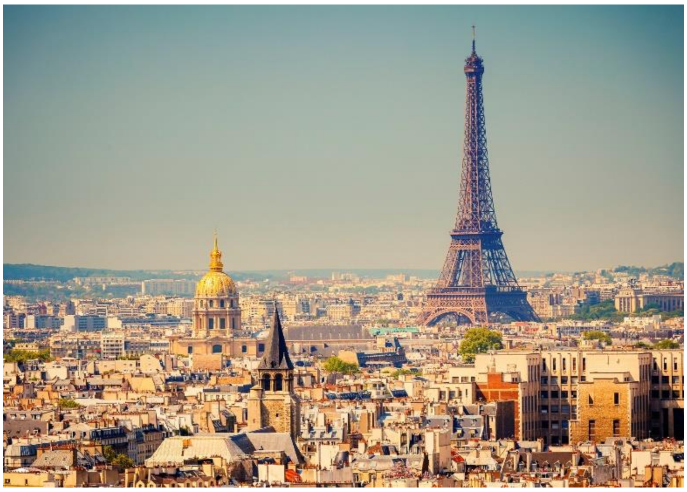

Protected designation of origin products and part-time farming in a strongly developed area

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Abstract

The aim of this work is to analyse an area where, along with a strong tradition of typical products, part-time work and pluriactivity can be found. This occurs in a "rich" socio-economic context, which is characterised by an agriculture reaching high levels of productivity, a widespread industry and a significant service sector. The area is the province of Parma. The objective is to stress the ways thanks to which agriculture would not disappear in a socio-economic context that is rapidly following a development model marked by the increasing role of the service sector. The role the significant typical products play helps professional and non-professional farming to keep its place.

The main lesson to be drawn is this : the presence of typical products and of a flourishing food industry accounts for the permanence of a rich professional agriculture as well as of a network of part-time and pluriactive farms which, thanks to their high profits, stay active in the agricultural sector in the long term and not as a prelude to leaving it. This is fundamental because, as recent studies point out, agriculture tends to be forced out from a post-industrial context, either for economic or socio-cultural reasons.

To reach this goal we had to analyse in detail the 47 administrative municipalities belonging to the province of Parma in the light of some factors we regard as significant.

The analysis has been conducted with an innovative approach aimed at incorporating the idea of the <u>local labour market</u>, i.e. through the adoption of a functionally defined statistic-geographic entity, the local labour market, as explained in Annex 1. The analysis has pointed out that, according to the main activity in terms of employees, in the province there can be found three types of local markets of labour that can be divided on a time basis :

1. *<u>A. "Agricultural exemplification" local market of labour</u> - The term agricultural is inappropriate, since agriculture is not the main sector, in terms of employees, but in this area it has a greater weight than the average in the rest of the province : with the "central town" of Busseto.*
2. *<u>AI. "Agricultural-Industrial exemplification" local market of labour</u> - This area has a high percentage of agricultu-ral farms as compared with the average of the province, but is has – in absolute figures – the highest percentage of workers in the industrial sector : with the "central town" of Langhirano, where industry means food industry.*
3. *<u>S. "Other activities (Services) exemplification" local market of labour</u> - having the highest percentage of employees in the other activities (services) sector, it has all the typical characteristics of the development phase of current economic systems : with the "central town" of Fidenza.*

In this work, the general results concerning the three local labour markets of each type will be shown. After providing some useful information regarding the development process of the area under examination, the following factors have been analysed :

- *Significance of the agricultural activity linked to typical products in the context of local production and importance of food industry in the economic activities.*
- *Relevance and features of pluriactivity and part-time work in agriculture.*

Keywords : typical products, part-time work, pluriactivity, Parma, local labour market

INTRODUCTION

After a long period of crisis (1930-1945), Parma, which had come out of the conflict less damaged than other cities and with a production system specialised in agro-food, lived more intensely than other provinces the period of fast development of the Italian economy which is named "economic miracle". Since the first years of the post-war, the local economic growth had been faster than the national and regional one. To the point that during these years, the income per person was higher than the national income by 20,5 % and by 15,6% compared to the regional datum. Development was favoured especially by the rapid growth of the secondary and the services sector.

From 1936 to 1961, the percentage of the primary sector passed from 59.6% of the total amount to 32% and the agricultural added value passed from 60% to 32%. In 1951, the economy of Parma was more bounded to the primary sector than the regional economy (34%) and the national one (23%). However, 25 years later, the relative economic prominence passed from agriculture to industry, which recorded one of the most important growths in the country. During these years, Parma lived a period of real change, in the economic and social field, which had a weight upon the features of the primary sector and upon its relative importance in the picture of the local production system.

Moreover, the Sixties recorded a rapid and general improvement of the living standard and of the private income, which caused a rapid growth of the demand of foodstuffs and agricultural products, followed by positive effects upon the income of the sector.

However, the real development of this area took place during the last years of the Sixties, when the country was taking the road of the great economic growth, and it was stirred at first by the big business, then by a characterisation at local level (North-East and Centre area) and with sectional peculiarities : from the traditional manufacturing industry (textile-clothing, shoe-manufacturing, pottery, foodstuffs and drinks) to sectors characterised by a high mechanical specialisation.

Parma places itself, also, among the first Italian cities for its living standard and its income per head. The composition of its production reveals, moreover, the ascent of the "other activity" sector, which covers today 60% of gross provincial income[2]. Therefore, the composition of the workers points out a generalised expansion of the "others activity" sector in the economy of Parma province.

In conclusion, we can state that, in the thirty-year period going from 1961 to 1991, the general trend evidenced by the data of the various ISTAT census is an progressive growing of other activities (services) in the economy, which is more marked in the communes of the lowlands, with Parma in the forefront, and successively in the hills where industry was still strong, followed by the mountain areas, where the phenomenon has been more gradual (mainly due to the lack of occupation alternatives other than those of the agricultural sector).

1. AGRI BUSINESS : FOOD INDUSTRY AND PDO PRODUCTS

The Province of Parma is an area where agribusiness is extremely important : the food industry alone employs 1/4 of the total industry workers and nearly 3/4 of the final agricultural output is destined to the PDO/PGI productions.

1.1. Food industry

Parma faced the first fifty years of the century with a renewed agriculture[3], (from a technological point of view) and a large number of firms, which undertook the processing of agricultural products, even if they still had artisan characteristics. Moreover, at the end of the First World War, the chief food-industries had to increase production to meet the rising demand by stimulating the expansion of agricultural cultivation. The production of sugar beets increased : 80.000 quintals in 1918 and 245.000 in 1920 ; in 1924, the production of tomatoes tripled, compared to the production of 1919. The chief industries were those which were based on the processing of agricultural products : food preservation industry, dairy industry, milling and pork meat industry, etc. These are typical local industries, not only because they are based on the processing of local agricultural products, but also because they are grounded on local capitals[4].

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period of fast development of the Italian economy which is named "economic miracle".

Today Parma represents 1/4 of the workers of the regional food industry, which are second at national level, and 3.5% of the national total amount.

Despite the strong bargaining pressure to which the agro-food industry is subject from the modern distribution, it maintains its position in the chain. The total number of firm active in the agro-food industry amounted at 1,570 with 14,200 workers.

There is no other Italian province with such a high concentration of factories working in the agro-industrial sector, and with such a vast range of top quality products. Food represents the 45% of the total turnover of industry and handicrafts in 1997.

On these 1,570 firms, only about 2% employed more than 50 employees but provide work to 60% of the total workforce employed in the sector. The remaining people are employed by the several very small companies. The degree of industrial concentration varies in the different sub-sectors : high in sugar, industrial milk and pasta ; low in cheese and ham.

80% of these companies are confined to the territory of single municipalities. Although in the last 40 years, the total number of enterprises has decreased, while the number of workers has grown. The process of enterprise concentration goes on and is accompanied, especially for big companies, by a growing globalisation.

Table 1 : Local unity (Lu) and employed (Em) : food industry and other connected industries

1951		1961		1971		1981		1991	
Lu	Em	Lu	Em	Lu	Em	Lu	Ad	Em	Ad
1,083	5,097	1,133	7,957	1,484	11,133	1,849	14,550	1,352	13,960

Source : ISTAT

The main sectors are Pasta and baking, pastry, cereals, sugar, soups, frozen-food ; Dairy products, milk, ice creams ; Animal conserves and butchering ; Vegetable and fruit preserves ; Drinks : mineral waters, non alcoholic drinks, wines, spirits. Other sectors : fishing industry, feeding, etc and the important sector of Food equipment[5].

Table 2 : Food industry and its manufacturing equipment

	Turnover 1997* (billions £)	**Employed****	**Export 1997* (billions £)**
Pasta and baking, pastry, cereals, sugar, soups, frozen-food	**6,450**	**6,200**	**420**
Dairy products, milk, ice-creams	**2,100**	**2,000**	**42**
Animal conserves and butchering	**2,000**	**4,000**	**215**
Vegetable and fruit conserves	**480**	**1,255**	**206**
Drinks : mineral waters, non-alcoholic drinks, wines, spirits.	**80**	**300**	**4**
Other sectors : fishing industry, feeding, milling, etc.	**590**	**450**	**62**
Food Equipment	**2,700**	**7,000**	**1,293**
Total (food and equipment)	**14,400**	**21,200**	**2,249**
Total (industry and handicraft)	**26,000**	**65,000**	**4,340**

** Estimate*
*** ISTAT, 1991 Industry Census*

Source : Unione Parmense Industriali, 1999

Barilla, the market leader in pasta and oven products, has its head office and the world's largest pasta factory in Parma. The three pasta manufacturers, having their seat in Parma, have a total productive capacity of more than 0.35 million tons of pasta per year. Besides that, there is a considerable production of biscuits, cakes and oven products, providing work to a great number of people and to about 500 season-workers : we wish to bring to your attention a medium-sized company producing typical Christmas cakes (approximately 22 million pieces a year). Strictly linked to the production of bread and pasta and, of course, integrated part of the wheat process, is milling. Since many centuries, milling substitutes the grinding by hand. Water mills were introduced by the Romans, but their widespread use occurred only with the beginning of 1000 AD. Since than, canals and water mills are part of the landscape of our towns and villages.

The historical integration in the province of Parma between agriculture activities and food industry is a reality even for the sugar industry. Today, in our province, an important and modern industry is operating in this sector, manufacturing daily more than 12,000 tons of sugar beets for a productive capacity of 99,000 tons of sugar every working campaign : the biggest plant for the production of yeast existing in Italy, which produces 38,000 tons of yeast and covers 55% of the national bread-baking yeast production and 100% of the yeast extract production.

In the last twenty years with the modification of the life style and the working rhythms, the living habits of the Italians felt the effects of a chance of quality. More and more pre-cooked, deep-frozen and prepared food became part of the daily nourishment and our dynamic industry could not remain inactive : today the production of several factories covers the 35% of the national export of soups and meat extract.

The milk sector and its by-products is almost fully represented by Parmalat, a company founded in 1961 that in the seventies started a quick development, which brought her to become the first long-life milk producer in the world (1,500,000 litres daily) and one of the most important factories of pasteurised, condensed and powder milk, as well as milk by-products as yoghurt and dessert (we must not forget that Parmalat is leader in the production of many other food specialities).

In Parma is operating one of the four biggest factories in Italy (with a yearly production of 200 million pieces) in the sector of industrial ice creams and cold desserts.

The production of tomato puree dates from about 1870, although it is only since the beginning of the 20th century that it can be considered as a modern industry with the introduction of *boules* which replaced the primitive double-bottomed cauldron. This industry has developed in Parma considerably faster than elsewhere in Italy, so that since 1910 this province has 36 active factories, much more than in other parts of Italy. In the eighties, utilising new and more functional cardboard containers, Parmalat became the market leader for tomato purees and for fruit juices.

There are a dozen factories transforming tomatoes (and other fruits and vegetables) with a global capacity of approximately than 0,6 million tons of fresh tomatoes used to prepare a range of condiments, ragouts, sauces and canned vegetables.

The traditional exploitation in the province of medicinal waters containing bromine and iodine salts, hydrogen sulphide, sodium bicarbonate and other sodium compounds has encouraged a flourishing industry of commercial bottling of mineral water. Beside this, the soft-drinks industry is growing with a remarkable market and technology evolution. Today in our province, we count in this sector 6 factories producing yearly about 220 million bottles of mineral water and soft drinks, providing work for a large number of seasonal workers.

Among the less important branches of food industry, we point out the fish industry, represented in Parma by three factories, very advanced from a technological point of view, processing tuna-fish, sardines, anchovies, mackerels, salmon.

Nine factories, with about 200 employees, and few, very small ones, represent the animal feeding sector which has an important role in our economic system. In fact, it conditions the amount and the quality of the breeding, supporting their adjustment to the requirements of the modern food industry.

Since the middle of the last century, the preservation and the processing of agricultural products, has been the trademark of the economy of our city and the most vital factor in the development of the mechanical industry. Parma exports and sets up complete food-processing plants world-wide, especially for the production of tomato sauces and canned tomatoes, vegetables, continental and exotic fruits, jams, beverage, meats and fish preserves. There is also an active industry for the manufacture of air-conditioners, bottling and general packaging machinery.

Distinguishing according to the typology of the production process, the production of ham follows industrial schemes, while the production of *Parmigiano* is based on artisan methods.

With regard to the agriculture-processing connection, it is very strong in the case of milk-*Parmigiano Reggiano* processing, because almost all the milk produced in the province is transformed in *Parmigiano Reggiano.*

Feebler is the (present) connection between hog raising and the processing industry. Consequently, today less than 1/10 of pig legs comes from the provinces. With regard to the present destination of pork meat, according to production typologies, we point out : *Prosciutto di Parma, Salame di Felino, Culatello di Zibello, Spalla di S. Secondo.*

1.2. PDO products

From 1936 to now, the employed in the primary sector passed from 59.6% of the total amount to 7%, and the agricultural added value passed from 60% to 4%.

Table 3 : Some economic indicators of the primary sector

	% employed	% Added Value *
1936	59.6	60.1
1951	48.7	42.3
1961	32.2	32.4
1971	19.3	13.2
1981	12.7	6.6
1991	8.9	5.3
1997	7.0	4.0

**On the total*

Source : Our calculations

From the analyses of the composition and value of the Final Agricultural Output[6] (FAO), it is possible to get the quantitative aspects of the specialisation process performed by Parmesan agriculture. Today livestock production covers 80% of the output, with an increasing quota of milk. The prevailing importance of livestock production makes Parmesan agriculture similar to northern European countries. As a result, at national level, livestock covers 34% of the total Final Output (46% in Northern Italy), while, in the countries of Northern Europe, it covers a superior percentage : 64% in Holland, 62% in Belgium and France, 71% in Germany.

Table 4 : Final Output of agriculture, chosen years (composition)

	1938	1950	1960	1970	1980	1990	1996*
Vegetable production	55.56	52.47	39.80	35.66	29.55	26.33	19,70
Livestock	44.45	47.54	60.20	64.33	70.45	73.67	80.30
Cow s milk	14.82	17.85	26.38	32.24	34.44	36.01	61.59

** Provisional data*

Source : Elaboration about data of different origin

A 1/4 of agricultural and livestock production is transformed straight away by local industrial equipment (tomatoes, sugar beets), whose dimensions are capable of gathering products coming from other areas, just as it happens for milk and durum wheat.

A big proportion of agricultural production quota (3/4) is assigned to the processing (industrial and/or artisan) of products protected by PDO or by PGI or typical-local products. *Parmigiano Reggiano* cheese, typical raw ham such as *Prosciutto di Parma, Culatello di Zibello* (both PDO), *Salame di Felino, Coppa di Parma* and typical wines and mushrooms (Borgotaro) are among the most important PDO products for turnover and fame at European level.

1.2.1. The Parmigiano Reggiano chain

Apart from the skill in its manufacture, the *Parmigiano Reggiano* owes its qualities to the soil, to the particular climate, to the specific richness of the feed, to the methods of breed that produce high-quality milk. In the province of Parma, 223 dairies yearly transform approximately 0,59 million tons of milk into approximately 38,400 tons of *Parmigiano Reggiano* and 9,250 tons of butter (1997).

The history of PR originates in the period of the Roman colonisation in the cisalpine region. According to the tradition, the place of origin of PR was between the actual provinces of Reggio and Parma. The word *parmigiano* appeared in 1300. Strictly correlated to milk processing was hog raising and, consequently, pork meat processing. In particular, ham processing has very ancient roots both in the area of Parma and, on the whole, in western Emilia Romagna. Until the end of the XIX century, hog raising represented an economic incentive to an agriculture based essentially on share-cropping.

As regards cattle rearing, after the economic boom of the Sixties, while the number of heads of cattle did not change, the number of farms rapidly diminished.

Table 5 : Reared cattle, cows and farms with cattle rearing

	Cattle	Cows	Farms
1868	66,946	-	-
1908	137,000	-	-
1936	193,000	100,000	-
1961	249,984	123,296	22,662
1970	197,484	99,794	15,197
1982	198,993	98,375	8,109
1990	191,461	107,109	5,166

Source : Studies based on data of various origins

In 1990, the number of reared cattle was 191,461, of which 107,109 were dairy cows. Cattle stock was distributed among 5,166 farms (reduced by 47% with respect to 1970). 32% of the heads were concentrated in farms of considerable dimensions (163 heads of cattle on average) ; however, there were also farms with less than 10 heads of cattle.

90% of dairy cows were concentrated in the plain area and in the hills. The strains were in the main the Italian Friesian (85%) and the Brown Swiss (13%).

The role of co-operation was very important ; in the Sixties : cheese dairy co-operatives represented about 45% of cheese dairies in the province and the average quantity of processed milk for each dairy was 4,800 quintals, which was larger than the quantity of private cheese dairies.

In 1990, the active co-operative cheese dairies were 75% on the whole and they processed about 90% of milk, partly produced by partners and partly gathered from about a thousand of private farms.

Table 6 : Cheese dairies ; processed milk per cheese dairy and production of PR (Parma province)

	Cheese dairies	tons of PR
1921	420	6,500
1955	540	14,800
1961	533	15,800
1965	485	14,500
1970	448	15,600
1975	383	15,475
1980	335	17,734
1985	346	29,100
1990	277	32,000
1995	231	34,712
1997	223	38,400

Source : Consortium of PR

During the period 1950-1970, the amount of reared hogs passed from 50,841 to almost 200,000 heads.

Between 1961 and 1971 an industrial kind of raising started gaining importance, connected to cheese dairies, which availed itself of the large amount of whey obtained.

Hog raising was assuming the typical dimensions of an industrial kind of activity, although the bond with the dairy-factories was still strong, but decreasing.

In the Seventies, breeding was deeply reconstructed : from 1970 to 1990, the amount of reared heads increased by 34%, while the farms reduced by 90%. The peculiarity of the farms of Parma was represented by the fact that they were almost exclusively interested in the fattening of suckling-pigs, often bought outside the province.

In 1990, 38% of the farms were located in the hills, 42% on the plain and 20% in the mountains.

With reference to the amount of heads of cattle, 36% of the whole were concentrated in the hills, 58% on the plain and only 6% in the mountains : in this area, the loss, by 21% with respect to 1992, have been more abrupt than the 15% of the province.

Full-owing farms represented 80% on the whole (34% of heads), while farms based on wage labour were 19%, but they covered 66% of reared heads ; in fact, the average quantity was 128 in full-owing and 1,057 in the ones based on wage labour. This means that only a 30% of heads were left to smaller farms (especially those attached to cheese dairies).

Table 7 : Heads of hogs and hog raising farms

	hogs	farms
1868	55,000	-
1961	100,000	-
1970	194,344	7,503
1982	309,806	2,348
1990	265,163	875

Source : Studies based on data of various origins

In 1996, only 40% of hogs were still raised in cheese dairies. This quantity is still decreasing because of the always more urgent necessity of rationalising raising methods, in particular in the light of recent adjustments to sanitary measures and to rules related to the reduction of the influence on environment.

In fact, this body of rules represents the main obstacle to the development of the sector, in relation to the complicated ecological question essentially bound to water pollution caused by hog raising.

Today the production of PR represents 15% of Italian cheese market and more than 30% of PDO and labelled cheeses, which represent about 75% of all cheese manufacturing in Italy. 75% of the milk used in the production of PR originate in Emilia Romagna (from now on indicated as ER), the second most important region in dairy production after Lombardia (respectively producing 20% and 35% of the national dairy production).

According to the percentage method, assuming the milk production is 100, 85-90% is addressed to manufacturing (artisan or industrial). Moreover, assuming the total agricultural production is 100, the resulting PDO products are about 70% of the total agricultural production, which is above 700 billions of £- in current value.

In 1960, Parma represented 22% of the total PR production ; today it covers 32%.

1.2.2. Prosciutto di Parma chain

Since 1963, when the Consortium was founded, the production of typical raw ham has passed from 50,000 seals to almost 9 millions in 1997[7]. The development of the production took place after 1970, when the designation of origin *Prosciutto di Parma* was approved. Today Parma raw ham covers 45.5% of the national raw ham market.

It is common knowledge that the lives of the two leading products, that is *Parmigiano* and *Prosciutto*, have something in common. The evolution of the organising, technical and global aspects, in other words, of the product-production system has changed, especially during last century. As a result, today, the organisation and the relations with the territory of the two most important and typical products are undoubtedly original.

It is important to check the actual concentration of numerous small firms specialised in a particular production, on a limited but not stable territory. The area concerned with this phenomenon should not be urbanised with big metropolis but should be included in a specific area where town and country live together. In the picture of regional production of hog seasoning, the concentration of this kind of activity on the territory is extremely evident : the province is occupied by 50% of the factories. If one refers to the production of raw ham, it is possible to notice how this activity is further concentrated in the province : in fact, 2/3 of the production of the entire region is processed in this area. This high production specialisation is achieved by a very large number of small and medium-sized enterprises. The province of Parma, which preserves its traditional inclination to processing and ripening of pork meat, presents on its territory, and particularly in some towns, a peculiar density of firms.

The high concentration of firms in the hills[8] stands out clearly. Considering the towns of the agro industrial district, it is possible to obtain results that are much more interesting. In 1990, there were 282 firms with 2,358 employees. A large number of specialised firms, whose dimensions are undoubtedly medium-small, as the average of the workers and the establishment show it (about 8.3). In 1990, out of these 282 firms, 215 were recognised by the Consortium for the production of *Prosciutto di Parma*. These 215 establishments represent 68% of the whole of the province and 76% of the establishments located in the area with "PDO"[9] label.

Table 8 : Distribution of factories and employed (1990)

	Factories	Employed
Plain	30	308
Hills	232	2,134
Mountains	52	226
Total Province	314	2,668
Total AID	282	2,358
% AID / TP	90%	88%

Source : FLAI-CGL

As regards the factories producing *Prosciutto di Parma*, they amounted to 201 in 1993, according to Consortium data. It is important to point out that 113 firms, that is 56.2 %, are joint-stock companies (S.p.A and S.R.L.), while 88, which represent the remaining 43.4% are partnerships. Supposing that business names can be considered in some way as indicators of corporate sizes, we can assert that the considerable incidence of partnerships attests that many firms are still today of small dimensions. Supporting the hypothesis that in this decentralised area, starting from the second post-war, a very particular kind of development set off, compared to the industrial development of the big firms in north-western Italy.

It was a "self-centred" kind of development based on the growth of numerous small firms able to exploit the resources of the territory in the best way.

After analysing the main features of the two PDOs chain, it must be stressed how profits are a key factor, along with a number of non-economic reasons (the opposition to migration, the love for the land, etc.), in the "success" of typical products :

- The price of the milk for *Parmigiano Reggiano* cheese has been up to 60-70% higher than standard milk (in 1995 and in particular this year of crisis for Parmigiano Reggiano, the difference has reached a maximum of 20%).
- The ex-works price for the producer, without VAT, for 1 kg of pork legs becoming Parma ham is higher by 25% than that of pork legs for non-branded ham (the gap reaches 30% if the average consumer prices are compared).

2. PART-TIME FARMING AND PLURIACTIVITY

Pluriactivity might have very different roles according to the context : the presence of pluriactivity should be considered a structural feature for any context. The problem is how many types of pluriactivity there are, when some become transitory and to tend to disappear and when others tend to appear ; how, when and why one type is likely to change into another.

Based on the information available at commune level and subdivided by altimetrical areas comprised in the province of Parma, it must be said first that the pluriactivity phenomenon is generally widespread and dispersed on the territory.

According to the results of the 4th General Census of Agriculture of 1990, over a total of almost 18,000 farmers in the Parma district, 21.5% of them are involved in mainly off-farm activities, whilst only 1.5% is devoted mainly to the farm business.

Table 9 : Farmer's family members pluriactivity, 1990 Parma Province

	Farmers		Spouses		Nearest family members		Relatives		Total
	n	%	N	%	n	%	n	%	
Full time farmer	13,862	77.1	9,367	82.1	11,796	65.9	1,358	44.5	**36,383**
Involved mainly on farm	259	1.4	38	0.3	106	0.6	48	1.6	**451**
Involved mainly off-farm	3,868	21.5	2,002	17.6	5,985	33.5	1,648	54.0	**13,503**
Total	**17,989**	**100.0**	**11,407**	**100.0**	**17,887**	**100.0**	**3,054**	**100.0**	**50,337**
%	**35.7**		**22.7**		**35.5**		**6.1**		**100**

Source : Our calculations on ISTAT data

These two percentages are likely to increase considerably over the next few years. With regard to the agriculture farmers who are mainly involved in off-farm activities, statistics show that the employees involved are 3.868. The "other activities" (services) is the sector in which they are mainly active with as much as 2.125 units corresponding to 55% of the total, followed by the industry workers with 38%. The remaining part, of only 7%, is involved in several activities within the primary sector. Through the processing of data (not published by supplied by ISTAT and collected during the 4th General Census of Agriculture at communal level), it has been evidenced that industry has a greater importance for farmers than the other activities (services) sector, for the communes of "poor" areas.

When examining the composition of the farmer's family members involved in agricultural activities, it has been noted that over a total of more than 32.000 units (including the spouses, nearest family members and relatives), approximately 30% of them mainly work outside the farms, whilst only a very small percentage (0.6%) is active in the farm as a prevailing occupation. The various data considered and the extensive data processing conducted enable us to say that, in general, the other activities (services) is the prevailing sector in which the farmer's family members carry out off-farm activities.

Considering the varying diffusion of pluriactivity in the communes located in the mountains, hills or lowlands of Parma district, it is evidenced that the development of this phenomenon is not so much, (or not always), the difficulty in reaching an appropriate family income, but rather the fact that occupation in other sectors of economy is accessible.

In fact, in the communes of the highlands, less favoured and accessible, peasants insist in carrying out agricultural practices that would be regarded as definitely non-economic elsewhere. Only rarely they integrate their poor incomes with other activities, whilst in many lowland fertile areas, most farms integrate their (sometimes considerable) incomes from agriculture with occupations which take most of the time available to them (for example, productivity in highland areas is less than 1/3 of that measured in lowland areas).

Table 10 : Farms according to the farmer's pluriactivity per sector and belt - 1990

	Total	The farmer work								
		Full time farmer	Mainly on farm				Mainly off farm			
			Tot	Agric	Ind	Others	Tot	Agric	Ind	Others
Mountains	**6,330**	4,735	109	68	16	25	1,486	129	552	805
Hills	**6,139**	4,626	75	40	8	27	1,438	73	580	785
Lowlands	**5,520**	4,501	75	39	12	24	944	69	340	535
Total	**17,989**	13,862	259	147	36	76	3,868	271	1,472	2,125

Source : Our calculations on ISTAT data

We can state that, in the mountain communes located far away from the important production centres, that means difficult access and fewer opportunities to obtain occupations in other sectors of economy, the agricultural part-time observed should be rather called sub-occupation : that is the phenomenon that is observed when the reduced farm size or the presence of an aged work force do not allow for full agricultural employment of the labour unit made up by the tenant and, also, when this excess of available labour (obviously not in the case of aged members) does not find occupation opportunities outside. Therefore, it is an improper part-time occupation that often anticipates abandon of farming activities.

Within the individual strategies, pluriactivity may constitute ad advantage in the business management for the medium and large farms and an important support to income for the continuance of small farms.

In brief, at a national level, 67.4% of the farmer's family members and 75% of the farmers are engaged full-time in farming activities. 31.2% of the farmer's family members is engaged, mainly off-farm activities, in particular, family members other than the wife or husband in services (others activities than agriculture and industry).

3. ANALYSIS OF THE LOCAL LABOUR MARKETS

Given the relevance of typical products in the local labour markets under consideration, it is to be noted that PDO products are present in all types of local labour markets. However, nearly all POD productions are concentrated in 4 of the 8 local labour markets of the examined area. These 4 local labour markets also see the concentration of 90% of food industries, along with the related activities, and "only" 65% of industrial activities[10] (Table 11). Summarising, the **Langhirano** LLM (IA) produces 60% of Parma Ham and the **Parma** LLM 30%. As far as *Parmigiano Reggiano* is concerned, the **Parma** LLM produces 50% of it, the **Fidenza** LLM (S) 20%, the **Busseto** LLM (A) 12% and the **Langhirano** LLM (IA) 8%.

Table 11 : Relevance of typical products in the Local Labour Markets

Systems	Name of the LLM	Raw ham produced in the LLM / total raw ham production (*)	*Parmigiano Reggiano* produced in the LLM / total PR (**)	Food processing employed / Total industry workers
A I	**Langhirano**	60%	8%	62.09
S	**Parma**	30%	50%	22.38
S	**Fidenza**	Np	20%	11.89
A	**Busseto**	Np	12%	24.42

Np : non present *(*) Numbers of firms* *(**) Milk processed*

Source : Our calculations

In the province studied, the presence of typical production plays an important role : from *Parmigiano Reggiano* to Parma ham, which can certainly contribute to the continuance of a rich agriculture in areas where the other activities (services) sector is strong. An example of this integration-complementary aspect can be seen in particular in the *local market of labour of **Langhirano***. This not only for the products of the agro-industrial activity (this area concentrated 60% of the production of PDO raw ham) but for the integration of the labour factor which generates "mingling" between sectors in the various saving-consumption-investment phases[11]. This fact is evidenced by the high share of pluriactivity in the industrial sector that characterises the farmer's family in these areas.

Among the labour markets analysed, where can dualistic agriculture be found ? The analysis of local labour markets evidences that agriculture is dualistic, in particular, in the "other activities (services)-exemplification" local market, the *local market of labour of **Fidenza (S)***. In this market, agriculture has two well-differentiated aspects. On one side a type of agriculture that, on a business level, is scarcely competitive : small size, low profitability, limited control on its market outlets and purchasing sources, etc. This type of agriculture has, in terms of labour factor, greater exchanges with the system : greater resort to compensation elements, at production unit and family level, through incomes generated in other sectors (high pluriactivity of the family, reduced part-time for the farmer). Besides this, we find a highly specialised agriculture (three communes of the areas represent 1/5 of *Parmigiano Reggiano* production) which coexists with a "foreign" context. It is interesting to note that, during the comment of the analysis of labour market and of the changes occurred in the local labour markets during the last decade, the **Fidenza** (S) local labour market rejected the commune of **Busseto** (A) (10% of the production of *Parmigiano Reggiano*), which has become at the end of the decade the centre of a new local labour market, as it was said before : the "agricultural" exemplification. However, this market continues including communes with a high agricultural specialisation and, once more, a "typical" agriculture, measured by the high productivity, strong presence of dairies, generally medium-sized, reduced part-time in the intensive communes, but high in extensive communes.

These results are (only) partially in line with the findings of others (Benni, Musotti, 1997) : as, in the areas studied, the evolution of local labour markets in the long period towards other activities (services) has not always brought a gradual change into extensive agriculture or abandonment. Partially in line, because the presence of specialised agriculture contributes to increased stability, which is unparalleled in other local labour markets. In addition, competition for the use of the territory in these areas may have been partly mitigated by the high value of the land in these areas. Agriculture, above all in the lowlands, tends to be intensive, specialised, with an important animal husbandry sector, mechanised and capable of producing satisfactory income. In fact, it is shown by the results in the table that the percentage of farmers carrying out their activity mainly off the farm is lower than elsewhere, therefore the number of professional farms is greater. As far as the pluriactivity of the farmer's family members, the share of those carrying out off-farm activities is greater due to the facilitated access to other work opportunities than the agricultural ones.

Whilst interrelations between agriculture and industry occur both at product level and at labour-income level, the relations established between the agricultural sector and the other activities (services) sector are only limited to the integration of the family incomes, mainly due to the cultural difference between these two sectors which social evaluation tends to widen.

Table 12 : Farms numbers according to full-time or part-time activities of the farm manager

	Tot.	Full-time farms	Mainly on farm				Mainly off farm			
			Tot	Agri.	Ind.	Others	Tot	Agri.	Ind.	Others
Mountains	6,330	4,735	109	68	16	25	1,486	129	552	805
%	**100**	**74.80**	**1.72**	**1.07**	**0.25**	**0.39**	**23.48**	**2.04**	**8.72**	**12.72**
Hills	6,139	4,626	75	40	8	27	1,438	73	580	785
%	**100**	**75.35**	**1.22**	**0.65**	**0.13**	**0.44**	**23.42**	**1.19**	**9.45**	**12.79**
Lowlands	5,520	4,501	75	39	12	24	944	69	340	535
%	**100**	**81.54**	**1.36**	**0.71**	**0.22**	**0.43**	**17.10**	**1.25**	**6.16**	**9.69**
Total	17,989	13,862	259	147	36	76	3,868	271	1,472	2,125
%	**100**	**77.06**	**1.44**	**0.82**	**0.20**	**0.42**	**21.50**	**1.51**	**8.18**	**11.81**

Source : Our calculations

Which implications of agrarian policy can thus be obtained ? Although a critical analysis of the common agricultural policy and of its reform does not fall within the scope of this work, a number of considerations can be attempted. As it is well known, the role of agriculture in the economic development process of a country changes : from a primary role (production of foodstuffs, main occupational sector of the population etc.) to a reservoir of work force for the industrial sector (for example the recent development of our country). Nowadays agriculture plays new roles : in the environment, landscape, preservation of rural territories, preservation of the peasant's culture, buffer between strongly urbanised areas, preservation of the strong ties between typical productions and the territory. The possibility that agriculture has to fulfil this role depends on its capacity of autonomous development. However, to preserve the agricultural sector, one can not think of a sector made up of peasants-gardeners – to paraphrase the peasants-workers passage. Thus, agriculture, in a context that specialises in the production of services rather than tangible goods, must find an autonomous, dignified position. The analysis of local labour markets seems to suggest that agriculture may become synonymous of abandonment and marginality, being unable to adapt and take up a new role to face the society's cultural changes and competition for the use of land. Agriculture remains alive, in spite of the fact that development is running fast, where the cultural context, that is the background, and high specialisation, make it competitive with the other sectors.

In the case of a mountain area, where the prevailing activity is the other activities (services) (PA, trade, etc.) agriculture seems to be losing due to its lack of competitiveness with the other economic activities. In these areas, which are difficult due to their natural conditions, agriculture seems to be destined to perform mainly (subsidised) service functions. The fact the industrial and artisan activities have failed to develop may have accelerated this process.

Table 13 : Main indicators for the Local Labour Markets (1)

LLM		Average UAA	SGM / Worker (millions Italian £)	SGM / UAA (millions Italian £)	Farms with less than 10 ha (%)	Part time farming / Total	Full time farm manger / Total (*)
Bedonia	Bedonia	6.64	21.65	1.62	85	28.23	73.76
	Compiano	6.45	23.58	1.15	83	37.27	
	Tornolo	5.77	10.62	0.64	91	37.14	
BorgoTaro	Albareto	6.43	20.70	1.87	81	23.97	76.38
	Borgo Taro	7.89	19.95	1.93	81	39.57	
Busseto	Busseto	13.32	63.43	7.42	55	18.21	80.93
	Polesine	6.29	56.25	5.06	81	24.25	
	Roccabianca	8.78	41.50	4.81	70	25.72	
	Zibello	9.84	60.57	4.86	67	23.67	
Fidenza	Fidenza	10.56	55.10	6.69	64	22.72	80.02
	Fontanellato	11.14	53.83	8.07	63	23.23	
	Pellegrino	8.13	45.26	4.07	74	28.24	
	SalsoM.	6.65	54.62	4.60	81	37.13	
	Soragna	11.87	61.07	7.05	62	16.03	
FornovoTaro	Bardi	8.94	23.61	1.73	73	26.20	73.28
	Berceto	6.36	34.82	2.69	84	29.91	
	Bore	6.39	31.43	1.68	80	33.55	
	Fornovo	8.07	55.90	3.84	77	32.42	
	Medesano	8.94	57.63	5.05	68	29.38	
	Solignano	13.76	76.86	2.28	63	33.00	
	Terenzo	7.19	40.75	3.33	77	23.36	
	Valmozzola	6.26	40.79	1.86	87	33.22	
	Varano	6.21	39.92	2.89	82	34.00	
	Varsi	4.62	38.77	2.14	88	34.07	
Langhirano	Corniglio	9.56	27.25	2.62	78	26.22	76.43
	Langhirano	9.23	39.30	4.14	72	29.82	
	Lesignano	7.35	37.60	5.21	77	29.33	
	Neviano	7.60	34.45	4.43	77	25.63	
Parma	Calestano	7.06	46.18	3.09	81	36.06	79.23
	Collecchio	17.35	60.12	6.09	49	24.39	
	Colorno	10.91	56.87	6.12	66	27.53	
	Felino	13.13	36.04	5.32	56	25.68	
	Fontevivo	10.41	69.93	7.51	68	20.94	
	Mezzani	5.18	33.69	4.34	86	29.19	
	Montechiarug.	11.39	55.69	8.62	65	22.96	
	Noceto	11.24	76.49	5.86	65	25.05	
	Parma	14.87	59.46	6.87	53	24.01	
	Sala Baganza	8.62	29.47	3.70	72	23.36	
	San Secondo	10.27	46.40	6.00	68	30.24	
	Sissa	6.27	35.84	4.24	77	29.86	
	Sorbolo	11.46	47.37	6.07	66	30.62	
	Torrile	14.75	51.37	5.99	58	23.69	
	Traversetolo	7.50	41.70	6.45	76	26.05	
	Trecasali	9.85	41.45	5.56	64	27.30	
Tizzano	Monchio	8.55	22.40	1.15	78	39.95	75
	Palanzano	6.25	48.94	2.04	84	34.31	
	Tizzano	7.12	38.76	2.76	79	26.88	

LLM : Local Labour Market UAA : Utilised Agricultural Area SGM : Standard Gross Margin (*) The data referred to the total of LLM.

Source : Our calculations

CONCLUSION

Unlike theoretical expectations, according to which agriculture tends to disappear in LLMs based on the "service sector and other activities", agriculture can also remains efficient in post-industrial contexts - suffice it to mention data regarding the average size of farms, land productivity, etc. – provided that it is not only profitable ; but also, it must be underlined, linked to the territory, for example considered or recognised as typical, as the PDOs[12].

The presence of part-time activities in these areas is emblematic : in LLMs characterised by an agricultural sector featuring successful PDOs, let alone the overall type of the LLMs, agriculture is more efficient[13], as well as more "professional" than in the rest of the province, but this applies particularly to LLMs not based on the service sector. Furthermore, in areas where the service sector plays the same role, where PDOs are produced there is less pluriactivity. The quality of pluriactivity seems also to be different. Where the PDO specialisation is not present, pluriactivity can be a prelude to abandonment[14]. Analysing the data concerning the farm managers, the farmer is full time where the PDO specialisation is mainly based on rearing : examples of this are the service-sector based local labour markets - Fidenza - as well as those based on farming-industrial activities - Busseto.

The role of PDO agriculture, therefore, either in the sense of a pervasive culture, or in the sense of a real economic opportunity, is significant, apart from the overall socio-economic development. The presence of PDO productions slows the loss of importance of the farming activity.

The cross-check of the data regarding the share of full-time farmers, at a LLM level and of PDO-specialisation of the area shows that the share of full-time farmers is higher not only where there are PDO products ; but also where the food industry is very significant. These areas see a greater share of full-time farmers. On the other hand, where PDO products are not important, the share of part-time farmers is higher than the average of the province, in particular in those areas where agriculture is limited by natural factors (in mountain areas more than in hilly areas). Right in these mountain areas, where the production of typical products is negligible, a drastic disappearance of farming can be noted. The reason is that in the lowlands, the presence of industrial crops (e.g. tomatoes and sugar-beet) allows highly profitable part-time farming. The economic context ensures the employment in the remaining time. In the mountain areas, instead, the lack of alternative or complementary activities forces the farmer and his family to make more drastic decisions, regarding the continuance of their farming activity. The data concerning the age of farm manager in the mountain areas confirms this.

Therefore, pluriactivity has different functions in areas with "scattered" industry. But diffused industrialisation influences the behaviour, not only of small farms for whom pluriactivity has always been a structural feature, but also of professional farmers, who even with larger and more modern farms, might consider the opportunity of establishing a different mix of incomes for their families, especially in a post-industrial society. This happens even with the persistence of the small farm model. Nonetheless, the future job opportunities in the rural areas for the farmers' families will affect positively a flexible model linked to the diffused industrialisation.

NOTES

(1) The authors acknowledge the financial help of the European Union's DGXII *Environment and Climate* research and technological development programme (*MEDAFOR project*), through which the research project have been conducted.

(2) "Other activities" means : commercial sector, transport and communications, credit and insurance, public administration and other services.

(3) On this subject it is important to underline the privileged relation that has always characterised the agricultural world and the most important local banking company (Cassa di Risparmio of Parma, today of Parma and Piacenza). (Basini G.L., Forestieri G., 1989).

(4) The industry census of 1927 is the only source of information about the industrial structure of this period.

(5) More informations on the WEB site of the Unione Parmense degli Industriali : http://www.assindustria.pr.it.

(6) To compare the percentage of different years, it was necessary to relate them to one year, 1980. For this reason all the percentages referred to preceding years were multiplied by a specific coefficient relative to the wholesale price index (coefficients deduced from an ISTAT publication, *Il Valore della Lira*), while the percentages referred to years after 1980 were deflated by indexes of prices of products bought and sold by agriculture.

(7) There are about 250 producers in the province, for the most part 210 producing ham (approx. 16 million in 1997), and in particular the typical "Parma ham" (approx. 9 million in 1997) : this production is over 50% of the national market (Nielsen data).

(8) In the hills, there is a concentration of 73.8% of establishments. As it can be noticed, the larger amount of pork meat industries is located in the valleys of the most important rivers of the province. Therefore, 54% of the industries are located in the communes of Val Parma (Langhirano, Lesignano, Tizzano and Corniglio), 20% in the valley of the torrent Baganza (Sala Baganza, Felino, Calestano) and 10% along the river Taro (Noceto, Collecchio, Medesano, Fornovo, Solignano, Borgotaro, Albareto).

(9) The commune which records the largest number of firms on its territory is with no doubt Langhirano, with its 99 firms, followed by Felino with 37 factories, Sala Baganza and Lesignano 24. Therefore, Langhirano, the historical capital of ham appears to be the centre of the potential district, followed by the above-mentioned communes of Sala Baganza, Felino, and the most important centres of the typical production area identified by legislative measures, such as Collecchio, Calestano, Corniglio, Tizzano, Palanzano, Neviano Arduini, Traversetolo, Medesano and marginally Varano Melegari, Solignano, Fornovo and Montechiarugolo

(10) This is significant, because Parma, the administrative centre of the province, belongs to this LLM.

(11) These relations between agriculture and industry were analysed under this viewpoint by using the agro-industrial district as surveying tool (Mora, Mori, 1995).

(12) This implies that it is not the mere granting of the PDO brand that attaches value to the product, but that its history is valuable ; and under these particular circumstances, the PDO brand increases this value for the protection against imitations.

(13) In the areas where PDO productions are very important, the labour and land productivity is higher than the average of the province.

(14) It should be noted that low productivity is accompanied by a high presence of small farms, which rarely specialise in typical products, by the scarce presence of food industry and is typical of mountain areas.

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ANNEX

Local labour markets "... represent functional areas within which interde-pendence between the family-system and enterprise-system occurs..., territorial systems that are limited in labour supply and demand, however representing the place where most of the residential population can find (or change) occupation without moving from their place of residence, and where employers source most of their labour, thus generating a complex web of home to work commuting flows which – as it is well known – make up the empirical (and conceptual) basis of daily urban systems" (Sforzi F., "L'identificazione spaziale" in : G. Becattini (edited by) : *Mercato e forze locali : il distretto industriale*, Il Mulino, Bologna, 1987).

In the province of Parma, six local labour markets have been identified for the year 1981, and eight for the year 1991 (ISTAT-IRPET-University of Newcastle Upon Tyne-University of Leeds, *I sistemi locali del lavoro in Italia - 1991*, Roma, 1994). First of all we surveyed the changes occurred with respect to 1981.

Besides a change in the number of local markets, a different re-distribution of the communes within their boundaries has been experienced, which has involved the various labour markets to a variable extent.

SELECTION AND ANALYSIS OF SOME LOCAL LABOUR MARKETS

I) PHASE : IDENTIFICATION OF THE MAIN CHARACTERISTICS OF LOCAL LABOUR MARKETS : EVALUATING THE WEIGHT OF THE VARIOUS ECONOMIC SECTORS

In this phase we evaluate the characteristics of the local labour markets.

Table 14 : Main indicators for the Local Labour Markets (2)

LLM		SGM PDOs / Total SGM	Food processing / Industry (employed)
Bedonia	Bedonia	81.76	8.66
	Compiano	70.45	6.03
	Tornolo	69.24	27.42
Borgo Taro	Albareto	60.69	4.07
	BorgoTaro	73.08	16.42
Busseto	Busseto	81.50	32.92
	Polesine Parmense	72.52	12.29
	Roccabianca	71.10	19.53
	Zibello	71.27	16.83
Fidenza	Fidenza	78.32	7.34
	Fontanellato	84.34	31.22
	Pellegrino Parmense	65.82	23.31
	Salsomaggiore Terme	64.24	19.93
	Soragna	80.42	14.55
Fornovo	Bardi	62.70	10.61
	Berceto	69.79	11.98
	Bore	51.55	12.93
	Fornovo	64.10	4.90
	Medesano	71.87	23.72
	Solignano	44.46	80.74
	Terenzo	57.66	10.55
	Valmozzola	35.56	15.04
	Varano	50.19	10.07
	Varsi	49.61	1.62

LLM		SGM PDOs / Total SGM	Food processing / Industry (employed)
Langhirano	Corniglio	69.38	44.39
	Langhirano	64.65	76.23
	Lesignano	72.47	63.49
	Neviano	69.11	30.14
Parma	Calestano	63.09	13.20
	Collecchio	77.63	75.61
	Colorno	77.80	17.41
	Felino	72.86	38.89
	Fontevivo	83.37	10.00
	Mezzani	66.79	8.09
	Montechiarugolo	85.32	12.34
	Noceto	76.83	13.55
	Parma	80.22	18.87
	Sala Baganza	52.57	51.91
	San Secondo	76.97	6.96
	Sissa	67.07	18.42
	Sorbolo	76.45	9.27
	Torrile	76.08	16.42
	Traversetolo	77.46	20.00
	Trecasali	74.88	38.67
Tizzano	Monchio	76.00	16.07
	Palanza	70.35	20.58
	Tizzano Val Parma	63.94	60.11

SGM : Standard Gross Margin

Table 15 : Weight of economic sectors in the local labour markets - year 1991

Local Labour Markets	Percentage Values		
	Agriculture	Industry	Other activities
1991 BEDONIA	14	39	**(47)**
1991 BORGO VAL DI TARO	9	31	**(60)**
1991 BUSSETO	**{16}**	42	42
1991 FIDENZA	9	34	**(57)**
1991 FORNOVO DI TARO	11	**[45]**	44
1991 LANGHIRANO	**{14}**	**[46]**	40
1991 PARMA	5	39	**(56)**
1991 TIZZANO VAL PARMA	13	40	**(47)**

The brackets {} evidence the local markets where the primary sector still maintains a considerable weight ; the brackets [ ] show the local markets where industry represents the first sector ; finally, the brackets ( ) identify the local markets where the other activities (services) sector is prevailing.

Source : our elaborations on ISTAT data

II) PHASE :
SELECTION AND ANALYSIS OF SOME LOCAL LABOUR MARKETS

Among the eight local labour labour markets identified in 1991, three have been chosen to represent the different patterns of economic development.

Table 16 : Communes included in the local market of labour choosen

EXEMPLIFICATION AGRICULTURAL	*EXEMPLIFICATION AGRICULTURAL - INDUSTRIAL*	*EXEMPLIFICATION OTHER ACTIVITIES (SERVICES)*
LOCAL LABOUR MARKET OF BUSSETO	**LOCAL LABOUR MARKET OF LANGHIRANO**	**LOCAL LABOUR MARKET OF FIDENZA**
Communes	Communes	Communes
- Busseto	- Corniglio	- Fidenza
- Polesine Parmense	- Langhirano	- Fontanellato
- Roccabianca	- Lesignano de Bagni	- Pellegrino Parmense
- Zibello	- Neviano degli Arduini	- Salsomaggiore Terme

Busseto was chosen as *agricultural exemplification local market of labour* as, although over 80% of the residential population was employed in industry and the other activities (services), it still maintains an agricultural sector with a relatively high weight compared to other local systems.

Langhirano has been identified as *agricultural-industrial exemplification local market of labour* since, like Busseto, it has a high percentage of farmers as compared with the average of the province, but is has in absolute figures the highest percentage of employed in the industrial sector.

Fidenza has been chosen as *other activities (services) exemplification local market of labour* as, besides having the highest percentage of employed in the other activities (services) sector, it has all the typical characteristics of the development phase of current economic systems.

III) PHASE : ANALYSIS OF THE LOCAL MARKET OF LABOUR CHOOSEN

The variables considered, agricultural structures, PDO and typical products specialisation, social-economic context and off farm activities, have been analised at local labour market level as explained in the text.

Table 17 : Main economic sector by commune, by altimetrical area

COMMUNES	'61	'71	'81	'91
Albareto	A	A	T	T
Bardi	A	A	T	T
Bedonia	A	A	T	T
Berceto	A	I	T	T
Bore	A	A	T	T
Borgo Taro	T	T	T	T
Compiano	A	A	T	T
Corniglio	A	A	I	I
Monchio C.	A	I	T	T
Palanzano	A	I	I	T
Solignano	A	A	I	I
TizzanoV. P.	A	I	I	T
Tornolo	A	T	T	T
Valmozzola	A	A	A	I
Varsi	A	A	I	I
Mountain	**A**	**A**	**T**	**T**
Calestano	I	I	I	I
Collecchio	I	I	I	I
Felino	A	I	I	I
Fidenza	I	I	T	T
Fornovo T.	I	I	I	I-T
Langhirano	A	I	I	I
Lesignano B.	A	A	I	I
Medesano	A	I	I	I
Neviano	A	A	A-I	I
Noceto	A	I	I	T
Pellegrino P.	A	A	A	T
Sala Baganza	I	I	I	I
SalsoM	T	T	T	T
Terenzo	A	A	I	I
Traversetolo	A	I	I	T
Varano	A	A	I	I
Hills	**A-I**	**I**	**I-T**	**T**
Busseto	A	I	I	T
Colorno	A	I	T	T
Fontanellato	A	I	I	I
Fontevivo	I	I	I	I-T
Mezzani	A	I	I	I
Montechiar.	A	I	T	T
Parma	T	T	T	T
Polesine P.	A	I	I	I
Roccabianca	A	I	I	I
S. Secondo	A	I	I	T
Sissa	A	I	I	T
Soragna	A	A	I	I
Sorbolo	I	I	I	I
Torrile	A	A	I	T
Trecasali	A	A	I	I
Zibello	A	I	I	I
Lowland	**I**	**I**	**T**	**T**
Province	**I**	**I**	**T**	**T**

Key : **A** : Agriculture ; **I** : Industry ; **T** : Other activities :services,PA, Banks

Source : Oour calculations from ISTAT population Census in various years