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TRENDS AND DEVELOPMENT POSSIBILITIES OF ITALIAN AGRICULTURE

by

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1	Introduction	121
2	Production and demand	122
3	Main inputs	125
3.1	Labour	125
3.2	Land	128
3.3	Capital	129
4	Farm sizes and land tenure	130
5	Market structure	134

1 Introduction

Available forecasts, projections or simple extrapolation of trends into the 70 s are totally or to a large degree based on the events and relationships observed during the previous decade or earlier. It is hardly possible to follow other paths when quantitative estimates rather than simple indications of the direction of change or of development possibilities are the goal pursued. Yet I think there is a growing consciousness at various levels that the present decade could mark a turning point in the sense that new forces leading to behavioural changes of consumers, firms, trade unions, public bodies, will become increasingly important in shaping future trends, thus rendering even more uncertain than normally any attempt at predicting the future by relying on past experience. One could of course object that, in the absence of wars or revolutions, structural changes are never so sudden and that even a decade is not a long enough period. Whatever the degree of exaggeration inherent in the above anticipations, I think one has to pay due regard to the new feelings and preoccupations gradually shared by larger numbers and likely to give rise eventually to different sets of values, motivations, behaviours. I will simply mention some of the more apparent signs of this "new look": the concern for the preservation of natural resources and healthy environmental conditions, the demand for healthier food products and

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beverages, the feeling of uneasiness or overt rebellion against the failure to control increases in food prices, even for the products for which surpluses exist.

Although it is difficult to anticipate the impact that these changes, if they come about, will eventually exert, I believe that they will affect to some extent patterns and rates of change of production and demand, forms and rates of diffusion of technological progress, structural changes in farming and marketing. I also feel that countries can no longer rely mainly on the mobilization of productivity potentials by means of an indiscriminate application of modern technologies whatever their effects may be, or the adoption of organizational forms leading to greater farm efficiency in the traditional sense, because as part of the "new look" the traditional concepts of growth, productivity, efficiency will also have to take on new meanings.

Of course, I do not think we are ready yet to translate the outlook described above into operational guidelines capable, among other things, of testing the validity of projections and forecasts made up to now. Nor can we simply throw overboard whatever information of this kind is available simply because there is a feeling that it may finally turn out to be inaccurate. It is for this reason that I have preferred to draw first of all from available information and to illustrate what the various studies do expect in terms of future events; only secondarily I have attempted to introduce some remarks and doubts related to the influence of new possible values.

If for no other reason, I feel that such an approach might help us to place our discussion here, and perhaps future research projects, into a framework less anchored to already established and therefore traditional concepts. I am aware that Italy might not be the best observation point for explorations into new values; actually one can expect them to arise first in the more developed economies, not handicapped, as Italy still is nowadays, by a pronounced socio-economic dualism between sectors and main regions. But if such is the case, this is indeed the appropriate place to raise the question because of the presence of a large number of economists well aware of conditions and prospects in the more advanced European countries.

My presentation will closely follow the terms of reference which were suggested to me and cover, perhaps somewhat unevenly, the following four broad groups of subjects: production and demand, main inputs, structural conditions of farming and marketing.

2 Production and demand

In the decade 1961 - 70 gross product in agriculture increased at an average rate of 2.8 per year with a substantial contribution coming from the southern regions (3.8 per year). In terms of agricultural saleable output at constant prices the more relevant contribution has come from livestock and livestock products followed by the group including fruits, grapes and wine. Vegetable production has been expanded primarily in the Southern regions. To some extent, then, production trends show a certain correspondence with trends on the demand side, both domestic and foreign. Agricultural production has responded to a number of stimuli of various kinds such as price support, development of modern forms of production (poultry, vegetables, fruits), and the increased use of purchased inputs, new capital investments, favoured by subsidies of various kinds, to expand irrigation - especially in Central and Southern Italy -, mechanization, and fixed equipment for livestock production and for storing and processing perishable products.

However, as far as domestic demand is concerned, production has been unable to keep pace with the expansion of consumption of certain products such as meat which has required an increasing import of live cattle for fattening and of refrigerated and frozen meat. In other sectors government purchases through the State Agency AIMA have been necessary and more systematically made in recent times in order to ensure market equilibrium at the desired prices for the producers: this is the case of several fruits (apples, pears, peaches, oranges). Besides

fruits (except tropical ones) and vegetables, the only branches of production in which Italy has attained self-sufficiency are wine and soft wheat, while it remains a large importer of hard wheat (the largest within the EEC), and of feed grains.

The rate of increase of total expenditure for food in the last 20 years was higher than the corresponding output rate of growth; although slowing down, it is expected to continue to rise faster in the decade 1970 - 80. Of course this refers to the demand at the retail level and as such reflects the higher demand elasticity for goods and services which are incorporated in the primary products through processing, storing and distributing activities. The rate of increase of demand at the farm gate is no doubt considerably lower but direct estimates are not available. The farmer share of consumer expenditure for the more recent years has been estimated at about 48 %, with considerable variations among groups of products. 1). Past and projected trends of total expenditure for food and beverages are detailed in the Table 1. These rates and the corresponding average elasticities are however systematically higher than those resulting from the FAO projections, with the exception of animal products for which the two forecasts substantially coincide (Table 2) 2). The differences in the indices of projected per caput demand appear to stem mainly from differences in methodology and in the value and use made of elasti-

Table 1: PAST AND PROJECTED TRENDS OF TOTAL EXPENDITURE FOR FOOD AND BEVERAGES

	Yearly rates 1)		Average Elasticity 2)	
	1951-70	1970-80 3)	1951-70	1970-80 3)
Bread and flour products	1.89	1.94-2.07	0.239	0.263-0.250
Meat	7.28	4.13-4.60	1.375	0.746-0.724
Fish	3.29	3.53-3.90	0.536	0.618-0.592
Milk, cheese, eggs	3.31	2.25-2.52	0.540	0.333-0.336
Oils and fats	5.57	3.91-4.39	1.015	0.702-0.682
Fruits	5.85	4.85-4.32	1.074	0.790-0.790
Potatoes and vegetables	5.40	4.24-4.71	0.981	0.770-0.744
Sugar, cocoa, confectionery	5.77	4.12-4.57	1.057	0.751-0.716
Other foods	4.87	3.60-3.99	0.869	0.627-0.618
Non-alcoholic drinks	7.02	4.20-4.20	1.320	0.759-0.744
Alcoholic drinks	4.50	2.99-3.37	0.790	0.499-0.494
Tobacco	5.14	4.02-4.64	0.924	0.744-0.735
All products	4.91	3.57-3.98	0.877	0.623-0.607

- 1) Calculated on total expenditure valued at 1970 prices.
- 2) With respect to overall per caput private consumption expenditure (at 1970 prices).
- 3) The two values correspond to different assumptions concerning the yearly growth rate of income per caput, viz., a low rate (4.75) and a high rate (5.45). Overall per caput expenditure for private consumption is projected to expand at rates only slightly below income growth rates.

Source: adapted from Istituto Nazionale della Distribuzione (INDIS), *Previsione dei consumi privati in Italia al 1980* (Milano 1972).

- 1) Istituto Nazionale di Economia Agraria (INEA), *Annuario dell'agricoltura italiana*, Vol. XXIV, 1970 (Rome 1971).
- 2) Also the OECD projections are based on average elasticities higher than those used in the FAO study. See OECD, *Agricultural Projections for 1975 and 1985* (Paris 1968). No attempt is made here, however, to bring together and to compare all available projections.

Table 2: INDICES OF PER CAPUT DEMAND 1970 - 1980

	INDIS 1)	FAO
Meat	138	131,8
Fish	132	117,3
Eggs	116	120,5
Milk		112,9
Cheese		120,5
Fats and oils	136	109,1
Fruits	149	122,1
Vegetables	141	109,0
Sugar products	140	117,2
Cereals	113	94,1

1) Based on the lowest yearly rates of Table 1.

Sources: INDIS, *Previsione dei consumi privati in Italia*, op. cit.;

FAO, *Agricultural Commodity Projections, 1970-1980*, (Rome 1971).

city coefficients. Again, criteria for judging the relative merits of the two projections are not at hand; in fact, although it may still be too early for any significant conclusion, certain structural changes seem to be emerging in consumer behaviour with regard to the entire spectrum of private consumption expenditure. With regard to food and beverages greater attention is given to quality considerations and to the demand for frozen foods and to convenience foods in general. Within the meat group price increases are also shifting demand towards the less expensive items. This could well tend to reduce overall quantity increase of demand and alter the relative weight of the various foodstuffs. The upward price movements at the wholesale and retail levels of recent times are likely to accelerate structural changes in consumer preferences and in marketing channels whose inefficiency is, as we shall see, particularly high in Italy.

According to the FAO agricultural commodity projections Italy by 1980 should experience an increasing deficit of milk and milk products, of total meat especially beef and veal (thus strengthening her present position of larger importer within the EEC); she would have, on the other hand, a larger balance for exports of citrus fruits especially lemons, and would become the leading producer and exporter of wine. Although the FAO projections do not treat other fruits or do not give details by countries of other products such as sugar and tobacco, we may add that a further increase in production of other fruits (peaches, plums, apricots) is expected but at rates lower than those which occurred in the last decade; it would be such, at any rate as to leave a considerable balance for exports. Production of apples, however, is projected for 1975 at lower levels than in the period 1968 - 70, while the production of pears is expected to remain stable. As for vegetables, excluding potatoes whose total area cultivated and total production is expected to decline, projections point to a further but somewhat limited increase, to be obtained more by higher yields than by a greater cultivated area.

It has been suggested elsewhere that Italy still has considerable productivity potentials to be mobilized on account of the relative low yields of several crops and livestock (dairy cows, for example). This is certainly true inasmuch as in the last decade almost all crops and livestock activities have experienced a more or less constant increase in yields. Improved seeds, large and more efficient use of fertilizers, location of activities in the more suited areas, along with the advantages of mechanized practices are the main causes of higher yields. But

even if technically possible, as they no doubt are, can we reasonably expect that these trends will be perpetuated?

While for some of the staple products (for instance cereals), some bulky vegetables, dairy cows this will very likely occur, for the specialty crops (fruits, vegetables, flowers) the adoption of appropriate quality standards could reverse or at least considerably slow down past tendencies. Strict control of quality and yields is now the rule, for example, in the production of quality wines, although it remains to be seen how well standards will be enforced, especially in the face of rising total production, and further expected technological innovations (i.e., mechanical harvesting). For the rest of the wines, some forms of control concerning yields and quality would also be highly desirable and might well become necessary simply to ensure market equilibrium. Of course total production also depends on area planted or stock in hand. And although total agricultural land is gradually decreasing, as will be illustrated further on, considerable reallocation of land among different agricultural utilization is still possible, and certainly much more accurate investigations are needed as to where and to what extent these changes should take place. For example, there are several indications that beef production, now a very scarce commodity not only in Italy, could be expanded considerably, not as has been done so far by importing all sort of calves for fattening at whatever price - a situation which cannot last for long - but by utilizing through new forms of live-stock enterprise of the ranch type, the very extensive areas of hill and low mountain lands once used as poor arable land or pastures by peasant farms. Institutional changes, capital investment and organizational efforts are no doubt formidable¹⁾; however, one must also consider that the new form of management of these lands is also necessary for conservation purposes and for the production of other services which the so-called free market forces are not ready to supply in the desired quantity and form. Approaching the problem by simply assuming that these sorts of lands must be taken out of agricultural uses because the production capacity of European agriculture is greater than potential demand is at best a crude oversimplification.

3 Main inputs

I will now look into the recent changes and the likely developments of the main input categories: labour, land, capital and technological progress.

3.1 Labour

Agricultural labour forces in the last decade have declined at an average rate of 5 % per year, in spite of the temporary stop around 1964-65 due to the economic recession. The rate has been around 5.7 % in the Center-north and 4.3 % in the South. The decline is not only due to (a) the traditional transfer of agricultural workers to other sectors and to (b) the low propensity of younger people to choose an agricultural occupation when entering the labour force, but also to other important reasons, such as: (c) the exit of an increasing number for natural reasons (mortality and old age) connected with the increasing average age of farmers and farm workers; and (d) the decline in the specific rates of participation, by sectors, age and sex which, in the younger age groups, is due mainly to the raising of the school-leaving age, and in the older groups (over 50) may be attributed both to improved economic conditions and to difficulties in finding a suitable occupation. Women particularly are affected by the latter cause.

¹⁾ For an illustration see G.W. DEAN, M. DE BENEDICTIS et al., "Potential Use of the Mansholt Plan for Restructuring Agriculture in the Italian Mezzogiorno", European Economic Review, 3 (1972)

The lower rate of decline in the South could probably be explained in terms of the relative (greater or smaller) impact of these various forces, but substantially it is due to the younger average age of the labour force and to the more difficult access to alternative non-agricultural employments both locally and elsewhere.

Other important qualitative changes have taken place in the labour force. Probably the more significant one is the increasing share of the hired workers category which for the nation as a whole is around 33 % or the highest in Europe, and for the South alone reached in 1970 a peak of 47 %. Almost 70 % of the agricultural workers in a dependent position are concentrated in the southern regions, and the great majority of them do not enjoy any security of employment since they belong to the daily workers category. The average degree of employment of these workers is only around 200 days per year, including all types of work, in agriculture and outside 1). Labour conflicts have therefore been and still are acute and agricultural workers trade unions at present struggle not only or not so much for higher pay as for longer contracts, control of employment bureaus, participation in farmers' decisions regarding choice of enterprises, organizational arrangements and technologies, if not in each individual farm at least at the area level.

With regard to future developments we can draw from a number of projections and forecasts of agricultural labour forces up to 1981. They are the EEC forecasts of active agricultural population, published in 1970; the projections of the Italian Central Institute of Statistics (ISTAT) and the Ministry of Budget and Planning incorporated in the preliminary plan for 1971 - 75. As is easy to see from Table 3, these different projections share one common element only, the further decline of the agricultural labour force. A brief reference to the methods followed in each case will help to appraise their relative merits and understand the differences which are evident from Table 3.

The EEC study deals with the agricultural active population, a concept normally employed by censuses whereby each person is asked to declare his professional status and as such it is only loosely comparable with estimates of labour forces 2). It is also an attempt at basing projections on statistical explanation of the observed relationships between professional changes and a number of variables presumably affecting them 3). The EEC projections for 1971 largely underestimate the extent of the actual movement out of agriculture as shown by the QLFS estimates and the 1971 Population Census. According to the latter the active population in agriculture in 1971 was only four-fifths of the EEC projection, even smaller than the projection for 1976. I think this is a good example of how the use of sophisticated mathematical models is by itself no guarantee of a better performance than a simple extrapolation of past trends. The recent ISTAT projections up to 1981 on the other hand show a better start since the total labour force projected for 1971 practically coincides with the QLFS estimates for the same year.

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- 1) For a more detailed treatment of employment problems see G. BARBERO, "Agricultural Mechanization and Employment in Southern Italy", *International Labour Review*, Nov. 1972.
 - 2) Within the Italian Quarterly Labour Force Survey (QLFS) framework persons interviewed are asked to declare if and to what extent they have been employed or were seeking an employment during the week preceding the interview.
 - 3) The methodology of the EEC study can be summarized as follows: (a) changes in agricultural active population resulting from Census data were broken down into two components: natural demographic changes and professional shifts; (b) for each country a model was worked out to explain professional shifts with a view to single out the socio-economic factors influencing workers' decisions to leave agriculture; (c) finally a projection of agricultural active population was derived based on demographic projections and on projections of further professional shifts.

Table 3: LABOUR FORCES IN AGRICULTURE, ESTIMATES AND PROJECTIONS

	Men (1,000)	Women (1,000)	Total (1,000)
<u>Estimates</u>			
Agricultural active population (1971 Census)			3,241
QLFS estimate (average for 1971)	2,497	1,155	3,652
<u>Projections</u>			
EEC 1): active population			
1971	2,772	1,230	4,002
1976	2,443	1,037	3,480
ISTAT 2): labour forces			
1971	2,613	1,052	3,665
1976	2,096	839	2,935
1981	1,728	743	2,471
Economic Plan 3): employed labour forces			
1975 (GNP: + 5 %)			2,700
1975 (GNP: + 6 %)			2,600
1980 (GNP: + 6,2 %)			2,000

- 1) CEE: Evolution et prévisions de la population active agricole. Informations internes sur l'agriculture, n. 61, 1970.
- 2) G. De MEO: Evoluzione e prospettive delle forze di lavoro in Italia. Annali di Statistica, Serie VIII, vol. 23, ISTAT, Roma 1970.
- 3) Ministero del Bilancio e della Programmazione Economica. - "Documento programmatico preliminare 1971 - 75". In: Mondo Economico, No. 33 - 34, 1971.

The latter projection is based on the extrapolation of changes in the rates of participation by age groups which have occurred during the period 1961 - 66; for female workers a smaller change was assumed than that observed for the same period. Rates of participation were then applied to population projections drawn up separately. The projections by age groups have proved to be considerably less accurate than the overall projection: this is particularly evident for the female workers whose rate of decrease in recent times has slowed down. In general, and according to the experience of the last decade, it can be said that females of working age tend to stay in the labour force when there is a rapid exit of male workers and viceversa leave the labour force when male workers cannot easily find alternative occupations in the non-agricultural sectors.

If the ISTAT projections prove to be reasonably correct for the future years, which is hard to judge at present, the agricultural labour force in 1981 will be two thirds only of that estimated for 1971. But not much can be said about the sex composition of the labour force except that it will most likely continue to vary a great deal from one region to another; the female participation will be affected not only, and not so much, by the labour demand in the other sectors of the economy but by the production patterns, size of farms, technological levels and forms of organizations which will prevail in agriculture.

The targets of the Economic Plan for 1975 could on the other hand turn out to be somewhat

optimistic. Growth rates of the GNP for 1971 and 1972 have been much lower than expected so as to render very unlikely the realization of a 5 % increase per year over the period 1971 - 75; consequently, I think it more realistic to expect for 1975 a labour force just below 3 million people.

3.2 Land

In the more recent period the total agricultural land base has been losing about 60.000 hectares per year (corresponding to a yearly rate of about - 0,3 %), going approximately in equal parts to increase urban areas and forests. Within the agricultural land the main types of land uses have shown the following trends: a decline of about 1 % per year of arable lands and a gradual expansion of the area under permanent crops (fruit trees, citrus, meadows and pastures). Substantial changes have also taken place in the utilization of arable lands: the area cultivated with cereals and traditional pulses has declined while the area under horticultural crops, sugar-beet and fodder has become larger. The trends observed in land utilization can be related both to demographic factors, especially the depopulation of rural municipalities located in hilly and mountainous zones, and to economic and technological factors which have stimulated a tendency towards more specialized and intensive forms of agriculture in the better lands (plains, hills with more favourable soil and climatic conditions).

The increasing weight of farming in the plains, which although providing almost 50 % of total agricultural output occupy only 25 % of the total agricultural area, has contributed to focus attention on a number of important problems whose solution is not within easy reach, and probably demands an approach different from the traditional modes of public intervention. I will only mention the problem of what to do with the more difficult territories which tend to depopulate rapidly; if this is an inevitable aspect of a growing economy and therefore a positive fact from many points of view, it does not, however, automatically lead to a more rational utilization of the natural resources and of the social capital sunk in these territories. Water management for purposes of erosion and flood control, the allocation of the freed lands between forests and other forms of utilization, the introduction and strengthening of activities producing needed goods and services other than agricultural commodities, maintenance of roads and of other modern public services, are among some of the more pressing problems and the passing of time will only aggravate them.

In assessing the amount of land used in agricultural production under Italian conditions one must also pay attention to changes in irrigated land because, *ceteris paribus*, the provision of irrigation affects the production potential considerably. According to the Farm Structure Survey of 1967 lands normally irrigated amounted to 2,7 million hectares. Irrigable land, which is somewhat larger than that normally irrigated, has been expanded in the last 20 years at a rate of about 25,000 hectares per year through public and private investments. However, by the end of 1968, irrigation projects covering an area of about 400,000 hectares had been submitted to State and Regional authorities for examination and eventual approval. Furthermore, at the same date, new projects were being studied and drawn up for a total area of about 1,6 million hectares. It is true that, on the basis of the actual experience of the last two decades, irrigation investments require a long time to become effective and that, normally, project execution lags well behind declared intentions and plans; but even discounting for the time lag, it is obvious that the potentially irrigable area is of considerable size and its realization could have a great impact on the growth rate and composition of agricultural production. A number of important queries spring, therefore, to our attention. Do we need to exploit this production potential and, if so, in addition to or in substitution of the production capacity already existing in Italy or elsewhere? What commodities should be produced? For example, in the past new irrigation resources have gone to a large extent to increase production of specialty products (fruits, vegetables); but in the face of market disequilibria they could go

to beef cattle (through the production of maize for silage) or even, to some extent, to dairy cows to increase the supply of fresh milk, especially in areas where demand is expected to expand. Incentives to enlarge and modernize farms, and the absolute and relative price level will be influential factors in determining the relative profitability of the various outcomes and the willingness of farmers to embark, individually, cooperatively or through corporate forms, in large and risky investment programmes. In addition, the creation of external economies, involving both public and private investments and substantial administrative costs (technical assistance, processing, transportation, trade) would undoubtedly be necessary.

The problems raised by the best use of potential irrigation resources can serve here mainly as an illustration of the sort of problems the EEC will have to face in the near future if it really sets out to formulate community goals and to devise ways and means appropriate to the conditions prevailing in the various countries and regions.

3.3 Capital

Time series of gross investments in agriculture for the period 1951 - 70 can best be approximated by a doublelog function 1). Accordingly yearly rates of increase vary a great deal from the first to the latter part of the period under consideration. Up to 1962 gross investments, in constant prices (1963) increased at a rate of about 7,5 %, while from 1962 to 1970 the rate fell to just about 2 %. If the trend is extrapolated to 1975 one finds for the period 1970 - 75 a projected rate of growth of only 1,3 %, which means that net investments would be negative.

The explanation of the above trend lies in the fact that investments in reclamation, irrigation and farm improvements, which up to the end of the 60 s represented over two thirds of total investments, were considerably reduced afterwards. For example, in 1970 the gross outlay in real terms was just about equal to that of 1955 - 56. During the same time, however, investments in tractors, agricultural machinery, means of transportation and fixed mechanical equipment have been growing steadily.

It is reasonable to foresee that purchases of tractors and other machinery will continue high since they have now predominantly the role of substituting labour and bringing about higher labour productivity; furthermore, the availability of mechanical power per agricultural worker is in the South still considerably below the average level of the North (in 1970 hp 4,0 against hp 14,7) 2). It is in fact from Southern and Central Italy that we can expect the greatest increase of gross investments in mechanization, and perhaps not so much in standard tractors (four wheels) but rather in the small types of tractors (two-wheel tractors, rotovators) and in harvesting equipment.

With regard to the future one must remember that while investments concerning mechanization depend essentially on the individual farmers decisions and the rate at which suitable forms of equipment come on the market, fixed investments in reclamation, irrigation and even land improvements are largely the results of public decisions and the appropriation of public funds. Consequently, whether or not the latter type of investments will continue to decline, stabilize at the present relative low level, or be increased, is not something which can be easily predicted in the basis of past experience, especially when structural reforms are being considered and important policies affecting the use of natural resources in large areas, the extent of agricultural employment, and levels of production, will have to be formulated.

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- 1) According to a traditional classification, land reclamation works are considered as agricultural investments although, at least in part, they also serve non-agricultural purposes.
 - 2) Includes all power driven equipment except electric motors.

Current capital outlays in the period 1951 - 70 have been increasing at an average rate of about 7 % per year; however, if we inspect the time series we find again that the very fast-growing trend up to the middle of the 60 s has been replaced by a more moderate increase ever since, due to a slower rate of expansion in the use of seed, fertilizers and pesticides. Purchases of fuel and electric energy have continued to increase while the expenses for feed have also tended to slow down on account of lesser imports of maize induced by the greater domestic production. Obviously, if the trends of the more recent period are extrapolated into the 70 s, the resulting rate of increase will be only about one half or less of that experienced in the previous two decades. But here again we must be aware of the effects of two possible important qualitative changes. The rate of growth of current expenses could be speeded up by successful structural reforms and by policies aiming at increased production of scarce commodities; moreover, a similar effect could be caused by widespread attempts at controlling the pollution due to fertilizers and pesticides, for instance by introducing inputs less harmful but probably more expensive.

4 Fam sizes and land tenure

The trends towards fewer but larger farms is in Italy of more recent origin than in the rest of the EEC member countries. The 1961 Agricultural Census had in fact recorded about the same numbers of farms as in the prewar period (1930) 1). During that period, however, there was an expansion of the area occupied by the central classes (5 to 100 hectares) which had profited from the decline, in number and area, of the larger farms. From 1961 to 1970 the total number of farms has fallen from 4.3 millions to 3.6 millions and the increasing importance of farms from 10 to 100 hectares has become more pronounced. Due to some reduction of the area under cultivation average size of farms has increased only from 6.2 to 6.9 hectares 2).

The greatest decrease in number of farms has occurred in the north-central regions, especially in the classes below 5 hectares; this is probably related, on the one hand, to the higher average age of small farmers which over the last decade has brought about a faster exit and, on the other hand, to the closing down of a great number of mountain farms following the depopulation movement of the 50 s. According to the 1970 Agricultural Census farms of more than 10 hectares controlled about 70 % of the total farm land in the north-central regions and about 66 % in the South; however, it must be remembered that the relative high percentage of the South is heavily influenced by the situation in Sardinia where pasture lands of low productivity predominate.

The movement towards larger farms, in terms of hectares is indeed only in its beginning stages and it is likely to gain speed gradually because of the aging-off of a considerable number of small cultivators without heirs. A study referring to 1969 estimates at 900,000 the number of farms run by farmers whose sons having moved out of agriculture will not resume farming at the death of their parents 3). However, old family farmers are normally associated with units of small size and for this reason the area made available when they quit is not such as to permit a sizeable enlargement of the remaining farms. For instance, an analysis made in 1965 relative

1) CEE, Les tendances d'évolution des structures des exploitations agricoles. Informations internes sur l'agriculture, no. 20, 1967.

2) On considering the great heterogeneity of Italian agriculture, number of hectares is a very inaccurate measure of business size and therefore average figures cannot be very meaningful. In addition census figures include forest and woodland, often of very low economic value. For comparison over time, however, no alternative indices are available at present.

3) C. BARBERIS: Sociologia del Piano Mansholt (Bologna 1970).

to a province of the Po valley dominated by relatively small family farmers yielded the following forecast of the number of farms likely to close down 1):

	Farms	Hectares
up to 1970	2,040	2,825
from 1971 to 1975	1,710	1,985
from 1976 to 1985	7,770	18,845
Total	11,520	23,655

Assuming that in the absence of other events the above lands would be entirely available for incorporation by the remaining farms, the average size of farms would increase, in the area concerned and over twenty years, from 5 hectares to 7.3 hectares.

The movements towards larger farms has been favoured in the last decade by the policy of subsidized land purchases; contrary to what had happened earlier, these purchases have been more selective in the sense of giving preferences to those leading to enlargement of existing farms or to establishment of farms of "economic" size. Land transfers of this kind in the last decade have encompassed 1,360,000 hectares, coming to a large extent from small and medium farms. These measures, by the way, have contributed their part to the rapid increase of land prices occurring in the last eight years, thus adding to the difficulties any future restructuration programme will meet.

No matter how difficult, certainly more efforts along this line will have to be made in the future; also new programmes and institutions will have to be tried out with the purpose of achieving multiple goals: making the land consolidation more efficient, raising per caput incomes while avoiding unfair redistribution of wealth, and ensuring the rational management of large areas for the public benefit. The Italian interests in the structural and social components of the CAP and in the not yet formulated regional economic policy are thus easy to understand.

Perhaps the greatest recent changes concern land tenure types, although to some degree their extent and significance are controversial, mainly because the statistical information derived from the censuses is inadequate for an unbiased assessment of the changes themselves. What is beyond doubt is the rapid disappearance of the traditional sharecropping arrangements, both the classical forms (*métayage*) typical of the North and Center, and the variety of share-tenancy contracts once widespread throughout the South. The crisis undergone by these forms of land tenure is of course no novelty and dates back to the post-war years; but in the last decade the movement has gained further speed.

Table 4: SHARE TENANCY ARRANGEMENTS, 1961 - 70

	1961	1970
Number of farms	477,896	205,142
Area (hectares)	4,194,658	1,795,166

1) CEE, *Les tendances d'évolution des structures*, op. cit.

Part of the land thus mobilized has been bought over by previous sharecroppers through controlled (subsidized) or uncontrolled purchases; in other instances new cash tenancy contracts have been established. Thus the sharecroppers have become either owner or tenant cultivators. But in many other instances, and especially so in certain regions where the size of the landed property was more suited for the transformation, land-owners have assumed the role of managers, directly or indirectly (through hired managers or foremen). New entrepreneurs have also come in, often industrial managers, people engaged in the liberal professions or outright corporations, buying the land from the traditional land-owners who did not have the will or the capacity to become farmers themselves.

These are the farmers designated, according to a traditional Italian classification, as "capitalists" in contrast to the "cultivators", the dividing line between the two being represented by the fact that the former do not perform any manual work, while the latter do so by definition regardless of how much of the labour input is supplied by family members or wage-workers. Of course the capitalist class of farmers includes also tenants, especially in the central part of the Po Valley where they had an important role in the agricultural revolution of the 19th century.

These distinctions have clearly a social basis inasmuch as they are linked to the relationships between suppliers of land, working capital, management and labour services and reflect the class division into land-owner farmers, peasants and labourers. With the widespread adoption of capitalist forms of production, the increasing dominance of mechanized farming and the large role of state intervention not only in regulating production and marketing but also in the distribution of income, this way of classifying farms and farmers has lost most of its significance and does not help much in analyzing the actual structure nor in designing modern agricultural policies.

Bearing the above limitation in mind, a comparison of the last two censuses shows the following percentage variations:

Table 5: PERCENTAGE CHANGES IN FARM NUMBER AND AREA BY TENANCY TYPES (1961 - 70)

Altimetric zones	Cultivator No.	farmers ha.	Capitalist No.	farmers ha.
Mountain	- 15.9	4.3	- 29.3	- 9.3
Hill	- 6.9	15.0	- 15.5	- 4.0
Plain	- 9.9	12.6	- 4.8	- 9.6
Italy	- 10.2	11.1	- 16.3	- 7.6

As a result of these changes the relative share of the total farm land in 1970 was the following: cultivator farmers: 58,9 %; capitalistic farmers, 33,9 %, the balance being under the control of other types of tenure (various forms of share-cropping) 1). Both groups of farms are highly heterogeneous. Even a simple inspection of the size distribution of the capitalist farms is enough to see that a large number of them fall in the very small size classes; many of these units are run by people engaged in other professions who use irregularly hired workers to operate them and rely heavily on custom services (specialized contractors). According to the 1967 Farm Structure

1) The interpretation of the changes shown in table 5 is largely controversial. For instance, the reduction of the extent of "capitalist farming" in the mountains is probably to a large extent the result of a change in classification criteria: in 1961 pasture lands not regularly or no longer utilized (mainly municipal domains) were attributed to this type of tenure. In the rest of the territory one must bring into play the possibility of a systematic bias in recording a larger number of farmers than previously as performing manual work, as the criterion for classification is such that a manager driving at times a tractor would qualify as a cultivator, for census purposes, no matter how large his farm.

Survey the percentage of the farms with a labour input of less than 300 workdays per year was in this group even higher than among the cultivator group, 68 and 57 % respectively.

On the other hand one finds that the volume of workdays supplied by hired workers was almost as high in the cultivator farms as in the others. Furthermore, the percentage of farms with more than 500 days per year was about 17 % in the two groups, corresponding approximately to a total of 300,000 farms. It is obviously in the latter strata, accounting in 1967 for about 50 % of the total labour demand, that the modernization processes are likely to proceed at faster rates; thus the level and kind of employment of the future will depend largely on what happens in these farms.

Given the above picture it is no wonder that a large fraction of farm managers are not fully employed or that a large number of family hands have to seek employment outside their farms. According to the FSS about 30 % of all farms were in fact run by part-time farmers while 18 % of all farms employed family members who were also engaged in other occupations 1).

These two groups include a variety of cases ranging from the factory worker living close to an industrialized area, to the migrant who is away from home for most of the year, to the family aids who alternate work at home with work in other farms for a wage, this latter case being particularly frequent in many areas of Southern Italy. Total number of these farms and the relative weight of the various categories are affected through time by a number of factors. Insofar as economic development proceeds, income targets move upward and the push-pull forces further reduce the agricultural labour force, their number tend to increase; but at the same time occupational and settlement changes tend to become irreversible while part of the farms simply close down because of aging of the family members involved. For these reasons many consider part-time farming as a temporary transitional phenomenon, necessarily related to the processes determining and accompanying diversification and growth of the economic system, and the more so the more the process is left to "spontaneous forces". There is no doubt however that even if temporary it is, nonetheless, going to stay with us for a long time. Furthermore, the implications of part-time farming in terms of socio-economic welfare are quite different from place to place and their merits or demerits cannot be analyzed simply on grounds of agricultural efficiency. For example, one thing is the part-time or mixed income arrangements, no matter how harsh they may be, which farm families are forced to seek simply to escape from poverty and another thing is part-time farming rationally combined with the production of services demanded in greater quantity by large communities (conservation of natural resources and landscape, recreation, tourism).

As to cooperative and joint forms of farming, the situation in Italy is not very encouraging. There are, it is true, a few interesting examples of large cooperative farms in the lowest part of the Po Valley which date back to the beginning of the century up to the 1st World War. But no serious attempts have ever been made since to spread these forms of organization: the fascist regime did not certainly favour them while the democratic governments have deliberately expressed a preference for individual establishments, restricting the promotion of cooperation to the provision of services and processing facilities. A few examples of group farming have been developed in the last few years, without great enthusiasm on the part of agricultural

1) To fully appreciate the above figures one must bear in mind that they are taken from the EEC report referring only to about 3 million farms because of the exclusion of all units (approximately 800,000) below one hectare with annual sales of less than 250 dollars. See Istituto statistico delle Comunità Europee, - Indagine sulla struttura delle aziende agricole 1966/67, No. 4: Italia (Luxembourg).

authorities, and have generally taken the form of cooperative livestock enterprises (mainly for dairy cows) whose members, once freed from livestock care, could concentrate on other productions in their individual units. There is, however, a widespread feeling that cooperative farming could and should play a key role, with proper public help, in the reorganization of the areas of extensive agriculture and grazing where only fairly large units can thrive.

5 Market structure

I will briefly treat under this heading trends and development possibilities of the broad spectrum of institutions and activities dealing with marketing and processing of agricultural commodities with special attention to horizontal and vertical integration. As for many other aspects of socio-economic activities, trends in this field are not qualitatively different from those observable in other European countries, but the development of modern organizational forms is in general much less advanced or even at time severely limited by institutional restrictions, as in food retailing where the number of traditional stores is still increasing.

In the last twenty years final agricultural production has practically doubled; taking into account the continuous decline of the quantity of products kept in the farm for family consumption or as intermediate inputs and the increasing net imports of foodstuff, it is easy to see that the flow of commodities into the market has increased faster than final agricultural production. In the meantime, real income per caput increased almost fourfold with a net addition to total population of about 8 million people, agricultural labour force fell to about 40 % of the 1951 level (corresponding to a net decrease of 4.5 million) and a large urbanization process took place. The magnitude of the above changes would have required an almost revolutionary change in the marketing system to provide consumers, at reasonable prices, with the type of goods and services needed, while at the same time giving farmers a stronger bargaining position. The changes have indeed been less than revolutionary and although one can appreciate the difficulties, the fact remains nonetheless that in the present decade many innovations and adjustments will have to be made in order to eliminate the many gaps and inefficiencies which still exist.

As far as farmers cooperation is concerned, after the severe setback suffered in the fascist period, the movement underwent an uncertain revival in the post-war years and finally gained speed and coverage only in the 60 s, under the pressure of events and the support of public finance 1). This together with the relative low educational level explains why in 1967, according to the EEC Farm structure survey, only 14 % of farmers belonged to some sort of cooperative organization. Given the broad range of products typical of Italian agriculture, and the variety of socio-economic conditions, it is no wonder that cooperative organizations show greater progress in some branches of production and some regions rather than in others. For instance, cooperative wineries control more than 50 % of the total production in several regions, especially in the north-east. Processing of dairy milk for fluid consumption and milk products is also largely cooperatively controlled in several regions.

Where these cooperatives experience severe difficulties and consequently have made less progress is in the marketing phase when the needed managerial capacities and financial resources are greater than they can dispose of in the face of keen competition from private companies which are quicker at exploiting available opportunities. For these reasons it is often stated that development of cooperatives in the above fields has gone mainly to the advantage of wholesalers and food industries because it enables them to buy from a reduced number of small producers at consequently less cost. The amount of truth contained in this statement does not,

1) In the 50 s public efforts were concentrated in the land reform districts.

however, detract from the fact that the mere existence of a cooperative with a reasonable degree of efficiency is sufficient to enhance the farmers bargaining position. Several projects for the establishment of second degree organizations to deal with storing and marketing have been launched lately, especially for wine, and gradual progress is to be expected in the next years. The concentration process needed in the milk sector to reduce the great number of small milk processing plants is on the other hand proceeding at a smaller pace. Progress, in number and modernization of plants, has also been made by cooperatives dealing with the processing of olives.

In the field of fruits and vegetables the number of cooperative plants for packing, storing, processing and marketing has been steadily increasing, especially in the North, where over three quarters of the value of production dealt with by cooperatives is concentrated; however the total quantity of these products controlled by cooperative organizations is still low relative to total production.

This raises the important question of producers associations since it is precisely for the orderly marketing of fruits and vegetables that the promotion of these organizations has become an established component of EEC market regulations. The Italian experience up to now is rather disappointing: because of the heavy influence of contingent political interests, the lack of previous extensive experience, the short time available and last but not least the absence of clear ideas and objectives the existing associations have been promoted from above and on so large a scale as to make practically impossible a minimum of participation on the part of the producers. The result is that so far they have simply performed the role of intermediate agencies at times of market crisis requiring state purchases and diversion from normal marketing channels of surplus products. The other important functions, theoretically pertaining to them (guidance of production, supply control, collective bargaining, etc.), have been by and large neglected.

The development of true producers associations, and not only in the field of fruits and vegetables, remains therefore a task to be accomplished.

Of recent origin is also the trend modern forms of vertical integration. The lead in this field comes definitely from food and feed industries; supermarkets and buying chains have up to now only scanty relations with agricultural producers. The only notable exception is a large association of consumers cooperatives which has been able to establish fruitful links with a number of farmers cooperatives dealing with the processing of primary products. Examples of vertical integration promoted by the farmers cooperatives are few and of very limited extent. Production contracts are now the rule, for tomatoes, peas and green beans used by preserve industries; and further expansion is likely since consumption of frozen and preserved vegetables is increasing: in 1970 the consumption of all frozen foods, including fish which represents 50 % of the total, was only 0.6 kgs per caput.

A very weak point of the Italian economy, although to be sure not the only one, is the trade sector, especially food retailing, whose inefficiency not only has negative effects on the consumer but reaches down to the farmer by putting strong brakes on the development possibilities of a modern marketing system. As is well known to specialists and as a recently published IFO comparative study has shown, Italy has among the EEC countries the lowest density of modern retailing organizations of the self-service type, largely concentrated in the large urban centers of the north; their impact on the total private expenditure for food is only 3 % approximately 1). Very low is also the number of retailers affiliated to voluntary chains and buying organizations, although it is in this field that rapid developments might come about

1) IFO-Institut für Wirtschaftsforschung. - Agricultural Marketing Systems in the EEC-Member Countries (München 1971).

in the near future. Very high, on the other hand, is the number of traditional stores and shops in food retailing, employing a small number of workers per sale point at low levels of productivity. If they survive, and not necessarily at low levels of income, it is because they are able to extract high unit profits thanks to institutional barriers to entry of large retailing units (supérettes and supermarkets) and other legal restrictions.

The present situation of the trade sector cannot be understood without considering the role played by the sector itself in the course of Italian economic development in the last decades. However rapid industrial development may have been, the employment opportunities stemming from it would never have been sufficient to absorb the great number of people who have left agriculture and more generally moved from rural to urban areas without the large expansion in the number of retailing stores, and without, of course the emigration outlet, permanent or temporary. The trade sector has therefore become a sort of reservoir for the underemployed and for persons without the education, skill and age required elsewhere. To a large extent therefore the problem of underemployment and low incomes has simply been transferred from agriculture to the trade sector. As the small farmers have for a long time had a large political weight in the sense that they contributed an important part of the votes for the majority party, so retailers have now come to represent a rich ground for vote hunters, to the point that no important political group dare advocate real reforms for fear of losing their support.

The razionalization of the trade sector, especially in food retailing, will gradually come to acquire top priority during the 1970 s; but one cannot rely for the solution of the problem only on a new industrial boom; it will require much more than that because new factories, presumably based on advanced technologies, will not offer enough jobs to the excess working force in the trade and agricultural sectors nor to the many persons who could be mobilized into the labour force by more ample and more diversified employment opportunities 1). The overall and sectorial policies of the 70 s will as consequence have to pay much greater attention to the incentivation of activities, to their location, to level and kind of employment, to the allocation of labour and other resources for the production of a larger variety of public services in urban as well as rural areas.

There are already many signs that the present state of affairs is becoming untenable. The recent unsuccessful attempts on the part of public authority to control price and marketing margins, in order to curb price increases, have nonetheless put pressure on the retailers associations to come out of their shell and to work at least for more voluntary chains. On the other hand private business is pressing to get a free hand in the establishment of new supermarkets and department stores. Also the regional governments, the large municipalities in the industrialized areas and the trade unions themselves are finally giving the needed attention to this important problem. There will probably be no hypermarkets for a long time, mainly for fear of the urban speculation processes which they may cause, but some sort of compromise will likely be worked out leading to a blend of private supermarkets, shopping centers under public control and incentives to voluntary chains and consumers cooperatives.

Of course, structural changes at the retail level cannot go without corresponding changes in the other stages of the marketing chain. Producers markets will probably become more frequent and more important than at present; also the weight and roles of the terminal markets, which now lend themselves to unfair practices, to say the least, will need radical changes. But this a subject that would require a discussions by itself.

1) The rate of participation is in Italy considerably lower than in the rest of Europe.

6 Summary

To sum up and to suggest a lead for discussion I would like to set out the main points I have tried to bring out with this paper.

First, Italy still has a considerable production potential due to (a) possibilities of higher yields, for some products at least; (b) land resources which can be converted to producing needed commodities and (c) water resources which can be allocated to agricultural production. Second, to realize this potential specific policies and programmes are required at the EEC, national and regional levels. Third, it is in the interest of Europe and not of Italy only to pursue this aim. Fourth, when attempting to revise and formulate new common policies, greater attention, than has been the case up to now, will have to be paid to the peculiarities of the different countries and regions, and programmes tailored accordingly.