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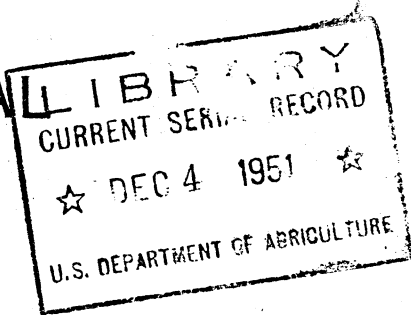
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AGRICULTURE AND INDUSTRY IN ITALY

By

PROF. GIUSEPPE MEDICI—UGO GIUSTI

1. *The New National State in the Second Half of Last Century.*

The Kingdom of Italy was formed (1861) by seven states : the Kingdom of Sardinia—which comprised, in addition to the island which gave it name, also Piedmont and Liguria—Lombardy, the Duchy of Parma and Piacenza, the Duchy of Modena, the Grand Duchy of Tuscany, the State of the Church (excluding Rome and Latium) and the Kingdom of the Two Sicilies (Naples and Sicily).

The area of the new state, which was 249,000 square kilometres, became in 1871, after the absorption of Venetia (1866) and of Rome and Latium, 287,000 square kilometres, of which level land constituted little more than a fifth (22%), hill land 41%, mountain land considerably more than a third (37%).

The inhabitants in 1861 numbered 21,800,000 of which 12,500,000 (51.8%) constituted working population ; 60% were engaged in agriculture, 25% in industry and 15% in other activities. Although by 1871 the total population had risen to 26,800,000 (90 inhabitants per square kilometre) there was not much change in the distribution, which was 58% in agriculture, 24% in industry and 18% in other activities ; a distribution to which must be attached a different significance from that of today.

At that time the manufacture of household goods—which afterwards almost disappeared as industry spread in the North—gave work to a large part of the rural population, particularly in the South ; no sharp distinction between rural and other workmen existed such as became apparent later when the specialization of industries developed. The number of women employed in domestic industries was much larger than now and more than made up for their scarce employment in commerce, professions, and in other activities which have become open to them with the passing of time. If we add to this the large number of children under fifteen years of age also employed in industry, it is clear that the few statistical data of which we can dispose, give us the picture of an Italy much less agricultural than she really was ; for it can, we think, be

truthfully affirmed that three quarters of the entire population belonged economically and socially to the rural world.

Conditions were poor for the workers in the factories, where protective and social legislation made its appearance only at the end of last century, but they were worse for the rural workers and particularly for the day labourers who represented much more than a third of that category. Small cultivating landowners, numerous in the Alps and in the Northern and Central Apennines, were relatively few in the South and in Sicily. "Mezzadri," or share-tenants, who worked under slightly better conditions, belonged mostly to Central Italy. A vast number of peasant leaseholders laboured in poverty generally in the South, though they formed an "island" in the rich Lombard Plain which was a veritable oasis in the farming world of that day; they created there in fact a farming industry that contributed in no small measure to the development of the wealth of the country ¹

Summed up, it can be said that in the early years of the new Kingdom, the physical features of the land were more sharply stressed than they are today, the hand of man not having yet striven so persistently to modify the contrasts which geographical position and climate had naturally determined. Thus, marshes and uncultivated wastes existed side by side with good agricultural lands, and vast latifundia, poorly cultivated, lay alongside holdings intensively farmed.

2. *The Economic and Industrial Development of Italy in the Twentieth Century*

Italy was first stirred to new life by the vast movement of emigration that took place at the beginning of this century and which was at first regarded by many as a leap in the dark. Judging from its effects, however, over a period of thirty years, it may be said to have acted as a spur to Northern Italy, which was already more advanced industrially, and to have constituted for Southern Italy and Sicily a peaceful revolution, — letting into a closed and practically feudal world, a current of fresh and invigorating air. ² Between 1876 and 1940, eighteen million Italians had emigrated abroad, a little more than half to various parts of Europe and the rest to North and South America. In the same period about

¹ See the report published by the R. Accademia dei Lincei "Cinquanta anni di storia italiana (1860—1911) Roma 1911. (Fifty years of Italian history). Among the foreigners who dealt particularly with the miserable conditions of the rural classes, should be mentioned P. D. Fischer "Italien und die Italiener 1899; Bolton King, "Italy Today" 1909; E. Lemonon "L'Italie economique et sociale (1861-1912" Paris 1913. A resume of conditions during Italy's early life as a nation as compared to those on the eve of the second world war, is contained in "Caratteristiche ambientali italiane agrarie-sociali-demografiche 1815—1942" Ugo Giusti (Istituto Nazionale di Economia Agraria, Rome).

² G. Lorenzoni. "Relazione finale dell'inchiesta sulla piccola proprieta coltivatrice formatasi nel dopoguerra" (Final Report of the enquiry concerning Peasant Operating Ownership in Italy in the Post-war Period).

six million workers (an average of 100,000 a year) took up permanent residence abroad.

The next important event was the association of industrial and rural workers in political bodies and their uprisings sponsored by socialism and catholic organizations. Thus, earlier than could be foreseen, remarkable progress was achieved economically by the working classes in general, and furthermore, by the end of the first decade of this century, universal suffrage had been granted.

Then followed another event of capital importance, the war of 1914-1918. This, too, may be said to have had a revolutionary effect on the rural world, since half a million peasants purchased (in most cases by free negotiation) in a period of twenty years about a million hectares of cultivated or cultivable land, thus becoming either owners of additional land or landowners *de novo*.

We must also consider besides these facts, which are the outcome of historical, political and social events, the gradual and continual transformation of Italy's surface by the hand of man, in the double sense of an increase in the productive area as the effect of centuries-old land reclamation and improvement, and—as opposed to this—of a gradual diminution of productive land due to the rapid growth of urban populations and their needs. We can then seek to distinguish, on the basis of the data available, the net result of the two contrasting tendencies.

For Italy as a whole, we must recognize that the result is positive, when we compare the 126,464 square kilometres which arable land and vineyards occupied out of the 305,000 square kilometres that constituted the geographical Italy of 1861, and the 153,800 square kilometres which such lands occupied in 1948 out of the 301,020 square kilometres that is Italian territory today. There are then 27,336 square kilometres more of arable land and vineyards which, if expressed relatively, have risen from 41% to 51%, with thus a gain of 10% of land more intensively farmed.

Notwithstanding this conspicuous increase of cultivable land, and the fact that the 26,800,000 inhabitants of 1871 had risen to 45,000,000 in 1936 (167 as compared to 100) the per cent proportion of agricultural workers dropped in the same period from 58% to 48%, while that of industrial workers rose from 24% to 34%; that is, against 100 workers in agriculture, instead of the 41 in industry of 1871, there were 69 employed in industry in 1936. In that year, on the eve of the second world war,

the position between agriculture and industry in Italy, compared with other countries, was as follows :

				(out of 1000 persons employed)	
				agriculture	industry (inclusive of transport and communications)
Italy	..	..	..	475	339
France	..	..	..	354	398
Germany	..	..	..	288	443
England & Wales	..	..	..	54	548
U.S.S.R.	..	..	..	848	92
Japan	..	..	..	478	239
U.S.A.	..	..	..	219	408

To the national net revenue from economic activity, estimated in 1938 at 119,140,000,000 lire, agriculture and forests contributed 31.9% and industry (including transport) 40.2% ; in 1949 they contributed respectively 36% and 44.1%.

3. *Outlines of Italian Agriculture*

Italy's agricultural civilization spread first over the Northern and Central hills, then along the coasts in the South and the Islands, embracing finally the vast plain of the Po and other minor plains. Progress in the south was impeded then as now by the difficult climate and the poor distribution of rainfall.

The crops grown in Northern Italy are mainly cereals (wheat, maize, rice), forage (clover, alfalfa, etc.) and some industrial crops (sugar beet and hemp) ; arboreal cultivation has primary importance in Central Italy and the South. Wheat, however, is the crop most widely grown throughout the Peninsula ; it is grown even on lands fitted only for woods or pasture, so urgent is the need of the peasants to wrest a livelihood from the soil.

Family farms occupy about one half of the total arable land and are found principally in the hill and mountain regions. Large and medium-sized owner—or tenant-operated holdings—predominate in the Po Plain and in the coastal plains of the Maremma and the South.

Expressed in the briefest terms, the economy of the various agricultural divisions appears as follows :

In the Alpine Mountains agriculture is based on numerous very small and well adapted enterprises, which by means of the Alpine pasture (Alpe) the mountain meadow (Maggengo) and the home meadow (usually situated in the valley) provide the forage for dairy and breeding stock. The few poor arable fields and vineyards furnish some cereals, potatoes and wine for family use.

The Apennine Mountains lose the sylvan-pastoral character of the Alps, taking on first agricultural-pastoral aspects and later the poor-cereal peasant cultivation characteristic of the Southern Apennines. In the Central regions are vast pasture lands where millions of sheep are brought up for the summer months from the plains.

In the pre-Alpine Zones and Tablelands farm production is organized in small family holdings. There is, however, a dense industrial population (in the districts of Biella, Varesotto, and north of Milan) which relies only in small part upon agriculture for support. The lands are mostly arable of low productivity with mulberry trees and vines and are sown almost exclusively to cereals. The livestock ratio per hectare, though modest (two quintals liveweight) is high if one considers the limited area sown to forage.

In the vast irrigated plain of the Po—the subject of eloquent pages written by Carlo Cattaneo and Stefano Jacini—the system of production is based on medium-sized (35-80 hectares) and large (80-200 hectares) holdings; only around the villages do the small peasant farms re-appear and they have little weight in the economy of the Plain. Production centres on wheat, maize, rice, and the abundant forage crops needed for the dairy stock which is here reared on a very large scale. The holding is organized on a capitalist basis; there is generally a distinction drawn between the tasks of landlord, tenant-operator and manual worker (permanent and casual), and this structure has endured even though there has been a gradual diminution in the farm area, accompanied by a subdivision of property and a constant increase in the amount of capital invested in the land. West of the Plain rice cultivation assumes importance and there is a traditional migratory movement of workers during the weeding period.

Very different is the farming practised in the unirrigated plain of the Po, which with its fertile soils (the result of large-scale reclamation) is to be considered one of the richest agricultural zones in the world. Farms situated on the old lands are worked on the "mezzadria" system while the large holdings of the newer lands (Venetia, Ferrara, Ravenna) are farmed by workers under share contracts of both family and collective

type. Crop production in this region has undergone profound changes in the last eighty years, due to the extension of forage crops (alfalfa), the industrial character assumed by fruit culture, and the introduction of such industrial crops as sugar beet, and also hemp, in the cultivation of which the farmers of these parts display exceptional skill. Livestock rearing is general; dual-purpose cattle are bred in Lower Venetia and very fine oxen in Romagna.

Surrounding the Po Plain are numerous vine hills, where for centuries peasants have tended grapes that produce famed and delicate wines (Barolo, Barbera, Valpolicella, etc.).

In Central Italy, land surface, soil and climate have combined to foster a widespread mixed cultivation (wheat, maize, pulse, forage, vines, olive and fruit trees). There is also considerable livestock breeding based on the forage yields of alfalfa and clover meadows. The eye of the observer is struck by the variety of the agricultural background and indeed in many parts the peasant's art allied to nature has created productive systems that technically are second to none.

South of Termoli on the Adriatic coast, the Mediterranean agriculture assumes definite form. Hard wheat replaces the soft variety and specialized arboreal cultivation begins. Vast zones already dense with vines, olive and almond trees, are forerunners of yet further arboreal conquests. And passing into Sicily tree growth reigns supreme and wields power as an instrument of economic and social progress. Vines, olives, almonds, hazelnuts, carobs and citrus, all find varying degrees of specialized cultivation, covering in fact about one fifth of the island. There exists in Southern Italy also a cereal-pastoral economy, in the coastal plains where it assumes a capitalist character (medium-sized and large "masserie") and in the hill and mountain zones of the interior where it has a peasant character (small-scale tenancy, product-sharing, etc.). Everywhere wheat is grown, alternated with pasture, in obedience to ancient tradition. The "masseries" are frequently farmed by tenants with the help of a few permanent farm workers and many casual labourers hired for the periods of sowing, weeding and harvest. In the hill and mountain zones, strips of land are precariously held—either on lease with a rent payable in wheat or under a share-crop agreement—by a vast number of peasants living in remote rural centres. Throughout the South there is an extreme scarcity of cattle, to be attributed to lack of capital, poor distribution of forage production and absence of stables, silos, etc.

Farming in Sardinia is practised mostly on rocky mountains or on plains that are wind-swept and arid and thus impeded in their

agricultural progress. The pattern of land use is therefore predominantly pastoral, the few arable fields producing only poor cereals. The island's chief asset today is livestock, though here and there olive and vine culture has asserted itself, and there are in fact some good wines (Vernaccia, Ierzu, etc.); these, however, are little known.

At the end of the last century, the importance assumed by rotation forage crops in the North of Italy led to a remarkable development of livestock rearing and thus large quantities of manure became available; in consequence wheat crops reaped much benefit, and also the soil-renewing crops (maize, beets, hemp, etc.) which followed it. Upon this changeover to new cereal-livestock combinations hinged the evolution of agriculture in Northern Italy, and in part of Central Italy. In Southern Italy, the poor distribution of forage production caused by drought impeded progress in the livestock sector. In recent years, however, the success which has attended ensilage in its various forms, makes it possible to foresee that Southern agriculture can be similarly guided towards prosperity through an allied production of the traditional wheat with beef and dairy cattle. Tree cultivation will remain, however, the most powerful instrument for the transformation of the poorest lands of the South and Islands.

4. *Location and Development of Italian Industry*

Although the growth of industry has been indeed considerable, the location of its various branches has remained substantially the same as when Italy began her life as a nation. The most important industrial zones lie within the territory bounded by the Western and Central Alps, the two Ligurian Rivas, the Lake of Garda and the River Mincio. Here is the engineering industry, and here lie the cotton mills that put to flight the spinning wheels of our grandmothers; also the large textile factories that arrived—a little late—to still the fervour of the sewing machine. The woollen industry lies now, as then, in the Alpine zone where, in Venetia particularly, it was already of note in the early part of the last century; it also flourished in parts of Tuscany in years long past. The silk industry remains firmly established between Lake Maggiore and Lake Como. That of steel grew up in ports—as was natural in a country that lacks coal and has very little iron—and is centred in those situated along the North Tyrrhenian coast, and in Naples; also in a few centres like Piombino and Portoferraio, and in others where electrical power is abundant such as Terni in Umbria and the Alps near Aosta.

The food-processing industries—so closely linked to farming—are still found where they first sprang up in response to regional needs; for

instance, in the Po Plain, where the production of cheese has such importance ; in the Naples area, where tomatoes and vegetables abound ; in the regions where vines and olives grow, so that these may yield up their wine and oil ; and in the various districts where fruit is plentiful and calls for processing aid.

Also small-scale arts and industries linger in the same scattered centres that gave them birth in days long past.

The development of industry, as a whole, can perhaps be best illustrated by figures drawn from the Industrial Census of 1937-39, which showed the existence of over a million establishments giving employment to four and a half million persons, of which three and one third millions were workmen. The electrical power supply totalled six and one third million HP. Distribution was given as follows :

			Number of establishments	Number of persons employed	Power Supply HP
Northern Italy	...	...	a little over 500,000	almost 3,000,000	4,500,000 almost
Central Italy	...	...	186,000	731,000	1,000,000
Southern Italy	...	...	220,000	576,000	586,000
Sicily and Sardinia	...	...	117,000	281,000	246,000

19% of the total population was shown as employed in industry.

The above figures show how poorly balanced is the location of industrial activity in Italy.

5. *Relations Between Agriculture and Industry*

It is not easy to relate mathematically and convincingly the course of industry to that of agriculture ; we shall attempt to do so, however, by means of the figures given below, which cover a period of about sixty years.

We find employed in the various branches of industry : 94,000 in fishing ; 137,000 in mining ; in manufacturing 3,500,000 of which more than 800,000 in mechanics, 600,000 in textiles and 500,000 in food-processing and 500,000 in building. In these figures are included 800,000 artisans' shops which give employment to 1,100,000 persons.

As against 100 persons employed in agriculture, the following numbers were employed in industry.

	1871	1936
Northern Italy :		
Piedmont	31	92
Liguria	46	190
Lombardy	49	177
Tridentine Venetia	?	53
Veneto	34	57
Emilia-Romagna	38	44
Central Italy :		
Tuscany	40	72
Umbria	19	35
The Marches	28	32
Latium	37	71
Southern Italy :		
Abruzzi & Molise	23	20
Campania	51	66
Apulia	46	61
Basilicata	34	21
Calabria	71	30
The Islands :		
Sicily	70	59
Sardinia	24	45

Already by the end of last century the disappearance of household manufactures had reduced industrial activity in the South to less than half that of agriculture. In the North-West of Italy, however, industry was almost dominant.

If we examine the following table, in which are shown the percentage of agricultural workers, the power supply per 1,000 inhabitants, the gross yield of tax on turnover of goods per inhabitant and the average earned income per inhabitant, for each region, we shall find that frequently to a low percentage of agricultural workers correspond high figures for "power", "tax on turnover" and "average income"; and that, conversely, where the rural percentage is high, as, for example, in Calabria

or Basilicata, the figures that correspond point clearly to economic depression.

Region	Number of agricultural workers per 100 total workers	Power supply per 1,000 inhabitants	Gross yield of tax on turnover of goods per inhabitant	Yearly average of earned in- come per inhabitant
		HP	Lire	Lire
Liguria	25	355	86	256
Lombardy	29	301	70	319
Latium	41	97	72	153
Piedmont	43	305	57	330
Tuscany	47	160	54	186
Campania	48	92	31	92
Triden. Venetia	40	134	41	141
Sicily	50	41	26	77
Apulia	52	50	23	87
Veneto	53	106	37	147
Sardinia	55	83	23	51
Emilia-Romagna	59	145	47	239
Umbria	65	268	39	81
The Marches	66	74	33	94
Calabria	67	40	13	46
Abruzzi and Molise	74	40	17	57
Basilicata	75	19	13	74

We cannot expect, from the reference of economic facts to the sole factor population—in which is condensed the result of centuries of history and in which diverse spiritual and cultural levels meet—a perfect correspondence of cause with effect; nevertheless too strident is the contrast between high degree of rurality, poor income and low standard of living. The link between these phenomena has long been apparent in European countries and has at times aroused fear of a sudden development of industry at the expense of agriculture. Against such fear was raised an energetic protest almost a century ago by an eminent Italian statistician, who, in 1861, when he made known the results of our first census, wrote: "Even where Nature lavishes her favours upon the farmer, the thousand inventions of industry must be made to contribute; where the people fail to do this, the countries will remain near to barbarism. The regions of Italy that are most industrial are also those where agriculture thrives best. And of this fact those who go about daily saying that arts take away the hands that till the soil were certainly aware. They do not consider that in the times of our elders, when Italy rose up and freed herself from her shackles, agriculture flourished first around the cities, where the industries prospered that were able to lavish on the land the capital that was reaped from commerce". (1) Yet so many since then have continued to argue whether it were better to afford liberal protection to agriculture

1. P. Maestri. "Statistica d'Italia; Popolazione." Florence 1867.

or to industry, not pausing to consider that each exists and prospers by reason of the other. A voice of today says in regard to Italy "... the development of agriculture and the development of industry depend one upon the other, as is amply demonstrated by concrete cases where we see that the growth of urban and industrial centres, the increase of trade and the higher standard of living of the people, all tend to stir agricultural activity and lead to forms of intensive farming which a few decades ago could not have been hoped for" ¹. And another, writing on the same subject, states, "Italy, like all the European countries, must intensify production not only in agriculture but also in industry. Thus a great part of her potential labour force will be absorbed, and agriculture will be freed from the necessity of employing under varied forms of compulsory allocation, its surplus manpower. Without a thriving industry which will also convert the products of the farm, agriculture will be condemned to a miserable existence without hope for the future. ² Countries exclusively agricultural, such as India and China up to a few years ago, were amongst the poorest countries in the world, where famine and epidemics were inescapable, and where millions dwelt on the margin of subsistence bereft of guarantee for the morrow."

[Prof. Giuseppe Medici is President, Istituto Nazionale di Economia Agraria, Rome, Italy.]

REPORT ON THE ENQUIRIES INTO CAPITAL FORMATION AND INTO INDEBTEDNESS OF PERSONS ENGAGED IN AGRICULTURE IN CERTAIN REGIONS OF KODINAR TALUKA.*

The object of this report is to examine the nature and extent of capital formation and of indebtedness of persons engaged in agriculture in certain regions of the Kodinar Taluka. The report is the result of a study undertaken by the Indian Society of Agricultural Economics on behalf of the Bombay Government.

The study comprises two enquiries, one into capital formation and the other into indebtedness.

1. M. Tofani. "Agricoltura ed industria in Italia" (VIIth International Conference of Agricultural Economists—Stresa 1949).

2. G. Medici. "L'agricoltura e la riforma agraria" Milan 1947.

* Dr. Manohar V. Hate, Special Research Officer in Charge of the Enquiries, carried out the field work and drafted the Report. Shri Jitendra Nanavati analysed and tabulated the data. We are grateful to Shri M. G. Desai, A. D. C. O. Kodinar and to the four Sub-Inspectors of the Kodinar Co-operative Banking Union, Ltd. for helping us in the field work. The enquiries were carried out on behalf of the Government of Bombay: the results are published here with their kind permission.