numbers
employed in wholesale and retail trade;   as compared with the other two countries,
Italy has more businesses but fewer people employed for the two branches taken
together.   This also applies within the two branches with the sole exception
that Germany has most wholesale businesses (totalling 125 200, which was 40%
above the figure for Italy in 1968).   The automatic consequence of this inflated
number of businesses, not matched by numbers employed, is that the average size
of our businesses is smaller, as the following figures show.

Average size: numbers employed per business (in 1968)

	Wholesale trade	Retail trade	Total
ITALY	4.6	2.1	2.4
FRANCE	8.4	3.6	4.2
GERMANY	9.5	4.8	5.8

Source: our development of INDIS data

      There is also a big difference in the composition of employment: in Italy
only 35% are paid employees but the figure for commerce in the other countries
is much higher (69% in France and 73% in Germany).   The average number of paid
employees per business is then as follows: 0.84 in Italy
                                            2.90 in France
                                            4.22 in Germany

      This wide difference shows the extent to which our commerce is dominated
by small individual businesses (often family concerns) which are not capable of
absorbing paid labour.

A further comparison can be made of a number of productivity indicators for the sector.   It should be borne in mind that the total value of private consumption is roughly the same in France and Germany and is about 60% higher than the figure for Italy.   With the inflated number of businesses in Italy, average turnover (private consumption per trading unit) is therefore only about 40% of the average figure for France and Germany.   This wide difference in the quantity of goods sold by each business is not repeated to the same marked extent in productivity per person employed calculated on the basis of sector value added.

This can be seen from the following figures:

	GROSS PRODUCT per person employed		PRIVATE CONSUMPTION per trading unit	
	Lire '000	Index	Lire '000	Index
ITALY	2 600	100	36 320	100
FRANCE	3 600	138	90 930	250
GERMANY	3 400	131	88 600	244

Source: INDIS

The clear difference between the two indices may (according to the INDIS report already quoted) be attributed to the fact that 'the incidence of value added on turnover is appreciably higher for smaller businesses and marginal workers than for large undertakings'.   Hence, the relatively high level of value added per person employed in Italy (only slightly lower than for the other countries) is not due to equal levels of efficiency, but to the fact that 'in the case of the small individual businesses which are the main core of the sector, value added or trading margin is correlated not so much with the amount and quality of the services rendered as with the need for so many tiny businesses to survive'.

It should be recalled, however, that it is the number of businesses which is inflated in Italy and not the number of people employed;   consequently, if value added per person employed is uniformly compared with private consumption per person employed in commerce (instead of per business), the difference between the two indices is not so great;   when the calculation is made for retail trade only, the indices tend to indicate that 'efficiency' is some 50% higher in the other countries than in Italy (with the exception of private consumption per

person employed in retail trading in Germany, which is only about 22% higher than the equivalent figure for Italy), as can be seen from the following figures.

	GROSS PRODUCT PER PERSON EMPLOYED IN RETAIL TRADING		PRIVATE CONSUMPTION PER PERSON EMPLOYED IN RETAIL TRADING	
	Lire '000	Index	Lire '000	Index
ITALY	3 490	100	18 891	100
FRANCE	5 390	154	29 627	157
GERMANY	5 380	154	23 121	122

Year: 1968; for Italy 1969
Source: our development of INDIS data

Further points emerge when retail commerce is broken down according to the kind of goods sold (food and non-food businesses) and according to type of organization.

The breakdown of fixed retail businesses in 1971 was as follows:

FOOD BUSINESSES		NON-FOOD BUSINESSES	TOTAL BUSINESSES	INHABITANTS PER BUSINESS			
Number	% of total businesses			Food	Non-food	Total	
409 396	50.7	397 587	806 983	132.0	135.9	66.9	ITALY
250 140	47.9	272 100	522 240	207.9	191.1	99.6	FRANCE(+)
260 000	48.6	275 000	535 000	235.7	222.8	114.6	GERMANY

(+) 1973

It will be seen that Italy is the only one of the three countries still having more food shops than non-food shops; this is the result of opposed long-term changes in the number of retail businesses. During the 1960s, the number of food shops increased in Italy only. In fact, the average annual rate of increase from 1961 to 1971 was 0.60%, as compared with 3.05% for non-food businesses; overall, the number of retail outlets increased by 1.83% per annum. In France, by contrast, the number of food shops fell at an average rate of 3.40%, of non-food shops by 0.86% and of all retail outlets by 2.19% over the years 1962-70; in Germany the average annual drop in the number of food shops was 1.64% between 1960 and 1968 while numbers of non-food businesses rose by 1.71%

and the total number of retail outlets remained virtually unchanged (down by 0.01%).

In conclusion, over the ten years under review, retail commerce was not rationalized in the way which many people consider to be essential not merely for this sector but for the economy as a whole (because of the part which this sector plays in derermining the cost of living). Its backward state is clearly reflected in the economic data; in Italy both turnover per person employed and value added per person employed are still too low, with the result that individual businesses lead an extremely precarious existence and in many cases do not even do enough trade to provide a living for the people working in them (who are the owners in many cases).

Italy's inadequate degree of rationalization and structural backwardness as compared with other European countries are further confirmed by the share of the market held by the different forms of retail trading organization in the three countries (see Table 28).

Table 1

PERCENTAGE VARIATIONS OF IMPLICIT GROSS NATIONAL PRODUCT PRICES

BY SECTORS

Year	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(1)	(m)
1952	2.6	- 1.6	3.1	8.0	4.0	4.6	1.7	4.0	24.3	11.5	3.1
1953	3.4	- 0.6	1.0	5.5	1.8	7.9	3.2	3.1	19.3	4.5	3.0
1954	2.9	- 1.7	0.6	5.7	3.0	8.2	1.1	6.0	8.6	6.1	2.1
1955	2.5	0.7	3.5	5.2	1.6	6.6	0.1	7.0	11.4	8.1	3.6
1956	2.7	0.6	4.6	5.6	7.2	4.0	2.1	7.4	13.9	6.3	3.8
1957	- 1.1	1.6	1.9	0.7	2.4	4.0	- 2.6	4.2	9.5	5.4	2.2
1958	0	2.4	3.1	5.8	- 1.6	5.2	6.1	5.6	7.8	4.6	2.7
1959	- 6.8	- 1.5	- 0.2	3.1	0.6	2.5	- 3.4	5.8	7.4	3.2	- 0.5
1960	0.1	0.9	1.8	1.6	2.0	4.5	2.3	3.0	5.6	4.7	2.1
1961	6.5	2.2	2.2	- 2.9	- 0.4	- 5.0	- 1.6	4.0	5.2	5.4	3.0
1962	10.7	3.7	1.4	6.9	7.6	9.8	- 2.2	5.2	9.2	12.4	6.4
1963	4.1	8.9	8.7	7.9	6.0	11.8	26.2	13.2	2.8	19.0	9.1
1964	2.0	6.6	5.7	7.8	10.1	7.0	5.4	11.3	5.4	8.7	6.5
1965	2.9	1.5	5.2	6.5	0.2	7.6	5.0	6.5	2.8	10.1	3.8
1966	0.5	1.0	4.3	2.6	3.7	4.9	4.0	4.6	5.2	3.6	2.5
1967	1.8	1.8	2.3	5.0	4.4	2.8	2.0	6.4	6.0	2.4	2.6
1968	- 2.3	0.8	0.4	2.2	2.5	4.8	- 1.3	3.6	8.1	5.2	1.8
1969	7.6	4.9	1.1	2.8	2.0	8.5	3.9	3.4	5.9	5.0	4.6
1970	2.9	8.8	5.1	6.8	- 0.7	9.3	7.7	11.7	7.7	4.3	6.6
1971	3.8	5.9	5.0	7.3	6.2	12.9	0.7	10.0	4.3	16.7	7.4
(+) 1972	8.7	5.7	6.5		7.7	8.3		7.6	2.8	9.9	7.0
(+) 1973	21.7	9.6	5.8		12.0	11.9		6.8	12.4	12.9	10.9

(a) agriculture, forestry and fisheries

(b) industry

(c) commerce

(d) hotels and public catering

(e) transport and communications

(f) credit and finance

(g) insurance

(h) liberal professions and miscellaneous services

(i) housing

(1) public administration

(m) gross national product at factor cost

Source: ISTAT, National Accounts

The table shows the percentage annual increases of implicit value added prices at factor cost for the above sectors

(+) For 1972 and 1973, the figures for the two pairs of sectors c-d and f-g have been aggregated on the basis of available data.

Table 2

PERCENTAGE ANNUAL VARIATION OF IMPLICIT DOMESTIC PRIVATE CONSUMPTION PRICES BY GROUPS OF GOODS AND SERVICES

Year	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(l)	(m)	(n)
1952	3.8	3.9	- 2.4	17.7	8.2	2.1	3.3	3.6	14.5	5.4	3.9	4.4
1953	2.9	1.6	- 8.7	13.7	0.8	- 0.5	1.8	1.5	3.4	2.5	2.4	2.3
1954	1.7	0	1.2	6.6	2.0	2.8	3.7	7.5	1.4	4.2	3.7	2.4
1955	2.6	3.3	- 1.1	8.3	1.8	3.3	3.7	0.3	- 1.5	4.5	3.7	2.9
1956	5.3	0.6	- 1.1	11.7	2.6	2.9	5.3	3.9	3.2	4.3	3.5	4.7
1957	- 0.4	0.1	2.7	8.1	1.4	3.9	2.5	4.8	3.3	1.3	1.7	1.7
1958	1.6	0	0.4	6.5	- 1.9	2.8	2.3	1.6	9.8	3.7	3.0	2.1
1959	- 3.8	4.6	- 1.1	6.2	- 2.0	2.0	3.7	- 1.2	1.3	2.5	1.5	- 0.7
1960	0.7	2.2	0.9	5.0	- 2.7	0.9	2.7	- 2.2	11.9	3.1	0	1.3
1961	2.7	- 2.6	1.0	5.3	0.3	- 0.2	2.5	- 0.3	4.1	3.0	- 2.0	2.2
1962	6.7	2.3	3.4	9.8	1.9	3.5	4.1	2.3	0.2	6.3	4.5	5.7
1963	8.5	10.7	6.0	4.9	3.1	3.8	10.4	4.1	1.6	9.3	8.0	7.3
1964	4.8	0	5.9	5.5	2.7	4.2	10.6	6.3	12.2	3.5	8.3	5.3
1965	4.7	0	3.3	4.4	0	1.0	4.1	3.7	17.1	6.7	5.0	4.2
1966	2.6	0	3.1	5.5	0.3	1.1	3.4	2.0	11.8	3.6	3.2	2.8
1967	2.1	0	2.8	5.4	6.7	1.5	4.5	2.3	5.5	3.6	3.2	2.9
1968	0.3	0	0.9	7.3	- 1.2	2.0	2.6	1.4	8.6	1.9	2.3	1.6
1969	2.8	3.6	2.2	5.6	- 0.6	2.8	3.2	2.5	0.8	3.4	3.3	3.0
1970	4.3	2.5	6.4	8.9	1.1	5.6	8.5	4.7	- 0.6	5.3	6.3	5.4
1971	4.3	0	6.2	4.8	3.4	6.1	8.2	5.8	0	7.2	7.5	5.2
1972	6.8	- 0.1	6.0	3.8	- 0.4	4.1	4.4	5.0	10.9	6.5	9.4	5.6
1973	12.6	0.4	11.6	12.2	2.2	8.6	5.6	11.4	27.4	8.1	21.0	11.0

(a) food and drink

(b) tobacco

(c) clothing and footwear

(d) housing

(e) fuel and power

(f) furniture, furnishings, domestic appliances and services

(g) health and hygiene

(h) transport

(i) communications

(l) recreational and cultural goods and services

(m) other goods and services

(n) domestic private consumption

Source: ISTAT, National Accounts

Table 3

SECTOR INFLUENCES ON THE IMPLICIT DEFLATOR IN GROSS NATIONAL

PRODUCT AT FACTOR COST

Year	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(l)	(m)	
1952	17.6	- 18.1	11.3	3.3	8.2	4.0	0.2	7.7	30.5	36.5	- 1.0	100
1953	29.6	- 8.2	4.3	2.9	4.7	8.8	0.4	7.0	32.9	17.0	0.6	100
1954	30.7	- 31.5	3.6	4.2	10.1	13.2	0.2	18.2	20.2	30.3	- 0.1	100
1955	15.2	7.6	11.7	2.3	3.3	6.5	0	12.5	16.3	24.6	- 0.2	100
1956	13.6	5.6	13.6	2.3	13.8	3.5	0.2	11.7	18.9	16.7	0	100
1957	- 8.9	26.2	9.5	0.5	8.0	6.2	- 0.4	11.4	13.2	25.0	- 0.7	100
1958	0	32.8	13.3	3.6	- 4.2	7.0	0.8	12.8	16.7	18.2	- 1.1	100
1959	-265.5	-127.5	- 4.4	12.6	9.1	23.1	- 3.0	82.9	100.6	78.0	- 3.9	-100
1960	0.8	17.7	10.7	1.5	7.6	8.9	0.5	9.6	17.3	25.6	- 0.2	100
1961	34.1	28.7	8.5	- 1.7	- 0.9	- 6.0	- 0.2	8.2	10.3	19.0	0.1	100
1962	25.1	22.3	2.4	1.9	9.0	5.7	- 0.1	4.6	8.4	20.6	0	100
1963	6.1	37.3	11.0	1.5	4.5	4.9	1.1	8.2	1.7	23.2	0.5	100
1964	4.0	38.1	9.9	2.1	10.9	4.1	0.3	10.3	4.4	15.2	0.5	100
1965	9.9	14.5	16.2	3.0	0.3	8.2	0.6	10.4	4.0	32.1	0.8	100
1966	2.5	14.8	20.6	2.0	10.1	8.3	0.8	11.6	11.1	17.4	0.7	100
1967	8.4	25.2	10.4	3.5	11.1	4.5	0.4	15.1	11.9	10.4	- 0.9	100
1968	- 13.9	16.8	3.0	2.2	9.5	11.9	- 0.4	13.3	24.3	33.1	0.1	100
1969	18.0	41.0	2.9	1.2	3.0	8.3	0.4	5.0	6.8	12.1	1.2	100
1970	4.6	53.2	8.6	2.0	- 0.7	6.3	0.5	12.6	6.0	7.3	- 0.4	100
1971	4.7	28.2·	11.4	2.1	7.0	6.9	0.2	7.1	4.3	26.4	1.0	100
1972	11.3	32.2	13.3		7.9	7.2		8.4	2.1	17.6	0	100
+ 1973	18.5	32.3	6.7		7.4	5.9		4.2	5.2	13.4	6.4	100

(a) agriculture, forestry and fisheries

(b) industry

(c) commerce

(d) hotels and public catering

(e) transport and communications

(f) credit and finance

(g) insurance

(h) liberal professions and miscellaneous services

(i) housing

(l) public administration

(m) net earnings from abroad

Source: ISTAT, National Accounts; our development

+ For 1972 and 1973 the figures for sectors c-d and f-g have
been combined on the basis of available data

Table 4

SECTOR INFLUENCES ON THE IMPLICIT DEFLATOR IN DOMESTIC

PRIVATE CONSUMPTION

Year	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(l)	(m)	
1952	42.2	3.6	- 7.1	31.1	6.0	2.9	4.1	4.3	1.7	7.2	3.8	100
1953	69.4	3.2	-54.9	55.6	1.2	- 1.5	4.7	9.2	0.9	7.1	5.2	100
1954	29.3	0	4.9	20.0	2.3	6.0	7.1	15.0	0.3	9.2	5.9	100
1955	42.7	4.7	- 4.2	25.0	2.0	7.1	7.2	0.6	- 0.3	9.6	5.8	100
1956	52.0	0.5	- 2.4	22.2	1.7	3.5	6.1	7.4	0.4	5.2	3.4	100
1957	- 10.4	0.2	16.0	43.6	2.5	13.3	8.1	16.7	0.8	4.5	4.6	100
1958	32.5	0	5.7	28.0	- 2.5	7.4	5.7	4.3	2.6	10.0	6.3	100
1959	-273.2	25.6	-17.3	102.8	- 9.5	19.4	25.3	-12.2	1.5	25.4	12.3	-100
1960	24.4	6.3	6.9	41.0	- 6.3	4.2	12.6	-11.5	6.7	15.7	0	100
1961	54.4	- 4.5	4.5	25.1	0.4	- 0.6	6.8	- 1.0	1.3	8.7	4.9	100
1962	51.5	1.4	5.7	18.0	1.0	3.8	4.2	3.0	0	7.0	4.2	100
1963	49.7	5.0	7.8	6.5	1.2	3.3	8.3	4.5	0.2	7.8	5.7	100
1964	37.9	0	10.3	10.0	1.5	4.9	12.6	8.9	1.6	4.0	8.2	100
1965	48.1	0	7.1	10.2	0	1.1	6.7	6.8	3.3	10.0	6.5	100
1966	38.3	0	9.7	18.2	0.3	2.2	8.6	5.7	3.3	7.7	6.0	100
1967	29.8	0	8.8	17.5	7.4	2.9	11.3	7.0	1.7	7.6	6.0	100
1968	7.2	0	4.8	42.3	- 2.2	6.7	11.7	7.4	4.6	6.7	10.7	100
1969	37.5	3.6	6.6	18.4	- 0.6	5.3	8.4	7.8	0.2	6.8	6.1	100
1970	29.2	1.2	10.7	15.7	0.6	6.1	13.4	8.4	- 0.1	7.6	7.1	100
1971	30.9	0	10.9	12.0	2.2	9.8	7.5	11.2	- 0.1	8.0	7.6	100
1972	45.5	0	9.8	6.3	- 0.2	4.4	7.0	9.0	1.7	6.6	9.8	100
1973	41.9	0.1	9.3	9.9	0.6	4.9	4.5	10.1	2.7	4.1	11.9	100

(a) food and drink

(b) tobacco

(c) clothing and footwear

(d) housing

(e) fuel and power

(f) furniture, furnishings, domestic appliances and services

(g) health and hygiene

(h) transport

(i) communications

(l) recreational and cultural goods and services

(m) other goods and services

Source: our development of ISTAT data, National Accounts

Table 5

PERCENTAGE COMPOSITION BASED ON MONEY VALUES OF THE GROSS

NATIONAL PRODUCT AT FACTOR COST

Year	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1951	22.8	36.6	12.4	6.4	2.9	6.1	3.4	9.3
1952	21.5	35.9	12.9	6.5	3.0	6.1	4.0	10.0
1953	22.4	35.2	12.5	6.5	3.2	5.8	4.4	9.7
1954	20.6	36.1	12.6	6.6	3.5	5.9	4.6	9.9
1955	20.2	36.0	12.5	6.8	3,6	6.0	4.8	10.1
1956	19.1	35.7	13.1	7.5	3,7	6.1	5.3	10.1
1957	17.8	36.2	12.9	7.4	3,7	6.0	5.4	10.2
1958	18.4	35.7	12.9	6.9	3,8	6.0	5.6	10.3
1959	16.7	36.4	13.1	6.9	4,0	6.2	5.9	10.4
1960	14.7	37.8	13.3	7.2	4,2	6.1	5.9	10.4
1961	15.3	38.1	13.2	7.1	3,9	5.9	5.8	10.3
1962	14.9	38.3	12.9	7.5	4,0	5.6	5.8	10.5
1963	13.8	38.7	13.4	7.0	4,2	5.8	5.4	11.3
1964	13.4	38.2	13.4	7.1	4,4	6.1	5.4	11.6
1965	13,2	37.3	13.7	6.8	4,6	6.2	5.3	12.3
1966	12.6	37.3	13.9	6.8	4,8	6.3	5.4	12.1
1967	12.6	37.7	14.1	6.8	4,9	6.4	5.3	11.6
1968	11.1	38.3	14.1	7.0	5,0	6.7	5.5	11.6
1969	11.0	38.9	13.7	7.1	5,1	6.7	5.4	11.3
1970	10.1	40.2	13.8	6.7	5,3	7.2	5.3	10.8
1971	9.8	38.8	13.8	6.8	5,7	7.5	5.2	11.8
1972	9.2	38.7	14.1	6.9	6,0	7.6	5.0	12.0

(a) agriculture, forestry and fisheries

(b) industry

(c) commerce and public catering

(d) transport and communications

(e) credit and insurance

(f) liberal professions and miscellaneous services

(g) housing

(h) public administration

Source: our development of ISTAT data, National Accounts

Table 6

PERCENTAGE COMPOSITION BASED ON MONEY VALUES OF COMPOSITION

PRIVATE CONSUMPTION

Year	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(l)	(m)	
1951	46.8	4.1	13.0	6.9	2.9	6.1	5.4	4.7	0.5	5.6	4.0	100
1952	46.8	3.9	12.4	7.4	3.1	5.9	5.3	5.0	0.5	5.6	4.1	100
1953	46.6	3.9	12.3	7.9	3.0	5.9	5.1	5.1	0.5	5.5	4.2	100
1954	46.5	4.0	11.1	8.2	3.1	5.8	5.2	5.4	0.5	5.9	4.3	100
1955	46.3	4.0	10.7	8.5	3.1	5.7	5.4	5.4	0.5	6.0	4.4	100
1956	46.1	3.8	10.3	8.9	3.1	5.7	5.4	5.9	0.6	5.7	4.5	100
1957	44.8	3.8	10.2	9.3	3.1	5.9	5.6	6.0	0.6	6.0	4.7	100
1958	45.2	3.8	9.8	9.6	2.9	5.9	5.5	6.0	0.6	6.0	4.7	100
1959	43.8	3.9	9.6	10.1	2.9	5.9	5.7	6.2	0.7	6.2	5.0	100
1960	43.4	3.9	9.5	10.2	2.9	5.8	5.8	6.5	0.7	6.3	5.0	100
1961	43.0	3.7	9.6	10.1	2.9	6.0	5.8	6.9	0.7	6.2	5.1	100
1962	42.8	3.5	9.4	10.2	2.9	6.1	5.7	7.3	0.7	6.2	5.2	100
1963	42.5	3.4	9.5	9.6	2.8	6.4	5.8	8.0	0.7	6.1	5.2	100
1964	42.3	3.2	9.4	9.8	2.9	6.3	6.4	7.6	0.7	6.1	5.3	100
1965	42.6	3.1	9.0	9.6	3.0	5.9	6.8	7.6	0.8	6.2	5.4	100
1966	42.2	3.0	9.0	9.5	3.0	5.7	7.2	8.1	0.8	6.1	5.4	100
1967	41.3	2.9	9.1	9.4	3.2	5.6	7.3	8.9	0.9	6.0	5.4	100
1968	40.5	2.9	9.1	9.8	3.1	5.7	7.6	8.9	0.9	6.0	5.5	100
1969	40.0	3.0	8.9	9.8	3.1	5.7	7.8	9.3	0.9	6.0	5.5	100
1970	39.1	2.8	9.2	9.6	3.1	5.9	8.5	9.5	0.9	5.9	5.5	100
1971	38.3	2.7	9.1	9.6	3.1	6.0	8.8	10.0	0.9	5.7	5.8	100
1972	37.8	2.7	9.2	9.4	3.1	6.1	9.0	10.2	0.9	5.7	5.9	100
1973	37.6	2.5	9.1	9.2	2.9	6.4	9.1	10.0	1.1	5.7	6.4	100

(a) food and drink

(b) tobacco

(c) clothing and footwear

(d) housing

(e) fuel and power

(f) furniture, furnishings, domestic appliances and services

(g) health and hygiene

(h) transport

(i) communications

(l) recreational and cultural goods and services

(m) other goods and services

Source: ISTAT, National Accounts

INDICES OF WHOLESALE AND RETAIL PRICES AND THEIR RELATIONSHIP

(1953 = 100)

Year	(1)	(2)	(3)	$\frac{(1)}{(2)}$	$\frac{(1)}{(3)}$
1956	108.8	100.3	101.7	1.085	1.070
1957	110.2	100.5	102.7	1.096	1.073
1958	113.3	100.5	100.9	1.127	1.123
1959	112.8	97.0	97.9	1.163	1.152
1960	115.0	97.5	98.8	1.180	1.168
1961	117.6	97.4	99.0	1.207	1.190
1962	123.3	101.9	102.0	1.210	1.209
1963	132.3	107.6	107.3	1.230	1.235
1964	140.8	111.6	110.9	1.261	1.265
1965	145.7	114.2	112.7	1.285	1.302
1966	150.1	116.2	114.4	1.292	1.312
1967	155.7	115.3	114.2	1.350	1.363
1968	157.8	115.0	114.6	1.372	1.376
1969	162.0	119.6	119.1	1.354	1.360
1970	169.9	127.1	127.8	1.337	1.329
1971	178.4	131.8	132.1	1.351	1.348
1972	185.3	136.8	137.5	1.354	1.369
1973	208.5	161.0	162.0	1.296	1.288
1974	248.6	203.6	228.1	1.221	1.090

(1) General index of retail prices

(2) General index of wholesale prices of final consumption goods

(3) General index of wholesale prices

Source: our development of ISTAT data

Table 8

ANNUAL PERCENTAGE VARIATIONS OF WHOLESALE PRICES

BY GROUPS OF PRODUCTS

Year	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(l)	(m)	(n)	(o)	(p)
1957	1.0	- 3.3	- 6.9	2.5	- 0.5	-1.5	2.1	- 0.5	3.9	3.3	7.0	1.8	1.6	1.3
1958	- 1.7	1.7	5.9	0.8	-16.2	-2.0	- 2.8	0	-3.2	- 4.0	- 9.1	- 1.1	-1.2	2.8
1959	- 3.0	- 6.8	-11.5	- 0.2	0	-2.1	- 1.8	- 1,4	-0.8	- 1.3	- 6.9	- 2.8	-2.6	- 0.4
1960	0.9	1.7	1.6	- 0.2	9.1	-1.7	0.7	1,0	2.7	1.5	- 4.5	0.8	-2.7	2.3
1961	0.2	1.8	2.9	0.5	- 3.8	2.4	- 0.2	- 1,2	0.1	1.2	- 3.3	5.2	-1.1	2.1
1962	3.0	8.7	13.4	4.3	- 3.9	0.3	1.5	0,9	4.0	1.0	1.5	0.5	-0.6	4.7
1963	5.2	6.2	4.3	10.8	2.9	-0.4	4.8	7,7	3.4	3.0	3.5	10.5	3.6	7.5
1964	3.3	- 0.1	- 4.6	8.3	- 0.7	-1.0	4.3	5,7	4.2	1.3	4.7	8.8	5.1	5.9
1965	1.6	4.0	5.1	4.8	- 3.7	-4.6	0.9	3,9	-0.8	0.8	0.4	- 8.1	3.2	4.6
1966	1.5	1.8	3.4	- 0.3	1.0	0.6	1.5	1,2	2.9	1.7	0.4	- 3.1	0.7	2.4
1967	- 0.2	- 0.8	0.1	- 1.4	- 6.8	0.4	0	- 2,9	0.6	- 0.3	7.0	1.0	-0.9	3.7
1968	0.4	1.8	3.2	- 0.1	0	-2.7	0	- 1,3	0.7	0.7	3.0	3.7	-4.0	1.3
1969	3.9	5.9	4.4	9.1	3.4	5.0	3.6	3,6	4.3	4.7	0	4.7	0	3.0
1970	7.3	4.8	5.8	4.2	- 7.2	19.3	7.9	6,4	8.7	9.6	5.6	6.8	6.5	4.9
1971	3.4	2.2	1.2	4.4	- 4.9	6.0	3.6	4,3	4.1	1.5	12.0	1.9	1.1	4.8
1972	4.1	10.3	7.1	12.2	28.8	8.1	3.0	2,9	7.2	3.4	- 1.0	1.3	-0.9	5.7

(a) general index of wholesale prices

(b) overall index for agricultural products

(c) agricultural food products

(d) animal food products

(e) non-food agricultural and animal products

(f) timber

(g) overall index for non-agricultural products

(h) products of food and related industries

(i) products of non-food agricultural processing industries

(l) metallurgical and engineering products

(m) fuels and lubricants

(n) building materials

(o) chemicals and related products

(p) general index of retail prices

Source: our development of ISTAT data

Table 9

RESULTS OF ESTIMATED CROSS-SECTION CORRELATIONS BETWEEN PRODUCTIVITY AND PRICES FOR 7 SECTORS

The estimated equation was: $\boxed{y = m\,x + b}$

Results of estimates using:

y = total % increase of implicit value added prices for the sector over the period in question;

x = total % increase in the physical productivity of the sector in the same period.

PERIOD		r	R^2	t	Degree of significance
1951-63		-0.8598	0.7393	-3.7648	2%
1963-71		-0.7211	0.5199	-2.3271	N.S.*
1951-71		-0.8116	0.6587	-3.1062	5%

Results of estimates using the same variables, but eliminating public administration and separating the two branches "Commerce" and "Hotels and public catering":

PERIOD	m	b	r	R^2	t	Degree of significance
1951-63	-0.8735	102.4046	-0.7609	0.5789	-2.6219	5%
1963-71	-0.8077	80.0117	-0.5827	0.3395	-1.6032	N.S.
1951-71	-0.8075	228.8492	-0.6617	0.4378	-1.9734	N.S.

Results of estimates using:

y = logarithm of the index of prices at the end of the period, with the value at the start of the period = 100;

x = logarithm of the index of physical productivity at the end of the period, taking its initial value = 100.

PERIOD	m	b	r	R^2	t	Degree of significance
1951-63	-0.9408	9.7599	-0.7813	0.6105	-2.7993	5%
1963-71	-0.8770	9.3210	-0.6096	0.3716	-1.7197	N.S.
1951-71	-0.9248	10.3732	-0.7172	0.5144	-2.3013	N.S.

Results of estimates using:

y = logarithm of increase in prices;

x = logarithm of increase in physical productivity.

PERIOD	m	b	r	R^2	t	Degree of significance
1951-63	-1.0846	8.1073	-0.7873	0.6198	-2.8552	5%
1963-71	-1.0897	7.7961	-0.6756	0.4564	-2.0489	N.S.
1951-71	-1.0298	9.6006	-0.7580	0.5745	-2.5985	5%

NOTE: IN THIS AND ALL FOLLOWING TABLES EQUATIONS NOT ACCEPTABLE WITHIN 5% ARE NOT CONSIDERED TO BE SIGNIFICANT.

* N.S. = not significant

Table 10

RESULTS OF ESTIMATED CROSS-SECTION CORRELATIONS BETWEEN

PRODUCTIVITY AND PRICES FOR 22 SECTORS

The estimated equation is of the type:

$$y = m\, x + b$$

1) Results of estimates where:

   y = total percentage increase of implicit sector value added prices over the
   whole period studied;

   x = total percentage increase of physical productivity over the same period.

2) Results of estimates where:

   y = logarithm of the index of sector prices at the end of the period, taking
   its initial value to be 100;

   x = logarithm of the index of sector physical productivity at the end of the
   period, taking its value at the start of the period to be 100.

PERIOD	m	b	r	R^2	t	Degree of significance
1)						
1951-61	-0.5422	50.3159	-0.7942	0.6307	-5.844	1%
1951-63	-0.6728	90.1453	-0.8642	0.7468	-7.6797	1%
1963-71	-0.7546	69.0235	-0.4947	0.2447	-2.5457	2%
2)						
1951-61	-0.9728	9.6393	-0.8109	0.6576	-6.197	1%
1951-63	-1.1860	10.9562	-0.8949	0.7954	-8.8181	1%
1963-71	-0.8276	9.0092	-0.4988	0.2488	-2.573	2%

Table 11

RESULTS OF ESTIMATED TIME SERIES CORRELATIONS
BETWEEN PRICES AND PRODUCTIVITY

The estimated equation is of the type: $\boxed{y = m x + B}$

The period covered is 1952-1971, with the following variables:

y = annual percentage variation of implicit value added prices for the sector in question;

x = annual percentage variation of the physical productivity of labour in the sector in question.

SECTOR	m	b	r	R^2	t	Degree of significance
Agriculture			0.0515	0.0026	0.2188	N.S.
Industry	-0.7868	6.4287	-0.5365	0.2879	-2.6974	2%
Commerce and hotels and public catering			0.1951	0.0381	0.8440	N.S.
Transport and communications			0.0723	0.0052	-0.3074	N.S.
Credit and insurance	-0.8446	9.1980	-0.4950	0.2450	-2.4168	5%
Liberal professions and miscellaneous services			-0.1140	0.0130	-0.4867	N.S.
Public administration			-0.2052	0.0421	-0.8895	N.S.

Table 12

The estimated equation is of the type: $\boxed{y = m\ x\ +\ b}$

See pages 53-4 for the explanation of the three models used.

PERIOD	m	b	r	R^2	t	Degree of significance
1)						
1951-63	-0.0011	50.2688	-0.0037	0	-0.0074	N.S.
1963-71	0.6746	-47.6048	0.9927	0.9854	16.4199	1%
1951-71	0.1021	48.7243	0.3661	0.1340	0.7868	N.S.
1963-72	0.6823	-58.1826	0.9612	0.9238	6.9639	1%
1951-72	0.0930	62.2778	0.3528	0.1245	0.7542	N.S.
2)						
1951-63	0.0639	3.404	0.0603	0.0036	1.8155	N.S.
1963-71	2.1131	-6.6430	0.9942	0.9884	18.4338	1%
1951-71	0.5348	1.1735	0.4601	0.2117	1.0365	N.S.
3)						
1951-63	0.0231	4.8605	0.0429	0.0018	0.086	N.S.
1963-71	1.0915	-0.9941	0.9924	0.9849	16.1557	1%
1951-71			0.4165	0.1735	0.9163	N.S.

Table 13

RESULTS OF ESTIMATED CROSS-SECTION CORRELATIONS BETWEEN
PRICES AND OTHER EARNINGS FOR 6 SECTORS

The comments for Table 12 apply in this case also.

PERIOD	m	b	r	R^2	t	Degree of significance
1)						
1951-63	0.2856	2.0789	0.7098	0.5038	2.0152	N.S.
1963-71	0.3315	9.8125	0.9336	0.8716	5.2116	1%
1951-71	0.1921	28.9795	0.8082	0.6532	2.7446	N.S.
1963-72	0.2740	17.9141	0.9383	0.8803	5.4247	1%
1951-72	0.1693	40.3977	0.8201	0.6726	2.8667	5%
2)						
1951-63	0.9274	-0.9232	0.6721	0.4518	1.8155	N.S.
1963-71	0.7202	0.4620	0.9545	0.9111	6.403	1%
1951-71	0.7266	0.2950	0.8501	0.7226	3.2282	5%
3)						
1951-63	0.5078	2.1716	0.7149	0.5110	2.0446	N.S.
1963-71	0.4616	2.5247	0.9411	0.8856	5.5644	1%
1951-71	0.4995	2.2375	0.8438	0.7121	3.1453	5%

Table 14

RESULTS OF ESTIMATED CROSS-SECTION CORRELATIONS BETWEEN PRICES AND

AVERAGE EARNINGS (per employee and per self-employed person) FOR 6 SECTORS

The estimated equations are of the type described for Table 12.

The independent variables are:

a) relationship between earnings of labour and number of paid employees in each sector;

b) relationship between other gross earnings and number of self-employed persons.

PERIOD	m	b	r	R^2	t	Degree of significance
a)						
1						
1951–63	0.2616	13.3324	0.3474	0.1207	0.7409	N.S.
1963–71			0.1525	0.0232	0.3085	N.S.
1951–71	0.8419	−255.5851	0.7481	0.5597	2.2549	N.S.
2						
1951–63	0.4891	1.3515	0.2744	0.0753	0.5706	N.S.
1963–71			0.0438	0.0019	0.0877	N.S.
1951–71			0.6768	0.4580	1.8387	N.S.
b)						
1						
1951–63			0.2365	0.0559	0.4868	N.S.
1963–71			0.6224	0.3874	1.5903	N.S.
1951–71			0.4447	0.1978	0.9931	N.S.
2						
1951–63 (+)						
1963–71			0.5187	0.2690	1.2133	N.S.
1951–71			0.2854	0.0814	0.5955	N.S.

(+) for this period the logarithmic conversion cannot be applied to variations of the independent variable because some variations are negative.

Table 15

<u>RESULTS OF ESTIMATED CROSS-SECTION REGRESSION EQUATIONS FOR</u>

<u>PRICES AND EARNINGS OF LABOUR AND FOR PRICES AND OTHER EARNINGS</u>

<u>FOR 22 SECTORS</u>

The estimated equations are of the type y = m x + b

The variables used were introduced by logarithmic conversion of their indices (taking the index at the start of the various periods considered to be 100).

Implicit value added prices for the sector were used as the dependent variable and the following two explanatory variables were used alternately:

a) total earnings of labour in each sector at current prices;

b) total other gross earnings in each sector at current prices.

PERIOD	m	b	r	R^2	t	Degree of significance
a)						
1951-61	0.3157	2.9122	0.2368	0.0561	1.090	N.S.
1951-63	0.2530	3.2570	0.1621	0.0263	0.7345	N.S.
1963-71	0.3566	2.9517	0.3748	0.1405	1.8075	N.S.
b)						
1951-61	0.3964	2.5408	0.5124	0.2626	2.6684	2%
1951-63	0.6420	1.2767	0.6914	0.4780	4.2795	1%
1963-71	0.2852	3.4366	0.6376	0.4065	3.7011	1%

Table 16

RESULTS OF ESTIMATED TIME SERIES REGRESSION EQUATIONS
FOR THE AGRICULTURAL SECTOR

The three models tested are described on pages 56-7. Implicit value added prices for the sector were again used as the dependent variable[+] while the various independent variables were[++]:

u = total other gross earnings for the sector (at current prices);

v = ratio of other gross earnings to numbers of self-employed in the sector;

w = total earnings of labour for the sector (at current prices);

z = ratio of earnings of labour to number of paid employees in the sector.

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
1)							
w	1951-72	0.4622	659.2923	0.9733	0.9474	18.975	1%
z	1951-71	0.4619	718.5261	0.9463	0.8954	12.755	1%
u	1951-72	0.1723	437.8998	0.9589	0.9195	15.115	1%
v	1951-71	0.0242	71.9780	0.9726	0.9460	18.237	1%
2)							
w	1951-61			0.4066	0.1653	1.335	N.S.
w	1951-62	0.3585	2.2710	0.7120	0.5070	3.2066	1%
w	1951-63	0.3871	2.0990	0.8360	0.6987	5.053	1%
w	1961-71	0.3163	2.5438	0.9817	0.9637	15.462	1%
w	1963-71	0.2911	2.7157	0.9712	0.9433	10.195	1%
w	1951-71	0.3383	2.3941	0.9705	0.9419	17.546	1%
u	1951-61	0.2529	2.4670	0.7296	0.5322	3.200	2%
u	1951-63	0.3809	1.4832	0.8660	0.7499	5.744	1%
u	1961-71	0.6188	-0.4188	0.9596	0.9208	10.227	1%
u	1963-71	0.5515	0.1373	0.9234	0.8527	6.365	1%
u	1951-71	0.4860	0.6689	0.9655	0.9322	16.162	1%

(+) In the case of models 1 and 2, where the sector price index is used, the index is based on 1963 = 1000.

(++) In the case of models 1 and 2, where the absolute values of the independent variables are used, these values are calculated in thousand million lire (u,w) or in thousands of lire (v,z).

Table 16 continued

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of signification
3)							
w	1952-61	-0.8900	3.3634	-0,3717	0.1382	-1.132	N.S.
w	1952-63	0.4117	0.4094	0,5542	0.3071	2,105	N.S.
w	1961-73	0.7361	-2.7700	0,7481	0.5597	3,739	1%
w	1962-73	0.9014	-5.3165	0,8405	0.7064	4.906	1%
w	1963-73	0.9600	-5.7851	0,8351	0.6974	4.554	1%
w	1952-73	0.6002	-1,0098	0.7087	0.5023	4.493	1%
z	1952-61			0.3701	0.1370	1.127	N.S.
z	1952-62	0.8597	-1.9767	0,6321	0.3995	2.447	4%
z	1952-63			0,5300	0.2809	1.976	N.S.
z	1963-71			0,3231	0.1044	0.903	N.S.
z	1952-71	0,2178	0.4504	0,3502	0.1226	1.586	N.S.
u	1952-61	0.2350	0.1844	0.5936	0.3524	2.086	N.S.
u	1952-63	0.2714	0.9448	0.5233	0.2739	1.942	N.S.
u	1961-73	0.4475	2.2702	0.7761	0.6023	4.081	1%
u	1962-73	0.4850	2.3529	0.8005	0.6409	4.224	1%
u	1963-73	0.4776	1.9921	0,8169	0.6673	4.248	1%
u	1952-73	0.4053	1.2764	0.7028	0.4940	4.418	1%
v	1952-61	0.2143	-0.3895	0,5954	0.3546	2.096	N.S.
v	1952-62	0,2711	-0,1579	0,5921	0.3506	2.204	N.S.
v	1952-63	0.2587	-0.1420	0,5968	0.3562	2.352	5%
v	1961-71	0.3620	-0.7430	0.6735	0.4536	2.733	3%
v	1962-71	0.4842	-1,8724	0.6938	0.4814	2.725	3%
v	1963-71	0.3714	-1.2790	0.7230	0.5227	2.769	3%
v	1952-71	0,2895	-0.3639	0,6208	0.3855	3.360	1%

Table 17

The comments for Table 16 apply in this case also and the index of implicit
value added prices for the sector is again based on 1963 = 1000.

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
1)							
w	1951-72	0.0418	730.3675	0.9904	0.9809	32.034	1%
z	1951-71	0.2995	683.9649	0.9891	0.9784	29.305	1%
u	1951-72	0.0860	645.5196	0.9577	0.9172	14.886	1%
v	1951-71	0.0920	672.6487	0.9665	0.9341	16.405	1%
2)							
w	1951-61	0.0407	4.1217	0.5912	0.3495	2.200	N.S.
w	1951-62	0.0630	3.9468	0.7384	0.5453	3.463	1%
w	1951-63	0.1038	3.6264	0.8072	0.6515	4.739	1%
w	1961-71	0.3521	1.5116	0.9877	0.9755	18.934	1%
w	1951-71	0.2273	2.6416	0.9458	0.8945	12.693	1%
u	1951-61	0.0591	3.9857	0.7148	0.5110	3.067	2%
u	1951-63	0.1319	3.4280	0.7650	0.5852	3.939	1%
u	1961-71	0.4286	1.0211	0.9231	0.8522	7.203	1%
u	1963-71	0.3483	1.7242	0.8778	0.7705	4.847	1%
u	1951-71	0.2974	2.1441	0.9311	0.8670	11.130	1%
3)							
w	1952-61	0.0143	0.1573	0.0250	0.0006	0.070	N.S.
w	1952-63	0.4363	-3.8720	0.7649	0.5850	3.755	1%
w	1961-73	0.3378	0.2431	0.7297	0.5324	3.539	1%
w	1962-73	0.3391	0.4423	0.7543	0.5690	3.633	1%
w	1963-73	0.3706	0.3104	0.8085	0.6537	4.122	1%
w	1952-73	0.3979	-1.8517	0.6551	0.4291	3.877	1%
z	1952-61	0.5839	-3.4928	0.4273	0.1825	1.336	N.S.
z	1952-62	0.4989	-2.9551	0.6661	0.4437	2.679	3%
z	1952-63	0.5923	-3.5849	0.8964	0.8036	6.396	1%
z	1961-71	0.5247	-1.5529	0.8608	0.7410	5.074	1%
z	1962-71	0.5259	-1.5730	0.8533	0.7280	4.628	1%
z	1963-71	0.5474	-1.6006	0.8794	0.7734	4.888	1%
z	1952-71	0.6321	-3.2916	0.8619	0.7428	7.210	1%

Table 17 continued

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
3) u	1952-61	0.2137	-1.2657	0.5067	0.2567	1.662	N.S.
u	1952-63	0.0123	1.2138	0.0144	0.0002	0.046	N.S.
u	1961-73	-0.1976	6.3228	-0.3363	0.1131	-1.184	N.S.
u	1962-73	-0.1842	6.3914	-0.3208	0.1029	-1.071	N.S.
u	1963-73	-0.1899	6.5689	-0.3324	0.1105	-1.057	N.S.
u	1952-73	-0.0411	3.1347	-0.0561	0.0032	-0.251	N.S.
v	1952-61	0.1916	-0,9540	0.5230	0.2735	1.736	N.S.
v	1952-62	0.2175	-0,8449	0.4916	0.2416	1.694	N.S.
v	1952-63			0,1873	0.0351	0.603	N.S.
v	1961-71			-0,4846	0.2348	-1.662	N.S.
v	1962-71			-0,4819	0.2322	-1.556	N.S.
v	1963-71			-0,4846	0.2348	-1.466	N.S.
v	1952-71			-0,0320	0.0010	-0.136	N.S.

Table 18

RESULTS OF ESTIMATED TIME SERIES REGRESSION EQUATIONS

FOR THE COMMERCE AND HOTELS AND PUBLIC CATERING SECTOR

The comments for Table 16 apply in this case also, with the single variation
that the price index is based on 1963 = 10 000.   In the 3 models for this sector,
the dependent variable is also replaced by annual percentage variations of the
index of implicit domestic private consumption prices;   the estimates for these
equations are set out below as model 4.

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
1)							
w	1951–72	3.5776	6851.182	0.9868	0.9737	27.225	1%
z	1951–71	4.1561	5731.938	0.9903	0.9807	31.076	1%
u	1951–72	1.2466	6334.529	0.9922	0.9844	35.567	1%
v	1951–71	2.3011	5659.156	0.9924	0.9848	35.076	1%
2)							
w	1951–61	0.2059	3.1811	0.9895	0.9791	20.534	1%
w	1951–63	0.2133	3.1381	0.9882	0.9766	21.441	1%
w	1961–71	0.3654	2.1486	0.9823	0.9650	15.742	1%
w	1963–71	0.3243	2.4470	0.9729	0.9466	11.134	1%
w	1951–71	0.2838	2.7236	0.9864	0.9730	26.166	1%
u	1951–61	0.3119	2.1245	0.9882	0.9766	19.392	1%
u	1951–63	0.3006	2.2057	0.9904	0.9809	23.740	1%
u	1961–71	0.3950	1.4692	0.9899	0.9799	20.951	1%
u	1963–71	0.3641	1.7301	0.9824	0.9651	13.916	1%
u	1951–71	0.3476	1.8635	0.9954	0.9909	45.553	1%
3)							
w	1952–61	0.1734	0.1223	0.3287	0.1081	0.984	N.S.
w	1952–63	0.4508	3.0108	0.5677	0.3223	2.181	N.S.
w	1961–73	0.2146	1.4396	0.4386	0.1924	1.618	N.S.
w	1962–73	0.2072	1.7551	0.4514	0.2039	1.600	N.S.
w	1963–73	0.1960	2.0954	0.4495	0.2021	1.510	N.S.
w	1952–73	0.2181	0.6796	0.4016	0.1613	1.961	N.S.
z	1952–61			0.3978	0.1582	1.226	N.S.
z	1952–62			0.3177	0.1009	1.005	N.S.
z	1952–63	0.4559	–0.4762	0.7466	0.5575	3.549	1%
z	1961–71	0.5514	–1.3247	0.7815	0.6107	3.758	1%
z	1962–71	0.5323	–1.0841	0.7549	0.5698	3.255	2%
z	1963–71	0.5388	–0.9011	0.7998	0.6397	3.525	1%
z	1952–71	0.4619	–0.4348	0.7341	0.5389	4.587	1%

Table 18 continued

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
3)							
u	1952–61	0.3347	-0.4098	0.5176	0.2679	1.712	N.S.
u	1952–63	0.4902	-1.7009	0.8410	0.7072	4.915	1%
u	1961–73	0.4462	-0.3787	0.6159	0.3793	2.5902	3%
u	1962–73	0.4330	-0.0324	0.6367	0.4054	2.611	3%
u	1963–73	0.4223	0.2735	0.6551	0.4291	2.601	3%
u	1952–73	0.4840	-1.0463	0.6758	0.4568	4.100	1%
v	1952–61			0.2828	0.0800	0.834	N.S.
v	1952–62			0.2300	0.0529	0.709	N.S.
v	1952–63	0.3941	0.0034	0.7616	0.5800	3.716	1%
v	1961–71	0.3665	0.5207	0.6328	0.4004	2.452	4%
v	1962–71	0.3548	0.8405	0.6474	0.4191	2.402	5%
v	1963–71	0.3550	1.0687	0.6783	0.4601	2.443	5%
v	1952–71	0.3614	0.5041	0.6516	0.4246	3.644	1%
4)							
w	1952–61	0.3671	-2.2948	0.6481	0.4201	2.407	5%
w	1952–62			0.4706	0.2214	1.600	N.S.
w	1952–63	0.4812	-3.1912	0.6267	0.3928	2.543	3%
w	1961–72	0.3649	-0.0914	0.6411	0.4110	2.641	3%
w	1962–72	0.3727	0.0154	0.7057	0.4980	2.988	2%
w	1963–72	0.3756	-0.1496	0.7321	0.5360	3.061	2%
w	1952–72	0.3242	-0.5233	0.4936	0.2436	2.474	3%
u	1952–61	0.3066	-0.1606	0.4422	0.1955	1.394	N.S.
u	1952–63	0.4123	-0.7725	0.7316	0.5353	3.393	1%
u	1961–72			0.5708	0.3258	2.198	N.S.
u	1962–72			0.5889	0.3468	2.186	N.S.
u	1963–72	0.2889	1.2757	0.6243	0.3897	2.260	N.S.
u	1952–72	0.3773	-0.0932	0.6250	0.3906	3.490	1%

Table 19

RESULTS OF ESTIMATED TIME SERIES REGRESSION EQUATIONS

FOR THE TRANSPORT AND COMMUNICATIONS SECTOR

The comments for Table 16 apply in this case also, with the additional point that the index of implicit value added prices for the sector is based on 1963 = 10 000.

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
1)							
w	1951-72	2.4951	6757.671	0.9818	0.9640	23.130	1%
z	1951-71	2.1077	5901.302	0.9826	0.9655	23.072	1%
u	1951-72	6.9137	5490.492	0.9656	0.9323	16.598	1%
v	1951-71	3.2023	211.375	0.7350	0.5402	4.724	1%
2)							
w	1951-61	0.2228	2.9801	0.9604	0.9223	10.338	1%
w	1951-63	0.2340	2.9098	0.9780	0.9564	15.543	1%
w	1961-71	0.3772	1.9183	0.9738	0.9483	12.856	1%
w	1963-71	0.3202	2.1352	0.9505	0.9035	8.095	1%
w	1951-71	0.3030	2.4721	0.9868	0.9737	26.536	1%
u	1951-61	0.2679	2.8002	0.9683	0.9377	11.635	1%
u	1951-63	0.2854	2.6981	0.9607	0.9230	11.484	1%
u	1961-71	0.4755	1.5331	0.8586	0.7371	5.023	1%
u	1963-71	0.3409	2.4631	0.8870	0.7868	5.082	1%
u	1951-71	0.4144	1.9376	0.9620	0.9254	15.352	1%
3)							
w	1952-61	0.4666	-2.8212	0.4609	0.2125	1.469	N.S.
w	1952-63	0.5745	-3.8182	0.6910	0.4775	3.023	2%
w	1961-73	0.4258	-0.4152	0.4710	0.2218	1.771	N.S.
w	1962-73	0.4135	0.1360	0.4940	0.2440	1.796	N.S.
w	1963-73	0.3977	0.2492	0.4665	0.2176	1.582	N.S.
w	1952-73	0.4928	-1.8558	0.5214	0.2719	2.733	2%
z	1952-61	0.5531	-2.0808	0.6101	0.3723	2.178	N.S.
z	1952-62	0.6942	-2.9643	0.7287	0.5311	3.192	2%
z	1952-63	0.6447	-2.6319	0.7604	0.5782	3.703	1%
z	1961-71	0.6674	-2.4446	0.5961	0.3554	2.227	N.S.
z	1962-71	0.6001	-1.6336	0.4996	0.2496	1.631	N.S.
z	1963-71	0.5146	-1.0672	0.4273	0.1826	1.250	N.S.
z	1952-71	0.6343	-2.3593	0.6051	0.3661	3.224	1%

Table 19 continued

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
3)							
u	1952-61	0.1357	0.9270	0.5634	0.3174	1.928	N.S.
u	1952-63	0.0919	2.1019	0.3766	0.1418	1.285	N.S.
u	1961-73	0.1473	3.3774	0.4769	0.2274	1.799	N.S.
u	1962-73	0.1402	3.8303	0.4898	0.2399	1.776	N.S.
u	1963-73	0.1374	3.8256	0.4776	0.2094	1.544	N.S.
u	1952-73	0.1439	2.4611	0.4743	0.2250	2.409	3%
v	1952-61	0.1954	2.0474	0.7057	0.4980	2.817	3%
v	1952-62	0.2351	2.2264	0.7821	0.6117	3.765	1%
v	1952-63	0.1388	2.8401	0.4903	0.2404	1.779	N.S.
v	1961-71			0.3845	0.1478	1.249	N.S.
v	1962-71			0.3048	0.0929	0.905	N.S.
v	1963-71			0.2167	0.0470	0.587	N.S.
v	1952-71	0.1349	2.8709	0.4668	0.2179	2.239	4%

Table 20

RESULTS OF ESTIMATED TIME SERIES REGRESSION EQUATIONS
FOR THE CREDIT AND INSURANCE SECTOR

The comments for Table 16 apply in this case also, with the additional point that the price index for the sector is based on 1963 = 10 000.

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
1)							
w	1951-72	5.7649	5379.670	0.9939	0.9879	40.429	1%
z	1951-71	1.8916	4081.009	0.9951	0.9901	43.765	1%
u	1951-72	8.7926	5518.851	0.9877	0.9755	28.241	1%
v	1951-71	0.1288	5426.074	0.9758	0.9521	19.441	1%
2)							
w	1951-61	0.3876	2.0423	0.9772	0.9550	13.817	1%
w	1951-63	0.3740	2.1179	0.9825	0.9654	17.509	1%
w	1961-71	0.5439	0.9860	0.9975	0.9951	42.674	1%
w	1963-71	0.5387	1.0240	0.9948	0.9897	25.928	1%
w	1951-71	0.4264	1.8145	0.9924	0.9850	35.366	1%
u	1951-61	0.3958	2.1684	0.9878	0.9758	17.980	1%
u	1951-63	0.4101	2.0950	0.9908	0.9817	24.310	1%
u	1961-71	0.4399	1.9197	0.9805	0.9614	14.971	1%
u	1963-71	0.4068	2.1428	0.9654	0.9320	9.793	1%
u	1951-71	0.4250	2.0173	0.9945	0.9890	41.305	1%
3)							
w	1952-61	0.7133	-4.4259	0.4366	0.1906	1.373	N.S.
w	1952-63	0.9086	-6.6202	0.7043	0.4960	3.137	2%
w	1961-73	0.5890	-1.7138	0.6588	0.4340	2.904	2%
w	1962-73	0.4653	0.9177	0.7654	0.5858	3.760	1%
w	1963-73	0.4753	0.8411	0.7673	0.5887	3.589	1%
w	1952-73	0.5938	-1.9188	0.6810	0.4638	4.159	1%
z	1952-61			0.1230	0.0151	0.350	N.S.
z	1952-62			0.3287	0.1080	1.044	N.S.
z	1952-63			0.4633	0.2147	1.653	N.S.
z	1961-71	0.5384	0.2849	0.5543	0.3072	1.998	N.S.
z	1962-71	0.4068	2.7437	0.6340	0.4019	2.319	5%
z	1963-71	0.4020	2.7440	0.6266	0.3926	2.127	N.S.
z	1952-71	0.4833	0.9228	0.5374	0.2888	2.704	2%

Table 20 continued

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
3)							
u	1952-61	0.3530	-0.0555	0.8096	0.6554	3.900	1%
u	1952-63	0.4130	-0.0011	0.7916	0.6267	4.097	1%
u	1961-73	0.2680	3.5975	0.4844	0.2346	1.836	N.S.
u	1963-73			-0.0710	0.0050	-0.213	N.S.
u	1966-73	-0.4972	14.0217	-0.7090	0.5027	-2.462	5%
u	1952-73	0.2303	3.1524	0.4257	0.1812	2.104	5%
v	1952-61	0.3438	0.7675	0.7858	0.6174	3.593	1%
v	1952-62	0.3476	1.1469	0.7302	0.5332	3.207	2%
v	1952-63	0.4078	0.7986	0.8051	0.6483	4.292	1%
v	1961-71	0.3147	2.1220	0.6237	0.3890	2.394	5%
v	1962-71			0.1325	0.0176	0.378	N.S.
v	1963-71			0.1839	0.0338	0.495	N.S.
v	1952-71	0.2829	2.1927	0.5935	0.3522	3.128	1%

Table 21

<u>RESULTS OF ESTIMATED TIME SERIES REGRESSION EQUATIONS</u>

<u>FOR THE LIBERAL PROFESSIONS AND MISCELLANEOUS SERVICES SECTOR</u>

The comments for Table 16 apply in this case also, with the additional point that the price index for the sector is based on 1963 = 10 000.

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
1)							
w	1951-72	5.7615	4069.912	0.9818	0.9639	23.096	1%
z	1951-71	7.6433	3214.390	0.9895	0.9791	29.838	1%
u	1951-72	7.3169	4237.248	0.9885	0.9772	29.292	1%
v	1951-71	3.0065	2780.546	0.9892	0.9787	29.533	1%
2)							
w	1951-61	0.6765	-0.0221	0.9981	0.9961	48.156	1%
w	1951-63	0.6908	-0.1100	0.9985	0.9969	59.867	1%
w	1961-71	0.5858	0.6170	0.9900	0.9801	21.059	1%
w	1963-71	0.5290	1.0375	0.9903	0.9807	18.859	1%
w	1951-71	0.6502	0.1497	0.9966	0.9932	52.494	1%
u	1951-61	0.6377	0.4442	0.9933	0.9866	25.747	1%
u	1951-63	0.6198	0.5468	0.9954	0.9909	34.637	1%
u	1961-71	0.5660	0.8892	0.9921	0.9842	23.666	1%
u	1963-71	0.5250	1.1836	0.9884	0.9770	17.259	1%
u	1951-71	0.5889	0.7315	0.9974	0.9949	60.881	1%
3)							
w	1952-61	0.3319	2.4849	0.4432	0.1964	1.398	N.S.
w	1952-63	0.6939	-0.0450	0.8269	0.6838	4.651	1%
w	1961-73	0.3695	2.4895	0.6030	0.3636	2.507	5%
w	1962-73	0.3505	2.8127	0.5564	0.3096	2.117	N.S.
w	1963-73	0.3534	2.7631	0.5241	0.2747	1.846	N.S.
w	1952-73	0.3776	2.3058	0.6534	0.4270	3.860	1%
z	1952-61			0.4376	0.1915	1.376	N.S.
z	1952-62			0.4349	0.1891	1.449	N.S.
z	1952-63	0.8405	-0.7390	0.8242	0.6793	4.602	1%
z	1961-71	0.8100	-1.9299	0.8266	0.6833	4.406	1%
z	1962-71	0.8407	-2.3573	0.8105	0.6569	3.914	1%
z	1963-71	0.8662	-2.7374	0.8015	0.6424	3.546	1%
z	1952-71	0.6473	0.2312	0.7880	0.6208	5.429	1%

Table 21 continued

INDEPENDENT VARIABLE	PERIOD	m	b	r	R^2	t	Degree of significance
3)							
u	1952-61	0.1892	3.4160	0.4045	0.1636	1.251	N.S.
u	1952-63	0.4808	1.2698	0.7545	0.5693	3.636	1%
u	1961-73			0.3159	0.0998	1.104	N.S.
u	1962-73			0.3147	0.0991	1.048	N.S.
u	1963-73			0.2824	0.0797	0.883	N.S.
u	1952-73	0.2121	4.1897	0.4186	0.1753	2.061	N.S.
v	1952-61			0.2516	0.0633	0.735	N.S.
v	1952-62			0.2551	0.0651	0.791	N.S.
v	1952-63	0.3531	3.4996	0.6865	0.4713	2.985	2%
v	1961-71			0.4086	0.1670	1.343	N.S.
v	1962-71			0.3952	0.1562	1.217	N.S.
v	1963-71			0.3749	0.1405	1.070	N.S.
v	1952-71	0.2659	4.2418	0.4975	0.2475	2.433	3%

Table 22

MOVEMENT OF WHOLESALE AND PRODUCTION PRICES
OF AGRICULTURAL PRODUCTS

YEAR	Variation index of wholesale prices of agricultural products	Variation implicit gross saleable product prices for agriculture, forestry and fisheries	Difference between two variations
	(A)	(B)	(A)-(B)
1957	-3.3	-1.5	-1.8
1958	1.7	-0.6	2.3
1959	-6.8	-5.6	-1.2
1960	1.7	0.5	1.2
1961	1.8	5.3	-3.5
1962	8.7	9.2	-0.5
1963	6.2	4.5	1.7
1964	-0.1	2.6	-2.7
1965	4.0	3.0	1.0
1966	1.8	0.7	1.1
1967	-0.8	2.3	-3.1
1968	1.8	-1.8	3.6
1969	5.9	6.4	-0.5
1970	4.8	3.6	1.2
1971	2.2	4.2	-2.0
1972	10.3	7.2	3.1

SOURCE: our development of ISTAT data

Table 23

QUARTERLY VARIATIONS OF WHOLESALE AND RETAIL PRICES

Quarter	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2° 1961	-0.3	0.4	0.3	-0.5	0.4	0.5		0,7	0.8
3°	-0,4	0.5	-0.5	-0.8	0	1.0		1.0	0.8
4°	1.2	1.0	1.7	2.6	1.4	0.6		-0.7	-1.2
1° 1962	1.1	1.5	1.7	1.6	1.0	2.1	1.8	-0.2	-0,6
2°	1.2	1.5	1.7	2.0	1.6	2.1	0.8	-0.2	-0.4
3°	0.1	1,0	-0.1	-0.4	1.1	1.7	0.4	1.1	1.5
4°	1.8	1.6	2.1	2.9	1.8	1.1	1.5	-0.5	-1.1
1° 1963	2.2	3.4	2.5	3.4	4.3	1.4	3.4	0.9	0.9
2°	0.6	1.3	0.4	0.3	1.2	2.0	1.2	0.9	0.9
3°	0.3	0.5	0.1	-0.1	-0,2	1.2	1.3	0.4	-0.1
4°	2.4	2.2	2.8	3.8	2.6	1.2	2.3	-0.6	-1.2
1° 1964	0.9	1.5	0.7	0	0.9	1.9	0.8	1.2	0.9
2°	-0.3	1.2	-0.3	-1.0	0,7	1.1	3.6	1.5	1.7
3°	0	1.6	0.2	0.1	2.1	1.2	1.2	1.4	2.0
4°	1.4	1.4	1.9	2.8	1.7	0.9	1.3	-0.5	-1.1
1° 1965	0	1.2	0	0.3	1.3	0.7	1.6	1.2	1.0
2°	0.3	0.6	0.6	1.6	0.6	0.4	0.5	0	-1.0
3°	0.2	1.0	0.4	0.5	1.6	0	0.5	0.6	1.1
4°	1.2	0.6	1.6	2.4	0.4	0.2	1.4	-1.0	-2.0
1° 1966	0.8	0.7	0.6	0,4	0.7	0	1.1	0,1	0.3
2°	0	0.3	0	-0.6	0.1	0.3	0.7	0.3	0.7
3°	-0.7	0.2	-1.0	-1.6	-0.1	1.2	0.2	1.2	1.5
4°	0,1	0.9	0.3	0.4	0.3	0.8	1.7	0.6	-0.1
1° 1967	-0.2	1.9	-0.3	-0.9	0.6	0.4	6,0	2.2	1.5
2°	-0.3	0.6	-0.3	0.4	0.6	0.4	1.2	0.9	0.2
3°	0.3	0.8	-0.3	-0.5	1.1	0.4	0.4	1.1	1.6
4°	1.0	0.4	0.6	1.4	-0.3	0.5	1.4	-0.2	-1.7
1° 1968	0.2	0.2	-0.2	0	-0.2	0.1	1.0	0.4	-0.2
2°	-0.6	0.3	-0.3	-0.3	0.2	0.1	0.7	0.6	0.5
3°	-0.7	-0.2	-0.6	-1.1	-0.5	-0.1	0.1	0.4	0.6
4°	0.9	0.4	1.2	2.1	0.5	-0,1	0.9	-0.8	-1.6

Table 23 continued

Quarter	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1° 1969	1.0	0.8	1.2	1.8	0.9	0.4	1.0	-0.4	-0.9
2°	1.4	1.0	1.3	1.2	1.3	0.8	0.8	-0.3	0.1
3°	2.1	1.2	1.4	1.6	1.4	1.2	0.6	-0.2	-0.2
4°	2.2	1.0	2.2	2.1	0.2	1.5	1.7	-1.2	-1.9
1° 1970	2.7	1.6	2.2	2.2	1.4	1.5	1.9	-0.6	-0.8
2°	1.4	1.3	1.4	1.6	1.5	1.2	1.0	-0.1	-0.1
3°	0.1	0.8	-0.1	-1.6	0.7	1.3	0.5	0.9	2.3
4°	1.2	1.6	1.6	1.3	0.8	2.7	1.5	0	-0.5
1° 1971	1.1	1.2	1.2	1.8	0.9	1.1	1.6	0	-0.9
2°	0.4	1.1	0.3	0.4	1.0	1.2	1.2	0.8	0.6
3°	0.8	0.9	1.0	0.4	0.8	1.4	0.4	-0.1	0.4
4°	0.5	1.4	0.9	1.6	1.7	1.1	1.4	0.5	0.1
1° 1972	1.0	1.2	1.3	1.0	0.9	1.4	1.6	-0.1	-0.1
2°	0.9	1.4	1.2	1.5	1.7	0.8	1.4	0.2	0.2
3°	1.4	1.8	1.8	2.2	2.8	1.1	1.0	0	0.6
4°	2.8	2.6	3.6	4.6	2.9	1.8	3.3	-1.0	-1.7

This table shows variations of the following indices as compared with the previous quarter:

(1) wholesale prices

(2) retail prices

(3) wholesale prices of consumer goods

(4) wholesale prices of food consumption goods

(5) retail prices of food products

(6) retail prices of non-food products

(7) retail prices of services

(8) = (2) - (3)

(9) = (5) - (4)

SOURCE: our development of ISTAT data

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Table 24

LOCAL UNITS AND NUMBERS EMPLOYED BY SIZE GROUPS IN WHOLESALE

COMMERCE, RETAIL COMMERCE, FOOD SHOPS AND DEPARTMENT STORES

1) WHOLESALE COMMERCE								
	1961				1971			
Size group	LOCAL UNITS		NUMBERS EMPLOYED		LOCAL UNITS		NUMBERS EMPLOYED	
	Total	%	Total	%	Total	%	Total	%
2 or less	44 891	55.4	64 210	17.0	49 055	53.4	69 796	15.0
3-5	20 911	25.8	77 458	20.6	23 515	25.6	87 550	18.9
6-10 (+)	8 784	10.8	65 799	17.5	9 554	10.4	68 424	14.7
11-50 (+)	5 873	7.2	112 153	29.7	8 971	9.8	160 668	34.6
51-100 (+)	4 015	0.5	28 193	7.5	546	0.6	36 878	7.9
101 and over	150	0.2	29 013	7.6	201	0.2	41 125	8.8
TOTAL	81 024	100.0	376 827	100.0	91 842	100.0	464 441	100.0

(+) The classification by numbers employed is based on the 1951 and 1961 censuses; in 1971 the size groups are slightly changed to 6-9, 10-49 and 50-99. This applies to all subsequent figures in this table.

2) RETAIL COMMERCE : local units						
	1951		1961		1971	
	Total	%	Total	%	Total	%
2 or less	432 013	84.6	545 646	81.1	678 348	84.1
3-5	68 113	13.3	101 892	15.1	101 342	12.6
6-10	7 468	1.5	12 906	1.9	12 540	1.6
11-50	1 580	0.3	3 517	0.5	6 105	0.8
51-100	92	0	203	0	410	0.1
101 and over	20	0	100	0	188	0
TOTAL (+)	510 675	100.0	673 132	100.0	806 983	100.0

(+) This and all subsequent totals includes local units without paid employees.

Table 24 continued

3) RETAIL COMMERCE : numbers employed						
	1951		1961		1971	
	Total	%	Total	%	Total	%
2 or less	646 253	66.22	816 191	60.22	954 428	61.20
3-5	235 183	24.10	351 513	25.94	350 386	22.50
6-10	52 579	5.39	91 972	6.79	87 064	5.58
11-50	27 444	2.81	62 019	4.58	106 506	6.83
51-100	6 190	0.63	14 438	1.06	27 376	1.75
101 and over	3 934	0.40	19 162	1.41	33 854	2.17
TOTAL	975 915	100	1 355 295	100	1 559 615	100

4) RETAIL COMMERCE : percentage variations				
	1951-61		1961-71	
	Total	%	Total	%
2 or less	26.30	26.30	24.32	16.94
3-5	49.59	49.46	- 0.54	- 0.32
6-10	72.82	74.92	- 2.84	- 5.34
11-50	122.59	125.98	73.58	71.73
51-100	120.65	133.25	101.97	89.62
101 and over	400.00	387.09	88.00	76.67

5) RETAIL COMMERCE : food shops/local units						
	1951		1961		1971	
	Total	%	Total	%	Total	%
2 or less	268 865	85.00	322 698	83.68	354 943	86.70
3-5	42 745	13.51	57 540	14.92	88 040	11.73
6-10	3 803	1.20	4 758	1.23	3 532	0.86
11-50	475	0.15	595	0.15	1 261	0.31
51-100	8	0	9	0	75	0.02
101 and over	4	0	8	0	13	0
TOTAL	316 304	100	385 632	100	409 396	100

Table 24 continued

6) RETAIL COMMERCE : food shops/numbers employed						
	1951		1961		1971	
	Total	%	Total	%	Total	%
2 or less	413 766	69.42	482 366	66.72	513 349	70.48
3-5	146 662	24.61	195 888	27.09	162 883	22.37
6-10	26 294	4.41	33 060	4.57	24 114	3.31
11-50	7 226	1.21	9 419	1.30	21 254	2.92
51-100	456	0.08	650	0.09	4 615	0.63
101 and over	497	0.08	1 577	0.22	2 141	0.29
TOTAL	595 987	100	722 960	100	728 356	100

7) RETAIL COMMERCE : department stores/local units and numbers employed												
	1951				1961				1971			
	Local units		Numbers employed		Local units		Numbers employed		Local units		Numbers employed	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
2 or less	15	9.2	21	0.3	17	5.9	25	0.1	79	8.7	125	0.3
3-5	16	9.8	58	0.8	19	6.6	74	0.3	126	13.9	490	1.1
6-10	15	9.2	122	1.6	14	4.8	111	0.5	79	8.7	583	1.4
11-50	72	44.2	1 987	26.7	73	25.3	1 827	7.6	330	36.4	8 633	20.1
51-100	25	15.3	1 711	23.0	90	31.1	6 832	28.5	167	18.4	11 933	27.8
101 and over	12	7.4	2 544	34.2	76	26.3	15 140	63.1	119	13.1	21 228	49.4
TOTAL	163	100	7 444	100	289	100	24 009	100	906	100	42 998	100

Table 25

REGIONAL DISTRIBUTION OF NUMBERS EMPLOYED AND LOCAL UNITS FOR THE
WHOLE COMMERCIAL SECTOR (including hotels)

25/A Absolute figures

	1961		1971	
	LOCAL UNITS	NUMBERS EMPLOYED	LOCAL UNITS	NUMBERS EMPLOYED
Piedmont	101 262	220 123	108 978	242 222
Val d'Aosta	2 990	6 189	3 834	7 790
Lombardy	177 103	446 295	194 982	505 042
Trentino	17 933	52 298	22 139	60 517
Veneto	83 259	201 898	96 545	230 563
Friuli-V.G.	26 270	68 092	29 777	73 031
Liguria	52 225	127 398	56 230	130 782
Emilia-Romagna	91 736	207 569	108 274	233 996
Tuscany	84 726	180 520	93 386	204 071
Umbria	15 361	29 758	17 653	34 927
Marches	27 636	54 521	33 753	65 616
Latium	80 654	204 318	100 103	260 402
Abruzzi	23 560	45 624	27 935	52 259
Molise	6 274	10 218	6 786	11 021
Campania	86 986	173 464	98 045	185 225
Apulia	62 014	115 649	73 326	135 610
Basilicata	9 605	15 178	11 426	18 385
Calabria	35 168	59 597	39 604	63 300
Sicily	83 312	157 784	89 586	170 534
Sardinia	28 330	54 566	34 430	65 385
ITALY	1 096 404	2 431 059	1 246 792	2 750 678

Table 25 continued

25/B Percentage distribution and percentage increases

	PERCENTAGE DISTRIBUTION						
	1961		1971		1971	1961-71 % INCREASE	
	LOCAL UNITS	NUMBERS EMPLOYED	LOCAL UNITS	NUMBERS EMPLOYED	POPULATION	LOCAL UNITS	NUMBERS EMPLOYED
Piedmont/ Val d'Aosta	9.5	9.3	9.0	9.1	8.6	8.2	10.5
Lombardy	16.2	18.4	15.6	18.4	15.8	10.0	13.2
Trentino	1.6	2.2	1.8	2.2	1.6	23.5	15.7
Veneto	7.6	8.3	7.7	8.4	7.6	16.0	14.2
Friuli-V.G.	2.4	2.8	2.4	2.7	2.3	13.3	7.2
Liguria	4.8	5.2	4.5	4.8	3.5	7.6	2.6
Emilia-Romagna	8.4	8.5	8.7	8.5	7.2	18.0	12.7
Tuscany	7.7	7.4	7.5	7.4	6.6	10.2	13.0
Umbria	1.4	1.2	1.4	1.3	1.4	14.9	17.4
Marches	2.5	2.2	2.7	2.4	2.5	22.1	20.3
Latium	7.4	8.4	8.1	9.5	8.8	24.1	27.4
Abruzzi	2.1	1.9	2.2	1.9	2.1	18.6	14.5
Molise	0.6	0.4	0.5	0.4	0.6	8.2	7.9
Campania	7.9	7.1	7.9	6.7	9.2	12.8	6.8
Apulia	5.6	4.8	5.9	4.9	6.5	18.2	17.3
Basilicata	0.9	0.6	0.9	0.7	1.0	19.0	21.1
Calabria	3.2	2.5	3.2	2.3	3.4	12.6	6.2
Sicily	7.6	6.5	7.2	6.2	8.6	7.5	8.1
Sardinia	2.6	2.3	2.8	2.4	2.7	21.5	19.8
ITALY	100	100	100	100	100	13.7	13.1

SOURCE: our development of data from Censuses of Industry and Commerce

Table 26

GROWTH OF COMMERCE BY REGIONS FROM THE 1961 CENSUS

TO THE PRELIMINARY 1969 CENSUS

	TOTAL PERCENTAGE VARIATIONS 1951-1969					AVERAGE ANNUAL PERCENTAGE VARIATION 1951-1969				
	WHOLESALE COMMERCE		RETAIL COMMERCE			FIXED RETAIL SALES POINTS				
	Local Units	Numbers	Local Units	Numbers	Population	Food	Non-Food	Total	Population
Piedmont	- 2.8	45.5	35.2	45.7	24.5	1.0	2.7	1.7	1.2
Val d'Aosta	16.6	73.0	86.3	110.3	15.6	3.0	4.3	3.5	0.8
Lombardy	5.7	69.3	49.2	64.0	26.9	1.6	3.2	2.2	1.3
Trentino-Alto Adige	8.0	3.3	57.4	95.7	15.2	1.7	4.1	2.6	0.8
Veneto	32.4	98.4	66.4	79.6	4.3	1.9	4.2	2.9	0.2
Friuli-Venezia Giulia	13.5	39.8	50.2	59.8	0.2	1.7	3.1	2.3	0
Liguria	- 3.6	48.6	34.8	57.3	19.5	1.1	2.6	1.7	1.0
Emilia-Rom.	33.4	105.6	69.1	83.0	8.2	2.1	4.1	3.0	0.4
Tuscany	15.7	62.2	52.1	72.9	9.4	1.6	3.2	2.4	0.5
Umbria	53.5	132.5	65.8	88.9	- 2.6	2.1	3.8	2.8	- 0.2
Marches	38.6	99.1	74.5	91.9	0	2.6	3.8	3.1	0
Latium	60.8	109.9	111.0	128.0	38.8	4.0	4.6	4.2	1.8
Abruzzi	60.7	131.9	73.4	97.5	- 5.9	2.3	4.6	3.1	- 0.3
Molise	33.0	75.4	56.5	73.7	- 18.3	1.9	3.7	2.5	- 1.1
Campania	8.8	36.8	71.2	99.9	18.7	2.2	4.2	3.0	1.0
Apulia	52.2	112.0	69.8	100.7	12.7	2.2	4.1	3.0	0.7
Basilicata	96.0	167.1	95.9	115.9	- 0.3	2.9	5.5	3.1	0
Calabria	48.2	72.1	73.2	100.8	0.6	1.9	6.0	3.1	0
Sicily	10.7	39.0	48.9	78.7	8.7	1.7	3.2	2.2	0.5
Sardinia	55.0	121.1	88.2	109.1	17.2	3.2	4.6	3.6	0.9
ITALY	17.8	70.0	61.1	80.3	14.3	2.0	3.7	2.7	0.7
NORTH	10.2	67.1	50.9	66.0	16.6	1.6	3.4	2.3	0.9
CENTRE	35.1	88.7	73.3	98.2	18.8	2.7	3.9	3.2	0.9
SOUTH AND ISLANDS	27.9	64.8	67.0	94.8	9.6	2.2	4.1	2.9	0.5

SOURCE: INDIS Rapporto sulla distribuzione, Angeli, Milan 1972
         Development of ISTAT data

INDICATORS OF THE EFFICIENCY OF COMMERCE IN THE ITALIAN REGIONS

	(a) 1961	(a) 1971	(b)	(c)	(d)	(e)
Piedmont	2.17	2.22		23 122	17 721	3.122
Val d'Aosta	2.07	2.03	18.3 (+)	21 586	17 479	2 605
Lombardy	2.52	2.59	16.8	25 890	18 170	3.489
Trentino	2.92	2.73	14.0	22 936	15 783	2.418
Veneto	2.42	2.39	17.9	23 122	14 966	2 666
Friuli-V.G.	2.59	2.45	17.0	24 429	12 580	2.530
Liguria	2.44	2.33	14.3	20 714	14 330	3.421
Emilia-Romagna	2.26	2.16	16.5	23 014	15 869	2 740
Tuscany	2.13	2.19	17.2	23 731	14 076	3 074
Umbria	1.94	1.98	22.3	23 093	16 053	2 947
Marches	1.97	1.94	20.6	21 930	15 402	2 999
Latium	2.53	2.60	18.3	26 368	15 742	3.059
Abruzzi	1.94	1.87	21.6	18 150	14 669	2 309
Molise	1.63	1.62	27.4	17 005	14 897	2 168
Campania	1.99	1.89	27.0	22 318	13 153	2 631
Apulia	1.86	1.85	25.8	24 987	13 635	2 263
Basilicata	1.58	1.61	30.7	18 887	16.913	2 151
Calabria	1.69	1.60	29.3	17 274	14.966	2 477
Sicily	1.89	1.90	26.9	22 116	13.319	2 505
Sardinia	1.93	1.90	22.1	15 525	16.703	2 294
ITALY	2.22	2.21		23 570	15 386	2 912

(a) Numbers employed per local unit over the whole commercial sector when
   the censuses were taken;

(b) Ratio of population to total numbers employed in commerce in 1971;

(c) Ratio of consumer expenditure on food, drink and tobacco to numbers
   employed in the corresponding branch of retail trade in 1971 (lire '000);

(d) Ratio of consumer expenditure on clothing and footwear to numbers employed
   in the corresponding branch of retail trade in 1971 (lire '000);

(e) Value added per person employed over the whole commercial sector in 1971
   (lire '000).

SOURCE: Our development of census data and of 'I dati economici regionali
       1963-71', Angeli, Milan 1973.

Table 28

PERCENTAGE BREAKDOWN OF RETAIL TURNOVER BETWEEN

THE VARIOUS TYPES OF BUSINESS IN ITALY, FRANCE AND GERMANY (1969)

	(a)	(b)	(c)	(d)	(e)	Total
ITALY						
Food	4.1	2.0	7.6	13.7	86.3	100
Non-food	10.0	0.2	0.1	10.3	89.7	100
Total	6.1	1.4	5.1	12.6	87.4	100
FRANCE						
Food	21.4	4.2	11.3	36.9	63.1	100
Non-food	23.6	0.9	4.9	29.4	70.6	100
Total	22.4	2.6	7.5	32.5	67.5	100
GERMANY						
Food	18.6	5.4	48.1	72.1	27.9	100
Non-food	41.6	0.3	22.5	64.4	35.6	100
Total	31.3	2.7	33.9	67.9	32.1	100

(a) Integrated business of limited company type

(b) Integrated business of co-operative type

(c) Partnership

(d) Integrated partnership

(e) Independent

SOURCE: INDIS, op. cit. p. 39

Table 29

RESULTS OF ESTIMATED MULTIPLE REGRESSION EQUATIONS FOR 22 SECTORS

The model tested was of the following type:

$$\log p_i = a + b \log q_i + c \log r_i$$

See page 64 for the definition of the variables.

The figures for test F and the degrees of significance (up to 5%) are given below the estimated values for the various coefficients.

PERIOD	r	a	b	c	R^2	s^2
1951-61	w	9.258	− 0.960 (33.648) 1%	0.058 (1.188) N.S.	0.6594 (18.388) 1%	0.0343
1951-63	w	11.055	− 1.188 (71.469) 1%	− 0,015 (0.540) N.S.	0.7955 (36.955) 1%	0.0349
1963-71	w	7.261	− 0.688 (3.789) N.S.	0,194 (3.269) N.S.	0.2834 (3.757) 5%	0.0164
1951-61	u	7.528	− 0.986 (83.858) 1%	0,410 (39.215) 1%	0.9376 (142.768) 1%	0.0063
1951-63	u	7.792	− 0.979 (155.889) 1%	0,385 (18.314) 1%	0.9433 (158.019) 1%	0.0097
1963-71	u	7.404	− 0.788 (11.620) 1%	0,277 (13.698) 1%	0.6317 (16.296) 1%	0.0084

The explanatory variable r is represented alternately by :

w = index of earnings of labour

u = index of other gross earnings

Table 30

DEVIATION OF RECORDED VALUES FROM EXPECTED VALUES OF PRICE INDICES
FOR THE 22 SECTORS STUDIED

The remainders from the last two equations in the previous table are shown in this table; the variables are as follows:

y = actual value of the index of implicit value added prices for the sector at the end of the period (value at start of the same period = 100);

$\hat{y}$ = estimated value of the index of prices on the basis of the estimated equations;

$e = y - \hat{y}$

	1951-63			1963-71		
	y	$\hat{y}$	e	y	$\hat{y}$	e
Agriculture	130.2	100.8	29.4	120.6	109.8	10.8
Mining and quarrying	102.1	92.4	9.7	121.6	115.6	6.0
Food and tobacco	94.6	92.9	1.7	141.2	139.4	1.8
Textiles	76.8	65.4	11.4	128.1	124.6	3.5
Clothing and footwear	150.4	162.7	-12.3	147.1	131.5	15.6
Hides and skins	63.6	70.0	- 6.4	124.1	128.6	- 4.5
Timber and furniture	133.6	134.8	- 1.2	139.7	134.4	5.3
Metallurgy	65.6	68.0	- 2.4	106.3	120.7	-14.4
Engineering	134.5	139.2	- 4.7	137.1	145.9	- 8.8
Means of transport	98.1	90.2	7.9	115.9	103.2	12.7
Non-metal ores	113.9	120.7	- 6.8	112.3	113.8	- 1.6
Chemicals and related products	64.8	71.3	- 6.5	121.3	130.8	- 9.5
Rubber	50.0	56.3	- 6.3	132.9	131.1	1.8
Paper	69.5	73.9	- 4.4	103.7	114.4	- 10.7
Printing	242.2	230.1	12.1	157.4	149.8	7.6
Various manufactures	159.1	156.6	2.5	142.5	137.0	5.5
Electricity, gas, water	155.9	134.7	21.2	107.6	139.2	- 31.6
Construction	166.6	182.0	-15.4	181.8	159.1	22.7
Commerce and hotels and public catering	139.2	153.1	-13.9	135.1	146.7	- 11.6
Transport and communications	139.5	156.7	-17.2	131.6	141.0	- 9.4
Credit and insurance	180.8	175.8	5.0	166.1	156.5	9.6
Liberal professions and services	194.1	188.9	5.2	173.6	161.0	12.6

Table 31

HYPOTHETICAL INCREASE OF EX-WORKS PRICES OF NATIONALLY CONSUMED GOODS
AND SERVICES (public and private consumption) FROM 1965 TO 1966 RESULTING
FROM THE RISE OF OTHER NET EARNINGS IN THE INDIVIDUAL SECTORS

		(a)	(b)	(c)	(d)
1	Agriculture	0.9885475	15.37	1.5194	4
2	Mining and quarrying	0.0059019	124.71	0.0736	14
3	Food industry	0.1518341	22.03	0.3346	8
4	Textiles, footwear and clothing	0.1109200	58.05	0.6439	6
5	Chemicals	0.0555339	45.03	0.2500	10
6	Metallurgy	0.0024909	419.69	0.1045	13
7	Engineering	0.0670276	42.81	0.2870	9
8	Other manufactures	0.0849864	60.34	0.5128	7
9	Construction	0.0315793	71.90	0.2270	11
10	Electricity	0.0547449	- 0.25	- 0.0014	16
11	Commerce	0.8308531	39.78	3.3054	1
12	Transport	0.0541561	132.77	0.7190	5
13	Public administration	0.0432925	40.44	0.1751	12
14	Buildings	0.4398556	48.59	2.1374	3
15	Services	0.4951181	64.13	3.1757	2
16	Scrap, etc	0.0055143	77.14	0.0425	15
Total			43.97	13.5066	

(a) Theoretical coefficient and increase of implicit national consumption prices
for a 10% increase in other net earnings in the given sector;

(b) Actual percentage increase of other net earnings in the sector from 1965 to
1969;

(c) (a) x (b) : 10 = hypothetical increase of national consumption prices from
1965 to 1969 attributable to the rise of other net earnings in the sector;

(d) Position of sector in descending order of magnitude (c).
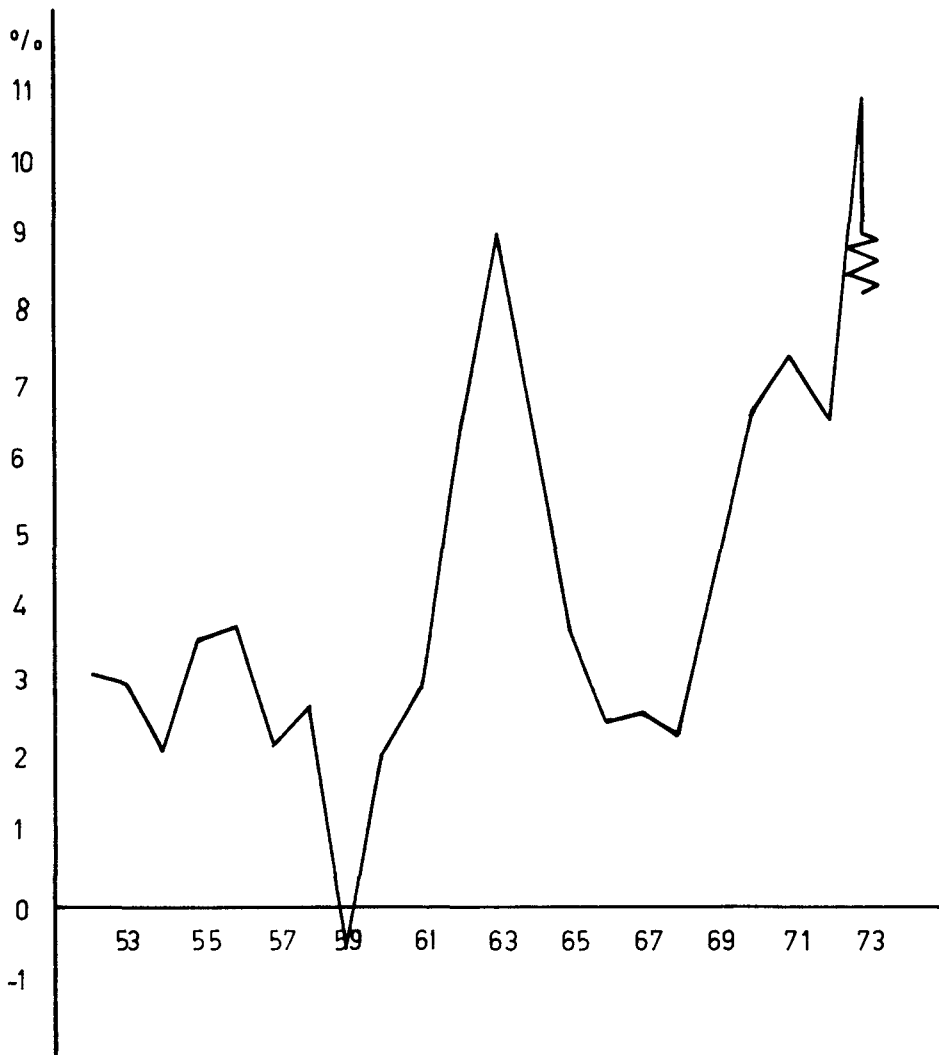
Graph 1. Percentage annual variation of GNP prices
(at factor cost)
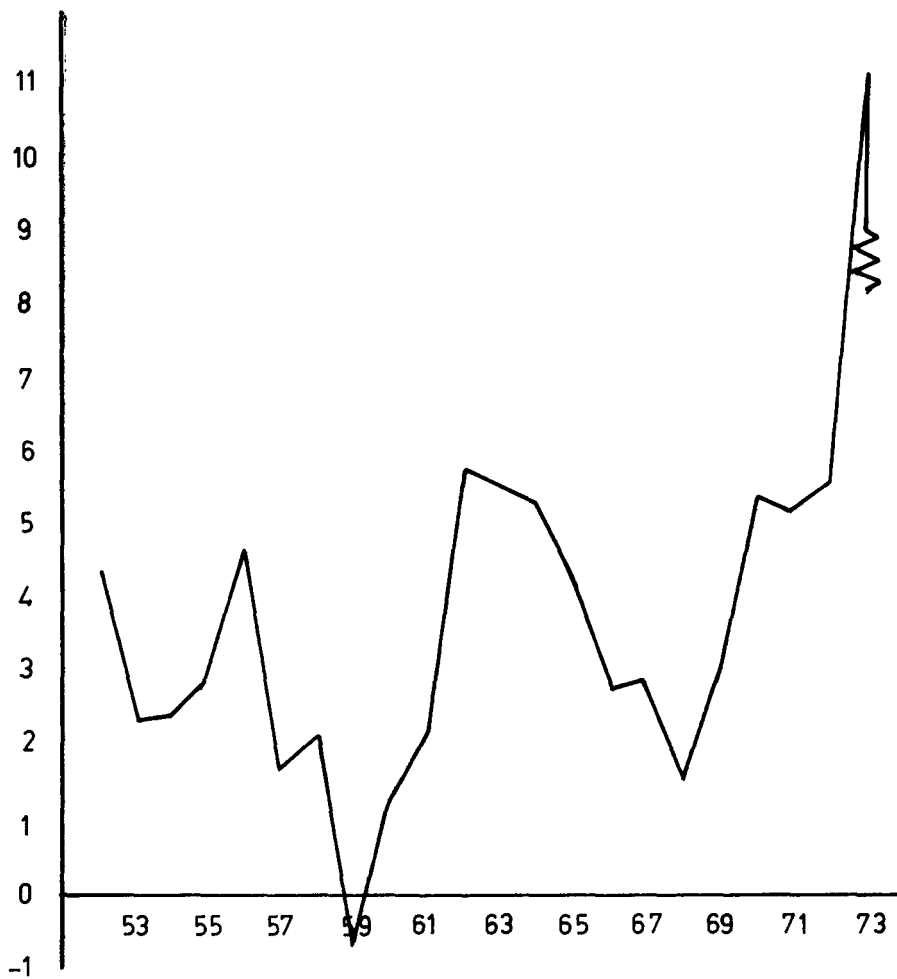
Graph 2.   Percentage annual variation of domestic private
           consumption prices
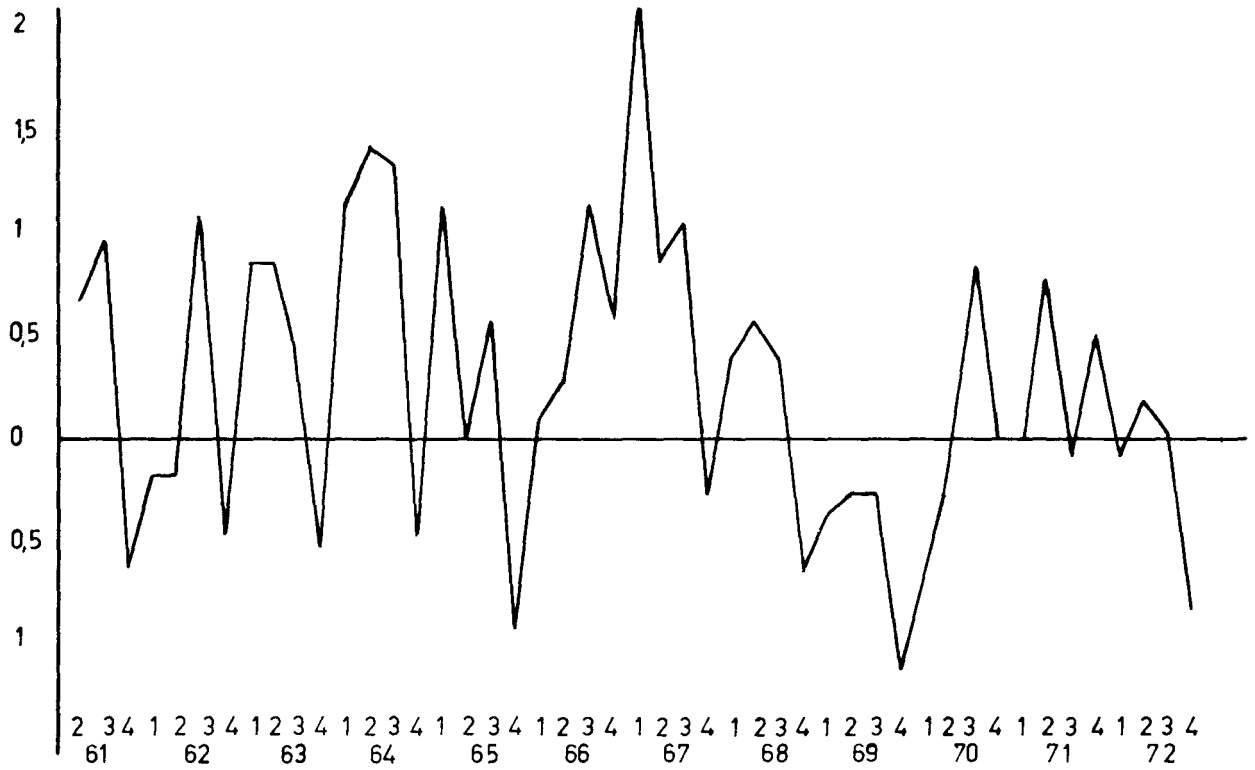
Graph 3. Quarterly variations: difference between
         retail and wholesale prices of **consumer**
         goods

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