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THE VALUE OF DESIGNATIONS OF  
ORIGIN IN EMILIA-ROMAGNA

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# The Value of Designations of Origin in Emilia-Romagna<sup>1</sup>

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## 1. Introduction: On Value

The determination of the absolute value of a good is a primary need of each individual, and is historically at the basis of economic theory.

David Ricardo, in the *Essay on the Low Price of Corn on the Profits of Stock* of 1815 (Ricardo, 1951b, p.9), writes, “Wherever competition can have its full effect, and the production of commodity be not limited by nature, as is the case with some wines, the difficulty or facility of their production will ultimately regulate their exchangeable value”. “The ‘difficulty’ or ‘facility’ of production is judged on the basis of the amount of labour required,” summarizes Fernando Vianello on page XVI of his Italian Introduction to Ricardo’s *On the Principles of Political Economy and Taxation* (1976). “If commodities are exchanged in proportion to the labour embodied, a commodity always produced by the same quantity of labour meets the requirements of a *perfect measure of value*” (Vianello, 1976, p. XVIII). Therefore in Ricardo, “The ‘absolute value’ of a commodity always produced by the same quantity of labour is *invariable* – even though its ‘exchange value’ or ‘relative value’ may change – in the sense that the commodity itself is not subject to that sole cause of variation of the value that acts on other commodities: the variation in the quantity of labour required for their production.” (Vianello, 1976, p. XVIII).

Ricardo’s labour theory of value made it possible – both in the early 19<sup>th</sup> century and today – to give clear solutions to the role of money (Vianello, 1976, p. XVIII) and rent (Vianello, 1976, p. XXII).

In Italy the lesson of classical economists, combined with the lesson of Schumpeter, was reworked by Sylos Labini both to provide an innovative answer to the theoretical problems of economic analysis (Sylos Labini, 1956) and to offer a direct study tool for the country’s industrial transformations from the 1960s up to today (Sylos Labini, 1972).

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<sup>1</sup> To Dr. Giovanni Cheli and Dr. Cristina Pagani with love and gratitude. Please accept my apologies for any mistakes that might have been overlooked.

The focus on labour in Ricardo's *Principles* does not, however, lead to a sophisticated treatment of the formation of the wage rate (Vianello, 1976, p. XXVI) and the characteristics of human capital, nor to an analysis of the differences at the international level that have been developed in contemporary labor economics (Ashenfelter, Rouse, 2000; Ashenfelter, Jurajda, 2004).

Ricardo's work makes possible another point of reference with respect to the themes dealt with in this article.

It has been seen how Ricardo, in his *Essay on the Low Price of Corn on the Profits of Stock*, refers to products whose value is determined not only by the quantity of labor required for their production, but also by the limits imposed by nature. This is the case, as he writes, of "some wines". This reference to the natural characteristics (in particular climatic) of the territories of origin of wines for the formation of prices is seen in the analysis that contemporary economics devotes to wine (Ashenfelter, 2008).

For Ricardo, these considerations come forth in his *Principles*, in the well-known explanation of the advantages of free international commerce: "Under a system of perfectly free commerce, each country naturally devotes its capital and labour to such employments as are most beneficial to each. This pursuit of individual advantage is admirably connected with the universal good of the whole. By stimulating industry, by rewarding ingenuity, and by using most efficaciously the peculiar powers bestowed by nature, it distributes labour most effectively and most economically: while, by increasing the general mass of productions, it diffuses general benefit, and binds together by one common tie of interest and intercourse, the universal society of nations throughout the civilized world. It is this principle which determines that wine shall be made in France and Portugal, that corn shall be grown in America and Poland, and that hardware and other goods shall be manufactured in England." (Ricardo, 1951a, pp.133-134).

... It's true! Since then something has changed in the wine production systems worldwide!

The intention of this paper on the Value of Designations of Origin in Emilia-Romagna is to study what it means today to have a regional policy on designations of origin, first of all, as expressions of the peculiar characteristics of a territory and its population.

It is not by chance that in the designation of origin territories of Emilia-Romagna some of the most characteristic production systems of the Italian economy have developed, such as industrial districts (Brusco, 1982), combined with economic studies that have been able to observe with particular sensitivity the relations between industrial and service activities, agriculture and population and territory (Brusco, 1979).

## 2. Context: Designation of origin and citizens

### 2.1 Designations of origin in the Emilia-Romagna Region

As for wines, there are overall 26 Protected Designations of Origin (DOPs) (14) and Protected Geographic Indications (IGPs) (12) (Table 1), in addition to one Controlled and Guaranteed Designation of Origin (DOCGs), 20 Controlled Designations of Origin (DOCs), and 10 Typical Geographic Indications (IGTs) (Table 2) (Fanfani, Pieri, 2008 and FEDERDOC 2008).

Some of these designations are among the top Italian DOPs and IGPs and represent a very significant share of the overall value of Italian DOPs and IGPs. ISMEA data on 2007, obtained from information provided by the authorized control bodies and *consorzi di tutela* (protection bodies), attribute to Emilia-Romagna the first place with a 38% share of the production's turnover (45% in 2003<sup>2</sup>), i.e. approximately 1.9 billion euro out of a total of more than 5.1 billion euro (ISMEA, 2008)<sup>3</sup>.

In 2006, wine turnover in Italy reached 10.7 billion euro, with almost 60% of production devoted to around 480 Designations of Origin and IGTs (in 2008: 41 DOCGs, 316 DOCs, 120 IGTs). At the Emilia-Romagna level, the production of the 31 DOCs, DOCGs, and IGTs was rather stable over the years and arrived, in 2007, at 66% of the total production, broken down as follows: 26% DOCs, DOCGs, 40% IGTs (Fanfani, Pieri, 2008).

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<sup>2</sup> The drop is due to the strong increase in the commercialization of the *Mela (Apple) della Val di Non DOP* (Fanfani, Pieri, 2008).

<sup>3</sup> Italy, with 173 products certified DOP and IGP as of 30 September 2008, confirms its first place in the European ranking, followed by France with 161 and Spain with 117. These three leader countries, together with Portugal and Greece and all belonging to the Mediterranean area, account for almost 80% of the European basket, which lists a total of 820 products recognized by the European Union (ISMEA 2008).

**Table 1 - DOPs and IGPs registered in the Emilia-Romagna territory**

Cheese	<i>Parmigiano Reggiano DOP, Grana Padano DOP, Provolone Valpadana DOP</i>
Meat	<i>Vitellone Bianco dell'Appennino Centrale (White veal of the Central Apennines) IGP</i>
Meat based products	<i>Prosciutto di Parma (Parma Ham) DOP, Prosciutto di Modena (Modena Ham) DOP, Culatello di Zibello DOP, Coppa Piacentina DOP, Salame Piacentino DOP, Pancetta Piacentina DOP, Salamini italiani alla cacciatoria IGP, Mortadella di Bologna IGP, Zampone di Modena IGP, Cotechino di Modena IGP, Salame di Cremona IGP</i>
Oils	<i>Brisighella DOP, Colline di Romagna DOP</i>
Fruit, vegetables & cereals	<i>Pera (Pear) dell'Emilia-Romagna IGP, Pesca e Nettarina (Peach and Nectarine) di Romagna IGP, Funghi (Mushrooms) di Borgotaro IGP, Marroni (Chestnuts) di Castel del Rio IGP, Scalogno (Shallot) di Romagna IGP, Asparago verde (Green Asparagus) di Altedo IGP</i>
Bakery and cakes	<i>Coppia ferrarese IGP</i>
Other products	<i>Aceto Balsamico Tradizionale (Traditional Balsamic Vinegar) di Modena DOP, Aceto Balsamico Tradizionale (Traditional Balsamic Vinegar) di Reggio Emilia DOP</i>

Source: Emilia-Romagna Region, Unit for the Enhancement of Productions, in Fanfani R., Pieri R. (2008)

**Table 2 – DOCGs, DOCs e IGTs registered in the Emilia-Romagna territory, year 2008**

Controlled and Guaranteed Designation of Origin (DOCGs)	<i>Albana di Romagna DOCG</i>
Controlled Designations of Origin (DOCs)	<i>Bosco Eliceo DOC, Cagnina di Romagna DOC, Colli Bolognesi DOC, Colli Bolognesi Classico Pignoletto DOC, Colli di Imola DOC, Colli di Faenza DOC, Colli di Parma DOC, Colli di Rimini DOC, Colli Piacentini DOC, Colli Romagna Centrale DOC, Colli di Scandiano e Canossa DOC, Lambrusco di Sorbara DOC, Lambrusco Grasparossa di Castelvetro DOC, Lambrusco Salamino di Santa Croce DOC, Pagadebit di Romagna DOC, Reggiano DOC, Reno DOC, Romagna Albana Spumante DOC, Sangiovese di Romagna DOC, Trebbiano di Romagna DOC</i>
Typical Geographic Indications (IGTs)	<i>Bianco di Castelfranco Emilia IGT, Emilia o dell'Emilia IGT, Forlì IGT, Fortana del Taro IGT, Modena o Provincia di Modena IGT, Ravenna IGT, Rubicone IGT, Sillaro o Bianco del Sillaro IGT, Terre di Veleja IGT, Val Tidone IGT</i>

Source: Regione Emilia-Romagna, General Directorate of Agriculture

## 2.2 Regional grants

The Emilia-Romagna Region set out the regulations for the promotion of high quality agro-food products through two Regional Acts on the “Economic promotion of regional agro-food products” (LR 16/1995) and “Contributions to the promotion of regional wines” (LR 46/1993).

In 2007, the Regional Administration allocated a total of 4.82 million euro in promotional activities, thus strengthening its effort, which in the 2004-2006 period registered investments approaching 14 million euro. In 2007, through Act 46/1993, 0.97 million euro were allocated in favor of the

“*Enoteca Regionale*”, for both wine promotion activities in Italy and abroad (75%) and the permanent exhibition in the *Enoteca* itself.

The Regional Act 16/1995 envisages two types of grants (which reached 3.85 million euro in 2007): the co-funding of promotional projects submitted by the consortia for the enhancement and protection of products of regulated quality (1.3 million euro in 2007), and the funding of institutional promotional activities indicated by the Regional Government (2.6 million euro in 2007). In 2007, the horticulture sector benefited most from the available grants, taking a total of 37% of the funds, followed by the meat and cold cuts sector (32%) and cheese sector (21%). In particular, out of the 25 bodies admitted to the funding, those which benefited most from the grant were: the *Parmigiano Reggiano DOP* Consortium (19.5%, increasing from the 15.2% of 2006), *Prosciutto di Parma DOP* Consortium (15.7%) and the consortia for the promotion of fruit and vegetables, including the CSO – *Centro Servizi Ortofrutticoli* – (9.1%), the consortium for *Pesca e Nettarina di Romagna IGP* (Peach and Nectarine from Romagna) (7.8%) and *Pera dell’Emilia-Romagna IGP* (Pear from Emilia-Romagna) (7.8%). Thanks to these grants, in 2007 these consortia developed institutional promotional actions, mainly involving communication through the media and promotional sales in domestic large-scale retail stores.

The second funding item, i.e. the Integrated Communication Plan, includes separate actions and projects for specific areas: DOPs and IGPs, traditional products, regional food and wine (*enogastronomia*) and *Strade del Vino e dei Sapori* (Wine and Flavor Routes); for each of these targets, communication strategies and characteristic images to be used on various occasions for promotional purposes (trade fairs, events, meetings, etc.) were defined (Fanfani, Pieri, 2008).

### **2.3 Production, policies and population**

The significance of both the quality productions in the agro-food system in Emilia-Romagna and the grants available for the promotion of these products<sup>4</sup> made it necessary to investigate the attitude of the population in territories characterized by designations of origin, with regard to these activities and the related grants<sup>5</sup>.

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<sup>4</sup> In 2008 the Emilia-Romagna Regional Government earmarked 3,208 euro in the budget for each citizen (the Region has 4.3 million residents). Of these, 2,127 euro for health and the family, 217 euro for public transport, 156 euro for the economy, 149 euro for the environment and development, 111 euro for training and culture, and 92 euro for the functioning of the “*Ente Regione*” (Regional Agency) (Regione Emilia-Romagna, 2008).

<sup>5</sup> For years the General Directorate of Agriculture and Rural Development of the European Commission have been carrying out surveys to assess public opinion on agriculture and the Common Agricultural Policy (CAP), in order to see how citizens view agriculture in general and to gauge reactions to recent developments of the CAP (European Commission, 2008).

Within the framework of an exploratory project funded by the Emilia-Romagna Region – General Directorate of Agriculture, the opinion of the citizens in the territory of the *Strada dei Vini e dei Sapori “Città Castelli Ciliégi”* (“Cities Castles Cherries” Wine and Flavor Route) on designations of origin and their territory was surveyed through more than 100 interviews with social and economic representatives of the area<sup>6</sup>.

### **3. The territory of the *Strada dei Vini e dei Sapori “Città Castelli Ciliégi”***

#### **3.1 “La Strada” (The Route)**

The *Strada dei Vini e dei Sapori “Città Castelli Ciliégi”* originates from a previous experience – connected, in particular, with the EU/LIFE project – which was known by the same name<sup>7</sup>.

Before the EU/LIFE project, a great deal of work had already been carried out to implement the municipality-planning scheme of Vignola. This municipality is the heart of the entire zone. During the Roman age it served as a bridge over the Panaro River. It is traditionally the site of the market, and this area’s point of reference between Modena and Bologna. In the 1980s, Vignola embodied the first experience of an associated municipality-planning scheme in the area.

The LIFE project was originated when the Province of Modena was looking into the possibility of creating a River Park in that area. There had already been several projects on the *Conca d’Oro*, and it was well known that the excessively rapid and intensive industrialization had to be kept under control and that new services could be offered through the exploitation of the river and its environment. The territory, in any case, was already going in that direction. The idea was to promote a park area for the two territories of Modena and Bologna. The municipalities were to be its users, products such as fruit and wine were to be the basis, and the task would be to foster the development of resources and skills.

The *Strada dei vini e dei sapori “Città Castelli Ciliégi”* of the hills between Modena and Bologna started in 1999 as a regional food and wine network: today it comprises 19 municipalities, two mountain communities, two regional parks, and 137 private operators (as of May 2006) (Table 3).

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<sup>6</sup> Resolution of the Service Manager no.19439 of 30/12/2005: PPA/05/41226 Executive Act entitled: Re: Regional Law 9/2000 and Resolution nos. 407/2005 and 1953/2005. Assignment to Alma Mater Studiorum Università di Bologna - Dipartimento di Scienze Statistiche 'P. Fortunati' “Indagine Su Valore Denominazioni d’ Origine”.

<sup>7</sup> For a previous analysis of the Wine Routes see Gatti (2001) and Gatti (2003).

**Table 3 - Types of members of the *Strada dei vini e dei sapori “Città Castelli Ciliegi”* (May 2006)**

Private enterprises	137, of which 45 are accommodation facilities
Municipalities	19
Associations and consortia	23
Agricultural schools	2
Mountain Communities	2
Regional nature parks	2
Hotel school	1
<b>TOTAL</b>	<b>186</b>

Source: Strada dei Vini e dei Sapori “Città Castelli Ciliegi”

Private enterprises include holiday farms, bed-and-breakfast establishments, teaching farms, hotels, inns, hostels, restaurants, and trattorias. Some craftsmen are also joining: a goldsmith and a potter. The “*Consorteria dell’Aceto Balsamico Tradizionale di Modena*” (the historical Association of Modena’s Traditional Balsamic Vinegar producers) from Spilamberto and the Museum of Peasant Culture are also members.

The farmers’ unions and consortia for the protection of typical local products – with the exception of the *Consorzio dei Colli Bolognesi* – did not join the “*Strada*”. This is rather odd, if one considers that the “*Strada*” has a very strong potential impact on the various production phases of the designation of origin and geographical indication agro-food products and contributes to the creation of growth opportunities for enterprises.

The member municipalities are: 1. Castelnuovo Rangone (5<sup>8</sup>), 2. Spilamberto (5), 3. Vignola (3), 4. Castelvetro (3), 5. Serramazzoni (3), 6. Savignano s.P. (3), 7. Pavullo n.F. (1), 8. Marano s.P. (3), 9. Zocca (1), 10. Vergato (1), 11. Savigno (3), 12. Castello di Serravalle (3), 13. Bazzano (3), 14. Crespellano (5), 15. Monteveglio (3), 16. Monte San Pietro (3), 17. Zola Predosa (3), 18. Casalecchio di Reno (3), and 19. Sasso Marconi (3) (fig. 1).

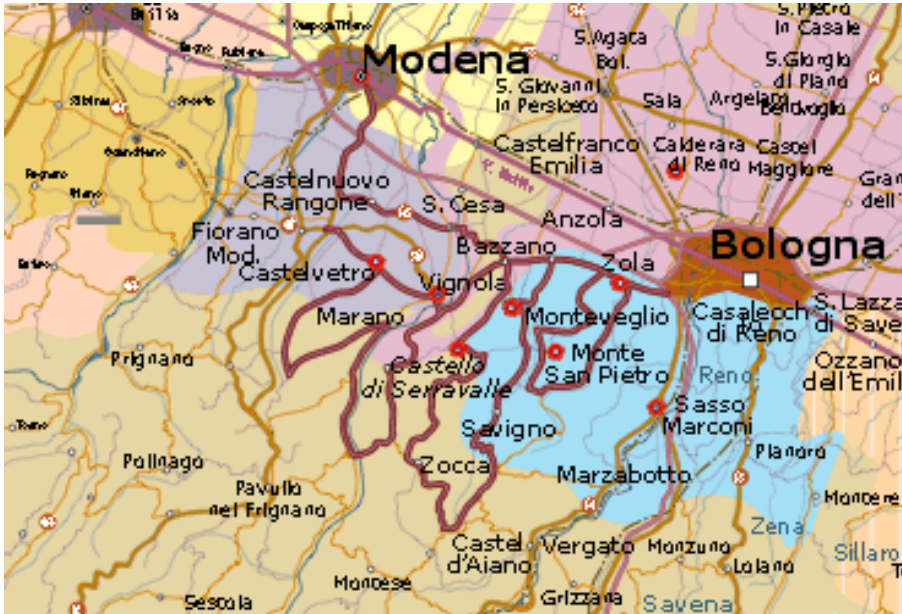
The ISTAT classification shows that the territory of the Route is mainly hilly (13 municipalities out of 19) with a small extension to flat land (3 municipalities out of 19) and to mountainous land (3 municipalities out of 19).

In 2005, at the top of the list of the wine-and-food tourists who took advantage of the Route’s incoming activities when they visited this area was a visit to the “*acetaie*” (the site where there are a series of barrels for producing the *Aceto Balsamico Tradizionale di Modena DOP*) (410), followed by taking part in festivals (254), and visits to cheese dairies of *Parmigiano Reggiano DOP* (240)

<sup>8</sup> ISTAT sets out the following classes of Italian municipalities: 1 – interior mountain municipalities, 2 – coastal mountain municipalities, 3 – interior hill-side municipalities, 4 – coastal hill-side municipalities, 5 – level plain municipalities.

and *Lambrusco Grasparossa di Castelvetro DOC* and *Colli Bolognesi DOC* wineries offering wine tastings (204). Also considered important were cultural, nature-oriented, and educational itineraries.

Fig. 1 – The territory of the *Strada dei Vini e dei Sapori “Città Castelli Ciliegi”*



Source : <http://www.strade.emilia-romagna.it/strade/cartaidentita.php?strada=castelliciliegi>

### 3.2 The typical local products of the *Strada*

The typical local products that characterize the “*Strada*” group together 2 Controlled Designations of Origin (*Lambrusco Grasparossa di Castelvetro di Modena DOC*, *Colli Bolognesi DOC*), 3 Protected Designations of Origin (*Aceto Balsamico Tradizionale di Modena DOP*, *Parmigiano Reggiano DOP*, *Prosciutto di Modena DOP*), 3 Protected Geographical Indications (*Zampone di Modena IGP*, *Cotechino di Modena IGP*, *Mortadella di Bologna IGP*), 1 proposal of Protected Geographical Indication (*Ciliegia di Vignola*), 2 Traditional Agro-food Products (PT) (*Crescentine fritte PT*, *Tigelle modenesi PT*), 2 products like the *Tartufo Bianco Pregiato di Savigno* and *Patate di Tolè*, which the local organizations want recognized, and which in their local food festivals attract thousands of people to the specific localities, and lastly, a pastry production that falls within the realm of individual inventive skill and which developed with time in local tradition: the cake known as the *Torta Barozzi* was “invented” in Vignola by Eugenio Gollini in 1907, and celebrates the name of this town’s original architect (Table 4).

**Table 4 - The typical local products of the *Strada dei vini e dei sapori “Città Castelli Ciliegi”* (May 2006)**

[01] <i>Colli Bolognesi DOC</i> (Pignoletto, Barbera, Cabernet Sauvignon...)
[02] <i>Lambrusco Grasparossa di Castelvetro di Modena DOC</i>
[03] <i>Aceto Balsamico Tradizionale di Modena DOP</i> (Traditional Balsamic Vinegar of Modena)
[04] <i>Ciliegia (Cherry) di Vignola</i> (which are soon to become an IGP)
[05] <i>Parmigiano Reggiano DOP</i> (Parmesan Cheese)
[06] <i>Prosciutto (Ham) di Modena DOP</i>
[07] <i>Zampone di Modena IGP</i>
[08] <i>Cotechino di Modena IGP</i>
[09] <i>Mortadella di Bologna IGP</i>
[10] <i>Tartufo Bianco Pregiato di Savigno</i> (Prized White Truffle from Savigno)
[11] <i>Patate di Tolè</i> (Potatoes from Tolè)
[12] <i>Crescentine fritte PT</i>
[13] <i>Tigelle modenesi PT</i>
[14] <i>Torta Barozzi (Barozzi cake)</i>

Source: *Strada dei Vini e dei Sapori “Città Castelli Ciliegi”*

It is necessary to emphasize how 6 of the DOC, DOP, IGP, and PT products included in the “*Strada*” basket have a reference to the Modenese origin in their names, and only 2 have a reference to their Bolognese origin. For *Parmigiano Reggiano DOP*, the production zone of the milk and its transformation into cheese stretches through the provinces of Parma, Reggio Emilia, Modena, and Bologna on the left side of the Reno River, and Mantua on the right side of the Po. For the products that are not (yet) recognized, one comes from the town of Vignola in the province of Modena (Cherries), and the other two (Truffles and Potatoes) are from the localities of Savigno and Tolè, in the province of Bologna. The *Torta Barozzi* is from Vignola.

The history of these productions intertwines with the territory’s social and economic history. The ancient ties are, for example, with medieval settlements of the Benedictine monasteries as far as *Parmigiano Reggiano DOP* (Zannoni, 1999) is concerned, and with the Este Court for the *Aceto Balsamico Tradizionale di Modena DOP* (Saccani, Ferrari Amorotti, 1999). But recent 20<sup>th</sup> century history, and the post World War II period in particular, with the establishment of the Production Disciplinaries and the Protection Bodies (Consortia), intertwines – especially for the *Lambrusco Grasparossa di Castelvetro di Modena DOC* and the *Parmigiano Reggiano DOP* – with the associative capacity of agricultural producers – farmers or sharecroppers – who created cooperative wineries and dairies<sup>9</sup> for achieving a better life for themselves and their families (Fabbri, 1979).

To this kind of social and economic history I will refer in this study, to understand the Value of Designations of Origin for its territory<sup>10</sup>.

<sup>9</sup> Johnson, himself, in his *The Story of Wine* of 1989, mentions the Lambrusco of Emilia and the Cantine Cooperative Riunite of Reggio Emilia.

<sup>10</sup> As far as the socioeconomic studies on the Designations of Origin are concerned, mention must be made of the activity of the UNESCO “Culture et Tradition du Vin” Chair at the Université de Bourgogne (France).

### 3.3 Features of the territory and population in the *Strada*

#### 3.3.1 Population

The population data are useful not only for providing a general introduction to the study area, but also for getting straight to the heart of the matter. For instance, the strong housing dynamics in some municipalities in the area (especially in the Bologna province around Bazzano) has been the subject of heated discussions regarding the future and, especially, the relationship between housing growth and landscape.

Table 5 - Total resident population in the "Città Castelli Ciliégi" territory by municipality of residence and year (absolute value) - years 1991 and 2001

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	9,683	12,096
CASTELVETRO DI MODENA	8,081	9,589
MARANO SUL PANARO	3,272	3,750
PAVULLO NEL FRIGNANO	13,379	15,119
SAVIGNANO SUL PANARO	7,762	8,325
SERRAMAZZONI	5,428	6,883
SPILAMBERTO	10,665	10,973
VIGNOLA	20,138	21,178
ZOCCA	4,213	4,593
BAZZANO	5,309	6,103
CASALECCHIO DI RENO	34,503	33,029
CASTELLO DI SERRAVALLE	2,773	3,977
CREPELLANO	7,149	7,787
MONTE SAN PIETRO	7,568	10,280
MONTEVEGLIO	3,868	4,481
SASSO MARCONI	13,295	13,793
SAVIGNO	2,238	2,556
VERGATO	5,872	6,730
ZOLA PREDOSA	15,665	15,965
<b>TOTAL</b>	<b>180,861</b>	<b>197,207</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>604,680</b>	<b>633,993</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>906,856</b>	<b>915,225</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>3,909,512</b>	<b>3,983,346</b>

Source: ISTAT – Census of Population and Dwellings

The municipalities in the “*Città Castelli Ciliégi*” territory have almost 200,000 resident inhabitants (197,207), as certified by the population census of 2001. 46.91% of the population live in municipalities in the province of Modena and 53.09% in municipalities in the province of Bologna. Compared to 1991, there was a population increase totalling 9.04%. This increase was not homogeneous: the inhabitants of the municipalities in Modena province increased by 11.96%, whereas those in the municipalities of Bologna province increased by 6.58% (Table 5).

The result is an area where the overall resident population increased much more than their two provinces and the entire Region: +4.85% in the province of Modena, +0.92% in the province of

Bologna, and +1.89% in Emilia-Romagna. Furthermore, some municipalities in this area are characterized by extremely high increases (more than 20%) in their resident population: Castelnuovo Rangone (24.92%), Serramazzoni (26.81%), Castello di Serravalle (43.42%), Monte San Pietro (35.84%).

**Table 6 - Youngsters 0-14 years old in the "Città Castelli Ciliègi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	12.42	13.72
CASTELVETRO DI MODENA	13.95	14.52
MARANO SUL PANARO	11.74	11.15
PAVULLO NEL FRIGNANO	12.77	13.98
SAVIGNANO SUL PANARO	12.02	11.96
SERRAMAZZONI	12.68	14.5
SPILAMBERTO	11.8	11.59
VIGNOLA	11.08	11.95
ZOCCA	11.46	12.5
BAZZANO	10.06	11.7
CASALECCHIO DI RENO	8.71	10.86
CASTELLO DI SERRAVALLE	11.94	14.48
CREPELLANO	11.41	12.06
MONTE SAN PIETRO	12.58	13.8
MONTEVEGLIO	12.9	12.72
SASSO MARCONI	10.33	11.51
SAVIGNO	11.71	10.49
VERGATO	10.85	11.93
ZOLA PREDOSA	11.02	11.21
<b>TOTAL</b>	<b>11.65</b>	<b>12.45</b>
TOTAL IN THE PROVINCE OF MODENA	12.42	12.32
TOTAL IN THE PROVINCE OF BOLOGNA	11.60	12.23
TOTAL IN THE EMILIA-ROMAGNA REGION	11.46	11.62

Source: ISTAT – Census of Population and Dwellings

The incidence of the youngest population (0 to 14 years of age) in municipalities in the “*Città Castelli Ciliègi*” territory is similar (12.45%) than the average value registered in the province of Modena (12.32%) and Bologna (12.23%), and higher than the regional average (11.62%) (Table 6)<sup>11</sup>.

<sup>11</sup> Average values calculated for the total of the municipalities belonging to the Route are simple means, as they are obtained from municipal-level information processed by the Statistical Service of the Emilia-Romagna Region on Census data. The resulting values should thus be viewed with caution.

**Table 7 - Population 65 and over in the "Città Castelli Ciliegi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	16.38	17.12
CASTELVETRO DI MODENA	16.66	17.05
MARANO SUL PANARO	18.73	22.77
PAVULLO NEL FRIGNANO	20.53	21.89
SAVIGNANO SUL PANARO	15.92	20.32
SERRAMAZZONI	21.78	19.15
SPILAMBERTO	18.58	22.21
VIGNOLA	18.92	22.02
ZOCCA	26.49	25.58
BAZZANO	20.93	22.42
CASALECCHIO DI RENO	18.19	24.23
CASTELLO DI SERRAVALLE	19.73	17.07
CREPELLANO	18.66	21.37
MONTE SAN PIETRO	13.54	14.28
MONTEVEGLIO	16.08	18.7
SASSO MARCONI	16.51	20.41
SAVIGNO	24.49	25.74
VERGATO	22.46	23.02
ZOLA PREDOSA	14.87	20.17
<b>TOTAL</b>	<b>18.92</b>	<b>20.82</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>20.57</b>	<b>22.71</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>19.37</b>	<b>21.44</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>19.58</b>	<b>22.42</b>

Source: ISTAT – Census of Population and Dwellings

In the “*Città Castelli Ciliegi*” territory the population over 65 years of age accounts for 20.82% of the total. This figure is lower than in the provinces of Modena (22.71%) and Bologna (21.44%) and in the region (22.42%), but increasing significantly compared to 1991 (18.92%) (Table 7).

**Table 8 - Working-age population in the "Città Castelli Ciliegi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	71.2	69.16
CASTELVETRO DI MODENA	69.4	68.43
MARANO SUL PANARO	69.53	66.08
PAVULLO NEL FRIGNANO	66.7	64.13
SAVIGNANO SUL PANARO	72.06	67.71
SERRAMAZZONI	65.55	66.35
SPILAMBERTO	69.61	66.2
VIGNOLA	70	66.03
ZOCCA	62.05	61.92
BAZZANO	69.01	65.89
CASALECCHIO DI RENO	73.11	64.92
CASTELLO DI SERRAVALLE	68.34	68.44
CREPELLANO	69.93	66.57
MONTE SAN PIETRO	73.88	71.92
MONTEVEGLIO	71.02	68.58
SASSO MARCONI	73.16	68.08
SAVIGNO	63.81	63.77
VERGATO	66.69	65.05
ZOLA PREDOSA	74.11	68.62
<b>TOTAL</b>	<b>69.43</b>	<b>66.73</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>67.01</b>	<b>64.97</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>69.02</b>	<b>66.33</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>68.96</b>	<b>65.97</b>

Source: ISTAT – Census of Population and Dwellings

Further analysis of the population structure shows that the incidence of the working age population in the “*Città Castelli Ciliegi*” territory (66.73% in 2001) is higher than both the regional average (65.97%) and the average of the two provinces (64.97% in Modena and 66.33% in Bologna). This incidence decreased by more than 2.5% from the 1991 figure, substantially in keeping with regional and provincial trends (Table 8).

These data are not easy to interpret within the framework of the dynamics of the area’s industrial growth, mainly concentrated in the Crespellano and Bazzano territories.

**Table 9 - Women of childbearing age (15-50 years) in the "Città Castelli Ciliegi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	50.75	48.43
CASTELVETRO DI MODENA	49.49	49.34
MARANO SUL PANARO	46.22	44.87
PAVULLO NEL FRIGNANO	45.77	45.95
SAVIGNANO SUL PANARO	50.76	46.71
SERRAMAZZONI	44.32	48.59
SPILAMBERTO	48.68	45.07
VIGNOLA	47.8	44.91
ZOCCA	40.6	41.88
BAZZANO	46.84	44.96
CASALECCHIO DI RENO	47.32	41.35
CASTELLO DI SERRAVALLE	47.14	49.57
CREPELLANO	48.33	44.76
MONTE SAN PIETRO	55.54	50.36
MONTEVEGLIO	53.15	47.44
SASSO MARCONI	51.85	43.86
SAVIGNO	41.49	45.25
VERGATO	45.36	44.44
ZOLA PREDOSA	52.66	45.00
<b>TOTAL</b>	<b>48.11</b>	<b>45.93</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>45.31</b>	<b>44.62</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>47.38</b>	<b>45.18</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>46.49</b>	<b>44.05</b>

Source: ISTAT – Census of Population and Dwellings

The percentage of women of childbearing age in the “Città Castelli Ciliegi” territory (45.93%) is higher than the provincial average (44.62% in Modena and 45.18% in Bologna) and regional average (44.05%). Compared to 1991, this percentage fell by more than 2%, but in single municipalities contrasting trends are registered. In Serramazzone there was an increase (44.32% in 1991 vs. 48.59% in 2001), as there was in Castello di Serravalle (47.14% in 1991 vs. 49.57% in 2001) and Savigno (41.49% in 1991 vs. 45.25% in 2001) (Table 9).

**Table 10 - High school graduates in the "Città Castelli Ciliégi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	14.87	22.33
CASTELVETRO DI MODENA	11.08	18.02
MARANO SUL PANARO	11.83	19.63
PAVULLO NEL FRIGNANO	12.74	18.96
SAVIGNANO SUL PANARO	11.09	17.07
SERRAMAZZONI	11.66	18.74
SPILAMBERTO	12.13	19.04
VIGNOLA	14.68	20.63
ZOCCA	10.3	15.7
BAZZANO	13.64	20.47
CASALECCHIO DI RENO	17.28	22.68
CASTELLO DI SERRAVALLE	9.66	17.37
CREPELLANO	11.96	18.49
MONTE SAN PIETRO	15.18	23.22
MONTEVEGLIO	12.98	20.71
SASSO MARCONI	16.46	22.32
SAVIGNO	7.55	16.28
VERGATO	12.23	19.44
ZOLA PREDOSA	16.55	21.82
<b>TOTAL</b>	<b>12.84</b>	<b>19.63</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>11.60</b>	<b>18.30</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>12.87</b>	<b>19.83</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>15.32</b>	<b>21.66</b>

Source: ISTAT – Census of Population and Dwellings

**Table 11 - University graduates in the "Città Castelli Ciliégi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	3.16	5.37
CASTELVETRO DI MODENA	1.66	3.02
MARANO SUL PANARO	1.77	3.31
PAVULLO NEL FRIGNANO	2.80	4.21
SAVIGNANO SUL PANARO	1.46	2.99
SERRAMAZZONI	1.77	3.85
SPILAMBERTO	1.70	3.60
VIGNOLA	3.14	4.85
ZOCCA	1.92	3.31
BAZZANO	2.41	4.80
CASALECCHIO DI RENO	4.30	8.04
CASTELLO DI SERRAVALLE	1.69	3.82
CREPELLANO	1.87	4.14
MONTE SAN PIETRO	3.08	5.36
MONTEVEGLIO	2.95	5.02
SASSO MARCONI	3.73	7.08
SAVIGNO	1.39	2.70
VERGATO	1.89	3.61
ZOLA PREDOSA	2.76	6.31
<b>TOTAL</b>	<b>2.39</b>	<b>4.49</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>1.91</b>	<b>3.44</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>2.30</b>	<b>4.38</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>4.00</b>	<b>6.57</b>

Source: ISTAT – Census of Population and Dwellings

As for the level of schooling, the percentage of high school and university graduates in the territory studied indicates a general inadequacy.

According to the last population census (in 2001), in the “*Città Castelli Ciligè*” area 19.63% of the population were high school graduates: a figure higher than that of Modena province as a whole (18.30%), slightly lower than in Bologna province (19.83%), and notably lower than the regional value (21.66%)(Table 10).

The percentage of university graduates in the territory reaches 4.49%: a higher figure than in the provinces of Modena (3.44%) and Bologna (4.38%), but lower than the regional value (6.57%) (Table 11).

Although these data do not depict an exceptional area as far as the schooling level of the resident population is concerned, a very significant improvement has been registered since 1991: high school graduates have increased by almost 53% and university graduates by 88%.

**Table 12 - Activity rates of the total population in the territory "Città Castelli Ciligè" by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	50.85	50.74
CASTELVETRO DI MODENA	50.55	51.55
MARANO SUL PANARO	47.25	49.57
PAVULLO NEL FRIGNANO	45.8	46.35
SAVIGNANO SUL PANARO	51.2	50.81
SERRAMAZZONI	46.22	47.61
SPILAMBERTO	49.26	48.85
VIGNOLA	48.73	48.67
ZOCCA	44.84	43.37
BAZZANO	47.69	48.78
CASALECCHIO DI RENO	49.49	45.88
CASTELLO DI SERRAVALLE	50.96	51.7
CREPELLANO	51.66	50.1
MONTE SAN PIETRO	54.39	54.27
MONTEVEGLIO	52.48	50.64
SASSO MARCONI	50.35	48.3
SAVIGNO	44.33	45.42
VERGATO	44.5	45.75
ZOLA PREDOSA	52.73	49.98
<b>TOTAL</b>	<b>49.12</b>	<b>48.86</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>47.14</b>	<b>47.47</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>48.36</b>	<b>48.22</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>46.37</b>	<b>46.56</b>

Source: ISTAT – Census of Population and Dwellings

The average activity rate in the area studied (48.86%), with all its significance limits, appears slightly higher than both that of the two provinces involved (47.47% in Modena and 48.22% in Bologna) and the average regional value (46.56%). This value is slightly lower than in 1991 (49.12%), as it is also the case for the province of Bologna (48,36%), whereas for the province of

Modena (47.14%) and the regional average (46.37%) there was a slight increase over the 1991 figure (Table 12).

**Table 13 - Unemployment rate in the "Città Castelli Ciliégi" territory by municipality of residence and year - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	4.48	3.16
CASTELVETRO DI MODENA	5.42	3.08
MARANO SUL PANARO	4.79	2.69
PAVULLO NEL FRIGNANO	8.25	4.21
SAVIGNANO SUL PANARO	4.62	4.11
SERRAMAZZONI	6.72	3.6
SPILAMBERTO	5.62	3.12
VIGNOLA	5.78	3.65
ZOCCA	5.76	4.02
BAZZANO	5	3.09
CASALECCHIO DI RENO	5.11	3.13
CASTELLO DI SERRAVALLE	5.01	3.5
CREPELLANO	3.81	3.2
MONTE SAN PIETRO	3.95	2.76
MONTEVEGLIO	4.77	2.64
SASSO MARCONI	4.89	2.66
SAVIGNO	5.13	4.05
VERGATO	5.23	4.22
ZOLA PREDOSA	4.64	2.79
<b>TOTAL</b>	<b>5.21</b>	<b>3.35</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>5.72</b>	<b>3.82</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>5.65</b>	<b>3.48</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>7.3</b>	<b>4.21</b>

Source: ISTAT – Census of Population and Dwellings

The average unemployment rate in the “*Città Castelli Ciliégi*” area is extremely low (3.35%) and lower than the unemployment rate in Modena (3.82%) and in Bologna (3.48%), and also below the regional average value (4.21%) (Table 13).

If compared to the census of 1991, the unemployment rate in the area has decreased considerably, from 5.21% to 3.35%. This trend has been common to all the municipalities; for Pavullo and Serramazzone, which had higher unemployment rates (8.25% and 6.72%, respectively), their rates were reduced by almost half.

High activity rates and unemployment rates lower than the provincial and regional average – and decreasing if compared to 1991 – are indicative of an area characterized by a strong economy and positive trends even in the municipalities which had previously seen harsher times.

Employment rates make it possible to analyze the role of different sectors in ensuring jobs.

Table 14 - Self-employment in the "Città Castelli Cilegi" territory by municipality of residence and year (percentage) - years 1991 and 2001

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	36.12	30.36
CASTELVETRO DI MODENA	35.95	28.55
MARANO SUL PANARO	43.34	33.17
PAVULLO NEL FRIGNANO	41.19	31.72
SAVIGNANO SUL PANARO	36.5	32.59
SERRAMAZZONI	43.93	31.78
SPILAMBERTO	36.36	30.5
VIGNOLA	36.1	30.18
ZOCCA	50.56	41.32
BAZZANO	35.6	27.83
CASALECCHIO DI RENO	27.85	26.38
CASTELLO DI SERRAVALLE	45.46	33.06
CREPELLANO	35.92	30.22
MONTE SAN PIETRO	37.29	33.86
MONTEVEGLIO	35.71	31.05
SASSO MARCONI	33.28	30.36
SAVIGNO	47.66	35.82
VERGATO	30.76	23.57
ZOLA PREDOSA	30.26	27.71
<b>TOTAL</b>	<b>37.89</b>	<b>31.05</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>40.09</b>	<b>32.50</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>34.71</b>	<b>28.84</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>35.74</b>	<b>29.91</b>

Source: ISTAT – Census of Population and Dwellings

Table 15 - Employees in the "Città Castelli Cilegi" territory by municipality of residence and year (percentage) - years 1991 and 2001

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	63.88	69.64
CASTELVETRO DI MODENA	64.05	71.45
MARANO SUL PANARO	56.66	66.83
PAVULLO NEL FRIGNANO	58.81	68.28
SAVIGNANO SUL PANARO	63.5	67.41
SERRAMAZZONI	56.07	68.22
SPILAMBERTO	63.64	69.5
VIGNOLA	63.9	69.82
ZOCCA	49.44	58.68
BAZZANO	64.4	72.17
CASALECCHIO DI RENO	72.15	73.62
CASTELLO DI SERRAVALLE	54.54	66.94
CREPELLANO	64.08	69.78
MONTE SAN PIETRO	62.71	66.14
MONTEVEGLIO	64.29	68.95
SASSO MARCONI	66.72	69.64
SAVIGNO	52.34	64.18
VERGATO	69.24	76.43
ZOLA PREDOSA	69.74	72.29
<b>TOTAL</b>	<b>62.11</b>	<b>68.95</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>59.91</b>	<b>67.50</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>65.29</b>	<b>71.16</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>64.26</b>	<b>70.09</b>

Source: ISTAT – Census of Population and Dwellings

People employed in the “*Città Castelli Ciliegi*” territory consist of 31.05% self-employed people and 68.95% employees. At the provincial level, Modena shows a higher percentage of self-employed people (32.50%), whereas Bologna has a lower value (28.84%); there are fewer self-employed people (29.91%) at the regional level also (Tables 14 and 15).

In 1991, the incidence of self-employed people in this area was much higher (37.89%). In this case, also, the province of Modena had a higher percentage (40.09%), whereas Bologna (34.71%) and the Region (35.74%) had lower percentages.

**Table 16 - People employed in agriculture in the "Città Castelli Ciliegi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	5.46	3.31
CASTELVETRO DI MODENA	12.73	7.53
MARANO SUL PANARO	13.38	7.52
PAVULLO NEL FRIGNANO	12.66	7.52
SAVIGNANO SUL PANARO	7.73	5.87
SERRAMAZZONI	14.32	7.91
SPILAMBERTO	11.15	7.90
VIGNOLA	5.79	5.32
ZOCCA	20.65	10.20
BAZZANO	6.90	3.95
CASALECCHIO DI RENO	0.85	0.74
CASTELLO DI SERRAVALLE	18.97	8.27
CREPELLANO	13.23	7.10
MONTE SAN PIETRO	5.61	3.04
MONTEVEGLIO	9.25	5.75
SASSO MARCONI	3.17	2.37
SAVIGNO	17.52	10.14
VERGATO	3.15	2.44
ZOLA PREDOSA	2.91	2.51
<b>TOTAL</b>	<b>9.76</b>	<b>5.76</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>12.38</b>	<b>7.29</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>9.25</b>	<b>5.73</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>8.05</b>	<b>5.96</b>

Source: ISTAT – Census of Population and Dwellings

**Table 17 - People employed in the industrial sector in the "Città Castelli Cilegi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	51.95	48.80
CASTELVETRO DI MODENA	55.95	54.81
MARANO SUL PANARO	45.11	47.32
PAVULLO NEL FRIGNANO	34.55	41.30
SAVIGNANO SUL PANARO	51.05	48.99
SERRAMAZZONI	44.70	50.74
SPILAMBERTO	43.42	47.89
VIGNOLA	42.35	44.12
ZOCCA	34.29	41.68
BAZZANO	44.29	45.89
CASALECCHIO DI RENO	37.49	31.94
CASTELLO DI SERRAVALLE	42.19	47.53
CREPELLANO	44.45	42.93
MONTE SAN PIETRO	43.50	40.48
MONTEVEGLIO	49.61	48.12
SASSO MARCONI	46.26	40.83
SAVIGNO	38.43	41.74
VERGATO	44.37	43.78
ZOLA PREDOSA	46.75	42.34
<b>TOTAL</b>	<b>44.25</b>	<b>44.80</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>47.33</b>	<b>48.68</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>42.14</b>	<b>41.26</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>38.02</b>	<b>37.66</b>

Source: ISTAT – Census of Population and Dwellings

**Table 18 - People employed in the commercial sector in the "Città Castelli Cilegi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	28.03	32.49
CASTELVETRO DI MODENA	20.60	23.86
MARANO SUL PANARO	27.31	29.08
PAVULLO NEL FRIGNANO	28.63	27.53
SAVIGNANO SUL PANARO	28.72	30.77
SERRAMAZZONI	27.18	27.26
SPILAMBERTO	30.72	27.54
VIGNOLA	34.41	32.43
ZOCCA	28.68	28.97
BAZZANO	31.74	31.92
CASALECCHIO DI RENO	40.99	42.81
CASTELLO DI SERRAVALLE	26.64	27.97
CREPELLANO	28.55	32.12
MONTE SAN PIETRO	35.74	37.49
MONTEVEGLIO	27.34	28.56
SASSO MARCONI	34.05	35.39
SAVIGNO	29.72	29.26
VERGATO	31.37	28.99
ZOLA PREDOSA	34.74	35.12
<b>TOTAL</b>	<b>30.27</b>	<b>31.03</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>25.69</b>	<b>27.71</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>31.50</b>	<b>32.63</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>33.21</b>	<b>33.44</b>

Source: ISTAT – Census of Population and Dwellings

**Table 19 - People employed in the public services sector in the "Città Castelli Ciliégi" territory by municipality of residence and year (percentage) - years 1991 and 2001**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	14.56	15.40
CASTELVETRO DI MODENA	10.71	13.80
MARANO SUL PANARO	14.20	16.09
PAVULLO NEL FRIGNANO	24.15	23.64
SAVIGNANO SUL PANARO	12.50	14.37
SERRAMAZZONI	13.80	14.09
SPILAMBERTO	14.71	16.68
VIGNOLA	17.45	18.13
ZOCCA	16.39	19.14
BAZZANO	17.08	18.23
CASALECCHIO DI RENO	20.65	24.51
CASTELLO DI SERRAVALLE	12.20	16.23
CREPELLANO	13.77	17.85
MONTE SAN PIETRO	15.12	18.99
MONTEVEGLIO	13.80	17.56
SASSO MARCONI	16.50	21.40
SAVIGNO	14.33	18.85
VERGATO	21.11	24.79
ZOLA PREDOSA	15.59	20.02
<b>TOTAL</b>	<b>15.72</b>	<b>18.41</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>14.59</b>	<b>16.33</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>17.10</b>	<b>20.39</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>20.71</b>	<b>22.94</b>

Source: ISTAT – Census of Population and Dwellings

5.76% of the people employed in the “Città Castelli Ciliégi” territory work in agriculture, 44.80% in the industrial sector, 31.03% in the commercial sector, and 18.41% in the public services sector (Tables 16-19).

The structure of employment in the province of Modena has 7.29% of its overall working people employed in agriculture, 48.68% in industry, 27.71% in commerce, and 16.33% in public services. The province of Bologna shows that agriculture accounts for 5.73%, industry for 41.26%, commerce for 32.63%, and public services for 20.39%. At the regional level, 5.96% of all working people are employed in agriculture, 37.66% in industry, 33.44% in commerce, and 22.94% in public services.

This area stands midway between the characteristics of the provinces of Modena and of Bologna. The percentage of people working in agriculture in this area is similar than that of the province of Bologna and lower than that of the province of Modena; the percentage of people working in the industrial sector is higher than that of the overall province of Bologna and lower than that of the province of Modena, whereas the percentage of people working in the commercial sector is lower than in the province of Bologna and higher than in the province of Modena. Lastly, the “Città Castelli Ciliégi” territory has fewer people employed in public services than the province of Bologna and more than in Modena province.

More in detail, the incidence of people employed in agriculture varies remarkably within this territory: generally speaking, municipalities in the Modena province have a much homogeneous incidence than the municipalities in the province of Bologna.

The comparison with the data of the census of 1991 stresses the different incidence of various sectors. Agriculture had a much stronger role in the area with 9.76%. Industry had a similar role if compared to 2001, with 44.25% out of the total of employed people. Commerce had also a similar role with 30.27%, whereas public services had a weaker role than today with 15.72% of the overall employed people.

Agriculture is the sector that underwent the greatest changes in employment in this 10-year span (9.76% in 1991, and 5.76% in 2001). In 1991, as in 2001, this territory appeared to be more similar to the province of Bologna (9.25% of the people employed in agriculture in 1991, and 5.73% in 2001) than to the province of Modena (12.38% in 1991, and 7.29% in 2001).

**Table 20 - Total foreign resident population in 1991-2001 in the "Città Castelli Ciliegi" territory by municipality of residence and year (absolute value)**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	87	540
CASTELVETRO DI MODENA	57	407
MARANO SUL PANARO	11	135
PAVULLO NEL FRIGNANO	90	535
SAVIGNANO SUL PANARO	62	309
SERRAMAZZONI	69	528
SPILAMBERTO	130	582
VIGNOLA	176	905
ZOCCA	63	331
BAZZANO	39	336
CASALECCHIO DI RENO	181	914
CASTELLO DI SERRAVALLE	56	239
CREPELLANO	81	338
MONTE SAN PIETRO	68	340
MONTEVEGLIO	64	192
SASSO MARCONI	23	475
SAVIGNO	8	97
VERGATO	4	494
ZOLA PREDOSA	182	481
<b>TOTAL</b>	<b>1,451</b>	<b>8,178</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>6,438</b>	<b>27,560</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>6,521</b>	<b>32,203</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>28,762</b>	<b>135,453</b>

Source: ISTAT – Census of Population and Dwellings

**Table 21 - Incidence of resident foreign immigrants (1991-2001) on the overall resident population in the "Città Castelli Ciliagi" territory by municipality of residence and year (percentage)**

Municipality of residence	Year	
	1991	2001
CASTELNUOVO RANGONE	0.90	4.46
CASTELVETRO DI MODENA	0.71	4.24
MARANO SUL PANARO	0.34	3.60
PAVULLO NEL FRIGNANO	0.67	3.54
SAVIGNANO SUL PANARO	0.80	3.71
SERRAMAZZONI	1.27	7.67
SPILAMBERTO	1.22	5.30
VIGNOLA	0.87	4.27
ZOCCA	1.50	7.21
BAZZANO	0.73	5.51
CASALECCHIO DI RENO	0.52	2.77
CASTELLO DI SERRAVALLE	2.02	6.01
CREPELLANO	1.13	4.34
MONTE SAN PIETRO	0.90	3.31
MONTEVEGLIO	1.65	4.28
SASSO MARCONI	0.17	3.44
SAVIGNO	0.36	3.79
VERGATO	0.07	7.34
ZOLA PREDOSA	1.16	3.01
<b>TOTAL</b>	<b>0.89</b>	<b>4.62</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>0.86</b>	<b>4.02</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>0.65</b>	<b>3.95</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>0.74</b>	<b>3.40</b>

Source: ISTAT – Census of Population and Dwellings

The immigration into the “*Città Castelli Ciliagi*” territory of foreign people attracted by the economic and social development of the area is one of the most felt problems in the territory; at the present time, official statistics are unable to provide a faithful picture of the scale and characteristics of this phenomenon.

The data obtained by the Population Census in 1991 and 2001, however, show a shift from an extremely limited number of foreign residents (1,451 units in 1991) to a number 5.6 times higher (8,178 units in 2001) (Table 20).

Thus there has been a shift from a very low incidence (0.89%) to one that begins to be significant (4.62%). In fact, these data represent only the “consolidated” part of a large, growing process of immigration with extremely varied characteristics (Table 21).

Both in 2001 and in 1991, this territory had a percentage of resident foreign population higher than both the provincial (0.86% in 1991 and 4.02% in 2001 in Modena and 0.65% in 1991 and 3.95% in 2001 in Bologna) and the regional (0.74% in 1991 and 3.40% in 2001) ones.

### 3.3.2 Agriculture

According to the 2000 Agriculture Census, in the “*Città Castelli Ciliégi*” territory there are 42,281.54 hectares of utilized agricultural area (UAA). The municipalities in the Modena area account for 16.87% of the UAA of the province of Modena, while the municipalities along the Route in the Bologna area account for 10.24% of the provincial UAA (Table 22).

There are 5,669 farms active in the “*Città Castelli Ciliégi*” territory. Agricultural farms in municipalities of the Route belonging to the province of Modena correspond to 22,03% of the enterprises of the entire province, while the farms in municipalities of the Bologna area correspond to 13.88% of those in the province (Table 23).

The average UAA per farm is equal to 7.46 hectares. In municipalities of the Route belonging to the province of Modena the average UAA is 7.14, while in municipalities in the province of Bologna the average UAA is 7.88 hectares. Overall, the two provinces have higher average UAAs (Modena 9.32, Bologna 10.69). The UAA modal class for farms is between 5 and 9.99 hectares, even though the highest UAA area is encountered in the following class, between 10 and 19.99 hectares of UAA. The farmer’s average age in the territory increases every 10 years: it was 56 years in 1982, 59 in 1990, and reached 62 years in 2000. Compared to the provincial and regional average data, lower average ages were recorded in this territory; now they reach higher values, thus indicating an accelerated aging process of the farmers (Table 24).

1,345,715 days of work in agriculture were registered by the Agriculture Census of 2000. 2,916,017 days were recorded in 1982 and 2,052,862 in 1990. In 2000 they represented 23.43% of the work days in the province of Modena, and 13.55% of the work days in the province of Bologna (Table 25). When linking this statistical information to the UAA data, we can state that the “*Città Castelli Ciliégi*” area in the Modena province appears to have a much higher intensity of work compared to the province (23.43% of work days versus 16.87% of UAA), while the territory in the province of Bologna appears to have a slightly higher intensity of work compared to the entire provincial territory (13.55% of work days versus 10.24% of the UAA).

In summary, we can say that – compared to the relevant provinces – the area studied is characterized by many small-sized farms, with particularly high-aged farmers and a high intensity of work.

Now, let us examine the relationship with the crops and livestock present in the area.

Table 22 - UAA in the "Città Castelli Ciliegi" territory (ha) by municipality and UAA class (absolute value) -Year 2000

Municipality	UAA Class											TOTAL
	With no UAA	Less than one hectare	1 - 1.99	2 - 2.99	3 - 4.99	5 - 9.99	10 - 19.99	20 - 29.99	30 - 49.99	50 - 99.99	100 and over	
CASTELNUOVO RANGONE	0	8.71	24.34	34.9	142.3	167.23	195.95	186.89	185.81	333.29	-	1,279.42
CASTELVETRO DI MODENA	0	39	93.43	180.53	301.63	427.13	707.18	353.81	187.37	460.81	-	2,750.89
MARANO SUL PANARO	0	17.28	34.59	55.67	106.25	250.38	369.62	334.09	306.71	245.69	140.7	1,860.98
PAVULLO NEL FRIGNANO	0	42.67	119.07	134.93	344.09	890.59	1,220.06	615.96	1,235.89	831.42	1,214.24	6,648.92
SAVIGNANO SUL PANARO	0	27.36	96.95	92.92	168.21	291.82	336.2	158.46	165.74	122.85	-	1,460.51
SERRAMAZZONI	0	48.06	152.28	148.86	402.48	714.48	544.73	370.23	492.51	246.46	-	3,120.09
SPILAMBERTO	0	19.75	67.37	96.71	186.72	336.85	297.26	199.07	188.42	356.95	519	2,268.10
VIGNOLA	0	91.25	134.84	132.38	223.74	325.35	265.49	101.9	-	-	-	1,274.95
ZOCCA	0	1.02	34	79.63	230.03	482.97	660.33	282.03	402.8	181	107.5	2,461.31
BAZZANO	-	5.95	13.4	22.94	65.15	155.63	166.9	-	-	250.74	217.08	897.79
CASALECCHIO DI RENO	0	5.82	10.72	2.37	19.1	31.74	78.15	49.35	-	130.53	152.22	480
CASTELLO DI SERRAVALLE	0	41.15	70.42	99.71	220.78	377.02	455.86	259.73	169.04	427.33	-	2,121.04
CREPELLANO	0	16.83	56.19	76.49	208.84	439.15	497.92	367.58	416.19	282.98	439.01	2,801.18
MONTE SAN PIETRO	0	14.75	43.07	39.93	123.55	353.95	420.03	322.38	230.1	222.61	126.63	1,897
MONTEVEGLIO	0	22.9	49.48	86.41	195.06	253.52	360.3	208.5	264.96	-	194	1,635.13
SASSO MARCONI	0	18.39	49.94	81.2	226.17	313.44	579.57	309.71	341.51	345.73	1,153.54	3,419.2
SAVIGNO	0	33.02	88.36	89.66	313.25	666.36	609.8	186.66	306.98	56	111.53	2,461.62
VERGATO	0	12.4	47.25	76.75	141.78	357.89	320.07	181.59	231.05	276.87	125	1,770.65
ZOLA PREDOSA	0	37.59	48.05	58.26	112.36	381.96	360.36	165.77	271.31	97.1	140	1,672.76
<b>TOTAL</b>	<b>0</b>	<b>503.9</b>	<b>1,233.75</b>	<b>1,590.25</b>	<b>3,731.49</b>	<b>7,217.46</b>	<b>8,445.78</b>	<b>4,653.71</b>	<b>5,396.39</b>	<b>4,868.36</b>	<b>4,640.45</b>	<b>42,281.54</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>0</b>	<b>1,074.80</b>	<b>2,935.55</b>	<b>4,009.49</b>	<b>9,020.24</b>	<b>19,773.36</b>	<b>25,702.74</b>	<b>16,383.01</b>	<b>18,519.41</b>	<b>19,389.97</b>	<b>20,238.29</b>	<b>137,046.86</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>0</b>	<b>1,224.10</b>	<b>3,228.91</b>	<b>4,176.01</b>	<b>10,045.72</b>	<b>24,083.86</b>	<b>34,504.35</b>	<b>19,386.68</b>	<b>23,658.65</b>	<b>24,871.34</b>	<b>41,877.17</b>	<b>187,056.79</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>0</b>	<b>8,739.04</b>	<b>20,780.08</b>	<b>26,231.90</b>	<b>60,079.08</b>	<b>144,424.84</b>	<b>206,134.52</b>	<b>130,197.71</b>	<b>154,706.74</b>	<b>159,058.74</b>	<b>205,027.19</b>	<b>1,115,379.8</b>

Source: ISTAT - 5° Census of Agriculture (2000)

Table 23 - Number of farms in the "Città Castelli Ciliegi" territory by municipality and UAA class (absolute value) - Year 2000

Municipality	UAA Class											TOTAL
	With no UAA	Less than one hectare	1 - 1.99	2 - 2.99	3 - 4.99	5 - 9.99	10 - 19.99	20 - 29.99	30 - 49.99	50 - 99.99	100 and over	
CASTELNUOVO RANGONE	2	14	16	14	37	24	13	8	4	4	-	136
CASTELVETRO DI MODENA	9	66	61	74	76	61	51	15	5	7	-	425
MARANO SUL PANARO	3	41	24	23	27	35	25	14	8	3	1	204
PAVULLO NEL FRIGNANO	37	87	80	55	90	129	84	25	32	12	7	638
SAVIGNANO SUL PANARO	1	42	66	38	42	42	25	7	4	2	-	269
SERRAMAZZONI	8	112	108	64	104	101	41	15	13	4	-	570
SPILAMBERTO	2	39	45	38	51	48	22	8	5	5	2	265
VIGNOLA	1	157	98	54	57	51	21	4	-	-	-	443
ZOCCA	15	3	27	36	63	71	50	12	10	3	1	291
BAZZANO	-	11	10	10	18	23	13	-	-	3	1	89
CASALECCHIO DI RENO	2	11	7	1	5	4	6	2	-	2	1	41
CASTELLO DI SERRAVALLE	7	85	50	40	59	55	33	11	4	6	-	350
CREPELLANO	1	30	39	32	54	60	37	15	10	4	3	285
MONTE SAN PIETRO	7	29	30	17	31	51	31	14	6	3	1	220
MONTEVEGLIO	3	42	36	35	51	38	24	8	7	-	1	245
SASSO MARCONI	4	30	35	34	57	46	43	13	9	6	6	283
SAVIGNO	14	64	63	38	84	98	46	8	8	1	1	425
VERGATO	1	25	35	33	37	53	24	8	6	4	1	227
ZOLA PREDOSA	3	79	33	24	28	55	25	7	7	1	1	263
<b>TOTAL</b>	<b>120</b>	<b>967</b>	<b>863</b>	<b>660</b>	<b>971</b>	<b>1045</b>	<b>614</b>	<b>194</b>	<b>138</b>	<b>70</b>	<b>27</b>	<b>5,669</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>361</b>	<b>2,118</b>	<b>2,039</b>	<b>1,651</b>	<b>2,326</b>	<b>2,806</b>	<b>1,855</b>	<b>677</b>	<b>484</b>	<b>286</b>	<b>108</b>	<b>14,711</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>612</b>	<b>2,387</b>	<b>2,282</b>	<b>1,731</b>	<b>2,600</b>	<b>3,432</b>	<b>2,491</b>	<b>798</b>	<b>621</b>	<b>365</b>	<b>177</b>	<b>17,496</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>1,999</b>	<b>17,084</b>	<b>14,578</b>	<b>10,794</b>	<b>15,519</b>	<b>20,427</b>	<b>14,794</b>	<b>5,362</b>	<b>4,064</b>	<b>2,354</b>	<b>913</b>	<b>107,888</b>

Source: ISTAT - 5° Census of Agriculture (2000)

Table 24 - Average age of farmers in the "Città Castelli Ciliegi" territory by municipality and year - years 1982, 1991, 2000

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	56.34	60.83	61.83
CASTELVETRO DI MODENA	54.71	56.87	59.95
MARANO SUL PANARO	54.61	59.61	61.06
PAVULLO NEL FRIGNANO	58.43	60.21	61.36
SAVIGNANO SUL PANARO	52.82	57.06	60.25
SERRAMAZZONI	56.8	60.79	62.92
SPILAMBERTO	54.1	57.64	60.9
VIGNOLA	55.7	57.33	58.28
ZOCCA	58.14	60.08	61.98
BAZZANO	58.62	57.87	62.47
CASALECCHIO DI RENO	57.19	59.78	61.16
CASTELLO DI SERRAVALLE	54.29	56.88	60.59
CREPELLANO	55.76	59.19	61.32
MONTE SAN PIETRO	56.55	60.56	63.18
MONTEVEGLIO	56.46	57.83	61.03
SASSO MARCONI	55.19	56.99	59.99
SAVIGNO	58.56	61.08	63.84
VERGATO	59.09	59.79	64.75
ZOLA PREDOSA	54.83	58.03	62.58
<b>TOTAL</b>	<b>56.22</b>	<b>58.86</b>	<b>61.55</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>57.49</b>	<b>59.45</b>	<b>60.94</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>57.17</b>	<b>58.83</b>	<b>61.14</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>57.3</b>	<b>59.04</b>	<b>60.18</b>

Source: ISTAT – Census of Agriculture

Table 25 - Total days of work in agriculture in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) - years 1982, 1991, 2000

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	130,536	78,092	51,550
CASTELVETRO DI MODENA	247,980	154,256	114,851
MARANO SUL PANARO	112,459	52,853	55,754
PAVULLO NEL FRIGNANO	355,081	264,288	215,366
SAVIGNANO SUL PANARO	132,231	108,088	82,902
SERRAMAZZONI	238,175	128,765	100,229
SPILAMBERTO	229,757	172,900	97,077
VIGNOLA	171,565	186,052	98,582
ZOCCA	153,683	116,387	48,787
BAZZANO	53,779	47,832	29,403
CASALECCHIO DI RENO	38,147	24,301	10,285
CASTELLO DI SERRAVALLE	112,627	78,751	67,333
CREPELLANO	213,447	161,316	84,230
MONTE SAN PIETRO	108,697	84,093	38,403
MONTEVEGLIO	103,041	67,138	56,713
SASSO MARCONI	169,185	111,966	45,322
SAVIGNO	109,839	96,695	63,186
VERGATO	82,741	42,794	39,886
ZOLA PREDOSA	153,047	76,295	45,856
<b>TOTAL</b>	<b>2,916,017</b>	<b>2,052,862</b>	<b>1,345,715</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>7,687,968</b>	<b>5,297,986</b>	<b>3,692,240</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>8,523,305</b>	<b>5,646,538</b>	<b>3,547,847</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>54,689,831</b>	<b>38,283,447</b>	<b>25,817,860</b>

Source: ISTAT - Census of Agriculture

### 3.3.2.1 Crops

In the “*Città Castelli Ciliegi*” territory there are 2,588 fruit farms, corresponding to 45.65% of the total enterprises in the territory. 54.37% are in the Modena province and 45.63% in the Bologna province. They account for 32.81% of the fruit farms in the Modena province and 20.74% of those in the Bologna province (Table 26).

Orchard areas cover 4,253.94 hectares, equal to 10.06% of the UAA in the “*Città Castelli Ciliegi*” territory. These areas represent 21.71% of the orchard areas in the province of Modena and 12.32% of those in the province of Bologna. The area devoted by the farms to fruit is small, i.e. 1.64 hectares (1.70 in the province of Modena and 1.57 in the province of Bologna) (Table 27).

**Table 26 - Fruit farms in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) - years 1982, 1991, 2000**

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	77	65	36
CASTELVETRO DI MODENA	238	143	122
MARANO SUL PANARO	130	138	109
PAVULLO NEL FRIGNANO	448	249	145
SAVIGNANO SUL PANARO	280	244	199
SERRAMAZZONI	316	191	196
SPILAMBERTO	282	244	198
VIGNOLA	433	455	344
ZOCCA	278	220	58
BAZZANO	86	86	58
CASALECCHIO DI RENO	32	24	19
CASTELLO DI SERRAVALLE	245	243	194
CREPELLANO	234	225	183
MONTE SAN PIETRO	187	172	108
MONTEVEGLIO	172	151	109
SASSO MARCONI	169	225	172
SAVIGNO	229	207	183
VERGATO	43	54	51
ZOLA PREDOSA	110	181	104
<b>TOTAL</b>	<b>3,989</b>	<b>3,517</b>	<b>2,588</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>6,431</b>	<b>5,197</b>	<b>4,288</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>8,698</b>	<b>8,036</b>	<b>5,695</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>43,984</b>	<b>41,108</b>	<b>30,500</b>

Source: ISTAT - Census of Agriculture

**Table 27 - Orchard areas (ha) in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) -years 1982, 1991, 2000**

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	69.71	87.45	65.03
CASTELVETRO DI MODENA	220.23	179.64	146.16
MARANO SUL PANARO	145.22	145.56	106.82
PAVULLO NEL FRIGNANO	140.7	131.3	149.42
SAVIGNANO SUL PANARO	620.31	679.69	574.62
SERRAMAZZONI	113.03	60.33	82.27
SPILAMBERTO	726.82	678.34	556.75
VIGNOLA	796.59	871.29	675.54
ZOCCA	275.94	270.96	130.16
BAZZANO	156.59	164.02	135.23
CASALECCHIO DI RENO	10.78	20.76	5.29
CASTELLO DI SERRAVALLE	278.1	276.58	232.43
CREPELLANO	505.98	512	435.1
MONTE SAN PIETRO	208.93	293.57	169.52
MONTEVEGLIO	234.73	244.76	172.28
SASSO MARCONI	204.14	300.61	193.1
SAVIGNO	189.01	186.95	235.15
VERGATO	43.33	54.3	58.73
ZOLA PREDOSA	131.3	132.61	130.34
<b>TOTAL</b>	<b>5,071.44</b>	<b>5,290.72</b>	<b>4,253.94</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>10,958.00</b>	<b>11,576.71</b>	<b>11,452.03</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>19,757.18</b>	<b>20,018.27</b>	<b>14,339.24</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>100,014.41</b>	<b>108,758.82</b>	<b>85,973.86</b>

Source: ISTAT - Census of Agriculture

There are 2,361 vineyards in the “Città Castelli Ciliegi” area, corresponding to 41.65% of the farms in the territory. 49.72% of the farms are in the province of Modena and 50.28% are in the province of Bologna. They correspond to 19.84% of the vineyards in the province of Modena and 19.71% of the vineyards in the province of Bologna (Table 28).

Vineyard areas cover 2,875.78 hectares, corresponding to 6.80% of the UAA in the “Città Castelli Ciliegi” territory. They account for 16.23% of the vineyard area in the province of Modena and 20.20% of the vineyard area in the province of Bologna (Table 29).

The average vineyard area of each farm is small and equal to 1.12 hectares in the province of Modena and 1.31 hectares in the province of Bologna.

There are 810 DOC and DOCG wine grape vineyards, equal to 34.31% of the vineyards in the territory. They account for 17.50% of DOC and DOCG wine grape vineyards in the province of Modena and 23.63% of DOC and DOCG wine grape vineyards in the province of Bologna (Table 30).

DOC and DOCG wine grape vineyards in the “*Città Castelli Ciliegi*” territory cover 1,500.05 hectares, equal to 52.16% of the territory’s vineyard areas. They correspond to 15.36% DOC and DOCG vineyards in the province of Modena and 25.92% of that in the province of Bologna (Table 31).

The average DOC and DOCG vineyard area is larger than that for all grapevines and reaches 1.85 hectares for each farm.

**Table 28 - Vineyard farms in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) - years 1982, 1991, 2000**

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	192	147	85
CASTELVETRO DI MODENA	542	396	329
MARANO SUL PANARO	153	138	101
PAVULLO NEL FRIGNANO	354	204	99
SAVIGNANO SUL PANARO	214	179	136
SERRAMAZZONI	324	193	135
SPILAMBERTO	261	202	154
VIGNOLA	341	213	125
ZOCCA	87	98	10
BAZZANO	115	93	53
CASALECCHIO DI RENO	62	48	31
CASTELLO DI SERRAVALLE	305	294	234
CREPELLANO	315	258	177
MONTE SAN PIETRO	241	158	104
MONTEVEGLIO	201	182	152
SASSO MARCONI	252	177	151
SAVIGNO	203	148	105
VERGATO	65	46	24
ZOLA PREDOSA	311	250	156
<b>TOTAL</b>	<b>4,538</b>	<b>3,424</b>	<b>2,361</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>12,499</b>	<b>8,733</b>	<b>5,918</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>13,625</b>	<b>9,435</b>	<b>6,023</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>95,922</b>	<b>67,531</b>	<b>44,444</b>

Source: ISTAT - Census of Agriculture

**Table 29 - Vineyards (ha) in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) - years 1982, 1991, 2000**

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	218.95	181.44	110.74
CASTELVETRO DI MODENA	565.58	496.56	540.84
MARANO SUL PANARO	50.86	44.73	42.73
PAVULLO NEL FRIGNANO	66.16	44.86	26.94
SAVIGNANO SUL PANARO	187.44	174.56	182.75
SERRAMAZZONI	50.16	41.81	47.25
SPILAMBERTO	218.59	191.32	255.33
VIGNOLA	130.46	125.24	102.63
ZOCCA	37.54	31.81	6.5
BAZZANO	159.39	113.24	68.44
CASALECCHIO DI RENO	93.75	78.63	54.64
CASTELLO DI SERRAVALLE	267.42	263.93	274.26
CREPELLANO	327.19	293.02	197.07
MONTE SAN PIETRO	363.71	277.57	176.88
MONTEVEGLIO	310.51	289.45	352.22
SASSO MARCONI	297.64	257.33	171.44
SAVIGNO	56.86	35.34	39.84
VERGATO	20.36	13.24	7.86
ZOLA PREDOSA	317.76	288.12	217.42
<b>TOTAL</b>	<b>3,740.33</b>	<b>3,242.20</b>	<b>2,875.78</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>11,796.70</b>	<b>8,896.40</b>	<b>8,106.17</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>11,790.95</b>	<b>9,263.21</b>	<b>7,722.16</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>85,607.30</b>	<b>67,622.46</b>	<b>60,013.11</b>

Source: ISTAT - Census of Agriculture

**Table 30 - DOC/DOCG wine grape vineyard farms in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) - years 1982, 1991, 2000**

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	75	71	81
CASTELVETRO DI MODENA	172	152	200
MARANO SUL PANARO	6	7	7
PAVULLO NEL FRIGNANO	-	-	-
SAVIGNANO SUL PANARO	32	36	64
SERRAMAZZONI	-	-	3
SPILAMBERTO	144	111	104
VIGNOLA	33	29	41
ZOCCA	-	-	-
BAZZANO	5	27	23
CASALECCHIO DI RENO	2	2	3
CASTELLO DI SERRAVALLE	35	54	41
CREPELLANO	13	81	98
MONTE SAN PIETRO	35	20	30
MONTEVEGLIO	30	43	61
SASSO MARCONI	52	23	13
SAVIGNO	-	-	1
VERGATO	-	-	-
ZOLA PREDOSA	21	35	40
<b>TOTAL</b>	<b>655</b>	<b>691</b>	<b>810</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>3,424</b>	<b>3,028</b>	<b>2,857</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>859</b>	<b>1,191</b>	<b>1,312</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>9,351</b>	<b>10,674</b>	<b>11,110</b>

Source: ISTAT - Census of Agriculture

**Table 31 - DOC/DOCG wine grape vineyard areas (ha) in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) - years 1982, 1991, 2000**

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	68.32	61.12	81.88
CASTELVETRO DI MODENA	208.07	199.94	288.14
MARANO SUL PANARO	2.98	2.11	7.85
PAVULLO NEL FRIGNANO	-	-	-
SAVIGNANO SUL PANARO	27.64	40.51	86.45
SERRAMAZZONI	-	-	3.83
SPILAMBERTO	116.09	92.11	140.53
VIGNOLA	23.74	21.35	31.06
ZOCCA	-	-	-
BAZZANO	6.34	32.4	37.08
CASALECCHIO DI RENO	21	34.93	31.84
CASTELLO DI SERRAVALLE	53.43	141.91	132.23
CREPELLANO	23.7	62.13	85.24
MONTE SAN PIETRO	124.88	119.74	129.52
MONTEVEGLIO	89.05	154.24	255.85
SASSO MARCONI	95.32	122.07	47.83
SAVIGNO	-	-	1
VERGATO	-	-	-
ZOLA PREDOSA	59.17	100.42	139.72
<b>TOTAL</b>	<b>919.73</b>	<b>1184.98</b>	<b>1500.05</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>4,184.84</b>	<b>3,549.77</b>	<b>4,165.88</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>2,286.13</b>	<b>2,486.52</b>	<b>3,319.65</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>17,238.23</b>	<b>20,075.46</b>	<b>24,633.40</b>

Source: ISTAT - Census of Agriculture

### 3.3.2.2 Livestock

In the "Città Castelli Ciliegi" territory there are 40,578 head of cattle. 80.33% are found in the area of Modena, with 39.74% in the municipality of Pavullo nel Frignano alone, and 19.67% are found in municipalities in the province of Bologna. These account for 29.84% of the cattle resources of the province of Modena and 19.10% of the cattle resources of the province of Bologna (Table 32).

These include 18,402 dairy cows (45.35% of the cattle in the "Città Castelli Ciliegi" territory), with 85.48% of these concentrated in the area of Modena, and in the municipality of Pavullo nel Frignano in particular (32.77%) (Table 33).

There are 845 farms with cattle, corresponding to 14.91% of the territory's farms. They represent 18.51% of the farms in the province of Modena (33.07% of the total farms in the municipality of Pavullo nel Frignano), and 10.09% of the farms in the province of Bologna. (Table 34).

Table 32 - Cattle in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) - years 1982, 1991, 2000

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	3,962	3,619	2,753
CASTELVETRO DI MODENA	4,992	4,870	3,562
MARANO SUL PANARO	2,753	2,315	2,152
PAVULLO NEL FRIGNANO	13,196	13,646	12,955
SAVIGNANO SUL PANARO	1,215	882	547
SERRAMAZZONI	5,453	4,988	3,342
SPILAMBERTO	8,470	7,448	4,732
VIGNOLA	1,684	1,550	454
ZOCCA	3,648	3,224	2,101
BAZZANO	1,117	896	431
CASALECCHIO DI RENO	225	41	17
CASTELLO DI SERRAVALLE	2,658	1,584	1,404
CREPELLANO	4,406	3,744	2,423
MONTE SAN PIETRO	1,784	1,084	623
MONTEVEGLIO	1,009	993	266
SASSO MARCONI	1,487	1,068	577
SAVIGNO	2,319	1,968	1,179
VERGATO	1,358	891	469
ZOLA PREDOSA	1,738	1,177	591
<b>TOTAL</b>	<b>63,474</b>	<b>55,988</b>	<b>40,578</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>183,517</b>	<b>157,248</b>	<b>109,232</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>108,663</b>	<b>68,542</b>	<b>41,776</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>1,060,339</b>	<b>871,425</b>	<b>621,748</b>

Source: ISTAT - Census of Agriculture

Table 33 - Dairy cows >=2 years in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) - years 1982, 1991, 2000

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	1,742	1,867	1,340
CASTELVETRO DI MODENA	2,212	2,680	1,936
MARANO SUL PANARO	1,226	1,250	987
PAVULLO NEL FRIGNANO	5,331	6,580	6,031
SAVIGNANO SUL PANARO	398	342	301
SERRAMAZZONI	2,590	2,546	1,731
SPILAMBERTO	2,356	2,656	2,017
VIGNOLA	753	659	273
ZOCCA	1,676	1,783	1,114
BAZZANO	381	395	177
CASALECCHIO DI RENO	68	11	6
CASTELLO DI SERRAVALLE	1,007	804	697
CREPELLANO	858	454	161
MONTE SAN PIETRO	678	480	278
MONTEVEGLIO	352	579	102
SASSO MARCONI	558	375	210
SAVIGNO	879	921	583
VERGATO	638	520	240
ZOLA PREDOSA	675	446	218
<b>TOTAL</b>	<b>24,378</b>	<b>25,348</b>	<b>18,402</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>70,785</b>	<b>71,840</b>	<b>50,674</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>30,342</b>	<b>22,338</b>	<b>13,385</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>378,034</b>	<b>374,436</b>	<b>274,606</b>

Source: ISTAT - Census of Agriculture

**Table 34 - Farms with cattle in the "Città Castelli Ciliegi" territory by municipality and year (absolute value)  
- years 1982, 1991, 2000**

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	105	63	36
CASTELVETRO DI MODENA	242	139	78
MARANO SUL PANARO	113	76	38
PAVULLO NEL FRIGNANO	543	390	211
SAVIGNANO SUL PANARO	63	40	24
SERRAMAZZONI	312	187	83
SPILAMBERTO	148	81	42
VIGNOLA	74	40	13
ZOCCA	279	179	75
BAZZANO	43	29	10
CASALECCHIO DI RENO	18	5	4
CASTELLO DI SERRAVALLE	83	47	26
CREPELLANO	110	63	34
MONTE SAN PIETRO	90	67	27
MONTEVEGLIO	58	30	11
SASSO MARCONI	94	57	31
SAVIGNO	154	102	54
VERGATO	118	62	32
ZOLA PREDOSA	76	37	16
<b>TOTAL</b>	<b>2,723</b>	<b>1,694</b>	<b>845</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>7,232</b>	<b>4,404</b>	<b>2,160</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>4,832</b>	<b>2,642</b>	<b>1,320</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>40,548</b>	<b>23,986</b>	<b>11,960</b>

Source: ISTAT - Census of Agriculture

The 2000 Agriculture Census counted 78,132 head of pigs in the “*Città Castelli Ciliégi*” territory. Most of them are concentrated in the province of Modena (92.54%), and in particular in the municipalities of Spilamberto (27.72%), Castelvetro di Modena (20.46%), and Pavullo nel Frignano (20.18%). In the area of Modena, these animals correspond to 14.71% of all the pigs in the province (Table 35).

There are 220 pig breeders, corresponding to 3.88% of the farms in the “*Città Castelli Ciliégi*” territory, with an average of 355.15 head per breeder (Table 36). 112 farms are located in the Modena-area municipalities of the Route, and 108 in the Bologna-area municipalities. It thus emerges that, while the number of farms with pigs is almost equal between the municipalities of the two provinces (50.91% in Modena province and 49.09% in Bologna province), the Modena-area farms have a much higher density of animals per farm (645.60 head per farm for Modena and 53.94 for Bologna).

**Table 35 - Pigs in the "Città Castelli Ciliégi" territory by municipality and year (absolute value) - years 1982, 1991, 2000**

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	22,362	10,550	1,805
CASTELVETRO DI MODENA	29,725	19,059	15,985
MARANO SUL PANARO	6,660	4,824	4,964
PAVULLO NEL FRIGNANO	21,199	17,117	15,764
SAVIGNANO SUL PANARO	2,534	164	512
SERRAMAZZONI	12,618	9,420	5,814
SPILAMBERTO	20,260	17,733	21,659
VIGNOLA	5,790	3,644	2,523
ZOCCA	8,155	5,640	3,281
BAZZANO	922	54	10
CASALECCHIO DI RENO	44	6	2
CASTELLO DI SERRAVALLE	4,223	2,564	3,477
CREPELLANO	3,856	1,715	1,644
MONTE SAN PIETRO	3,775	89	69
MONTEVEGLIO	1,199	7	3
SASSO MARCONI	425	250	115
SAVIGNO	2,643	788	27
VERGATO	304	80	42
ZOLA PREDOSA	1,307	145	436
<b>TOTAL</b>	<b>148,001</b>	<b>93,849</b>	<b>78,132</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>721,173</b>	<b>564,202</b>	<b>491,646</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>137,983</b>	<b>85,219</b>	<b>63,072</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>14,798,283</b>	<b>5,754,435</b>	<b>2,442,294</b>

Source: ISTAT - Census of Agriculture

**Table 36 - Farms with pigs in the "Città Castelli Ciliegi" territory by municipality and year (absolute value) – years 1982, 1991, 2000**

Municipality	Year		
	1982	1990	2000
CASTELNUOVO RANGONE	44	14	5
CASTELVETRO DI MODENA	96	23	10
MARANO SUL PANARO	63	22	11
PAVULLO NEL FRIGNANO	151	66	39
SAVIGNANO SUL PANARO	44	12	6
SERRAMAZZONI	80	35	11
SPILAMBERTO	81	37	17
VIGNOLA	67	11	8
ZOCCA	69	39	5
BAZZANO	26	9	4
CASALECCHIO DI RENO	15	2	1
CASTELLO DI SERRAVALLE	56	17	11
CREPELLANO	90	32	15
MONTE SAN PIETRO	75	37	16
MONTEVEGLIO	21	4	2
SASSO MARCONI	93	49	24
SAVIGNO	63	17	10
VERGATO	77	29	19
ZOLA PREDOSA	58	22	6
<b>TOTAL</b>	<b>1269</b>	<b>477</b>	<b>220</b>
<b>TOTAL IN THE PROVINCE OF MODENA</b>	<b>2,727</b>	<b>1,082</b>	<b>484</b>
<b>TOTAL IN THE PROVINCE OF BOLOGNA</b>	<b>5,388</b>	<b>2,118</b>	<b>920</b>
<b>TOTAL IN THE EMILIA-ROMAGNA REGION</b>	<b>27,772</b>	<b>11,091</b>	<b>4,521</b>

Source: ISTAT - Census of Agriculture

### 3.4 A summary of the characteristics of the “Città Castelli Ciliegi” territory

In conclusion, analyzing the Census data, the “Città Castelli Ciliegi” territory appears to be an area with a fast-growing population, a higher presence – compared to regional average values – of the population aged 0 to 14 years, and fewer people over 65. The working age population is higher than the average provincial and regional values. As for education, it appears not to be a particularly noteworthy territory, but very significant progress was registered as compared to 1991.

Higher incidence of activity and lower unemployment rates than the provincial and regional average values – the latter lower than in 1991 – indicate a territory characterized by a growing economy and positive trends even in municipalities that previously registered difficulties.

This territory’s employment structure appears to be midway between those of the two provinces of Modena and Bologna. Its percentage of people employed in agriculture is lower than that of the province of Modena and similar than that of the province of Bologna; its percentage of people employed in the industrial sector is lower than that of the province of Modena and higher than that of the entire province of Bologna, whereas its percentage of people employed in commerce is

higher than in the province of Modena and lower than in the province of Bologna. Lastly, the “*Città Castelli Ciliegi*” territory has a percentage of public services workers higher than that in the province of Modena and lower than that in the province of Bologna.

In both 2001 and 1991, this territory had a higher percentage of foreign resident population than the average provincial and regional values.

As for agriculture, farms had an average UAA lower than the average UAA in provinces, with farmers older than average and a high intensity of work. There is a specialization in fruit orchards, mainly in the territory in the province of Modena, which, on the average, are small in size, and a specialization in vineyards, mainly in the territory in the province of Bologna, with a larger average size of vineyard area for DOC wine per farm. Cattle breeding – especially dairy cows – characterizes the mountain area of the “*Città Castelli Ciliegi*” territory lying in the province of Modena. Pig breeding is characteristic of the foothill part of the territory, also in the province of Modena.

From the agricultural standpoint, there is a strong and apparent link between designations of origin and the territorial features. Fruit specialization is especially connected with the production of *Ciliegia di Vignola* (soon to become an IGP) and related fruit production. Vine cultivation is connected with the production of DOC wines *Lambrusco Grasparossa di Castelvetro DOC* and *Colli Bolognesi DOC* and musts for the *Aceto Balsamico Tradizionale di Modena DOP*. The intensity of cattle and dairy cow breeding in the mountain area of the territory in the Modena province is closely linked to the production of *Parmigiano Reggiano DOP* cheese. Even though the present breeding territory is much larger, pig breeding in “*Città Castelli Ciliegi*” territory is the traditional production basis for obtaining the *Prosciutto di Modena DOP* as well as other IGP cold cuts.

#### **4. Designations of Origin value for citizens**

While the link between agricultural characteristics and designations of origin can almost be taken for granted, the link between designation of origin and the population living in a territory characterized by a designation of origin is worth studying further.

In 2006 the survey funded by the General Directorate of Agriculture of the Emilia-Romagna Regional Administration studied the “*Città Castelli Ciliegi*” territory, which is characterized, as already mentioned, by the presence of 2 DOC, 3 DOP, and 3 IGP products (to which the *Ciliegia di Vignola IGP* will be added) and 2 Traditional agro-food Products (PT). The aim of this study was to assess if and how living in a designation of origin territory contributes to increasing the welfare of

individuals; it also studied the attitude of citizens as taxpayers for regional expenditure, aiming to understand what their alternative priorities would be with respect to the expenditure for designations of origin, or the constraints and limits they would set for such funding.

#### **4.1 The concept of welfare**

Our study started from the need to assess whether the citizens shared the regional policy in favor of designations of origin. Therefore, it was not possible to limit the survey to the merely economic aspects of the welfare of the citizens interviewed. Rather, it was necessary to make use of a broad idea of welfare which would make it possible to provide alternative choices concerning regional policies in fields which affect their overall life (policies for the environment, safety, health, education, culture, infrastructure, and so on)<sup>12</sup>.

The starting theoretical reference was welfare economics, meant as the science that deals with the relationship between the allocation of resources and (economic) welfare. The limitation of the analysis to economic welfare rather than to welfare as a whole was explained by Pigou in *Economics of Welfare* in 1920 as “The goal sought is to make more easy practical measures to promote welfare – practical measures which statesmen may build upon the work of the economist, just as Marconi, the inventor, built upon the discoveries of Hertz. Welfare, however, is a thing of very wide range. There is no need here to enter upon a general discussion of its content. It will be sufficient to lay down more or less dogmatically two propositions, first, that, the elements of welfare are states of consciousness and, perhaps, their relations, secondly, that welfare can be brought under the category of greater and less. A general investigation of all the groups of causes by which welfare thus conceived may be affected would constitute a task so enormous and complicated as to be quite impracticable. It is, therefore, necessary to limit our subject-matter. In doing this we are naturally attracted towards that portion of the field in which the methods of science seem likely to work at best advantage. This they can clearly do when there is present something measurable, on which analytical machinery can get a firm grip. The one obvious instrument of measurement available in social life is money. Hence, the range of our inquiry become restricted to that part of social welfare that can brought directly or indirectly into relation with the measuring-rod of money. This part of welfare may be called economic welfare. It is not, indeed, possible to separate it in any rigid way from other parts, ...” (Pigou, 1960, pp. 10-11).

But today the constraints highlighted by Pigou are no longer so stringent. The various scientific disciplines have prepared measurement scales able to provide a measure for social and individual

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<sup>12</sup> They can be traced back to the expenditure items for welfare in the budget of the Emilia-Romagna Regional Administration: health and family, public transport, economy, environment and development, training and culture mentioned previously (Regione Emilia-Romagna, 2008).

phenomena and for individual satisfaction. When it is not possible to achieve a standard measurement of the phenomenon, the recourse to methods such as contingent valuation may identify individuals' willingness to pay.

Starting from the suggestions given by a large number of interviewed citizens – confirming what the Public Administration's original plan for the area had been – stating that they had initially chosen that territory or had decided to stop there to live with their family, the reference concept of welfare taken into consideration was, then, that related to the characteristics of the ideal place where wishing, having and raising their children. Therefore, the question posed to interviewees was: “Do you think that the designations of origin which are present in this territory contribute to making this more suitable than others for arriving to wish to have children and being this more suitable for raising them? (And, if so, how?)”. The next question focused on their opinion on the congruity of the amount of regional grants for the promotion of the designations of origin and possible alternative uses and suggested constraints.

## 4.2 Interviewees

The survey aimed at collecting the largest possible amount of opinions and suggestions from parties representing social groups or economic categories and organizations in the field of the designations of origin and relevant policies in a specific territory such as that of the *Strada dei vini e dei sapori “Città Castelli Ciliegi”*. It was decided to conduct “open” interviews – rather than administer a guided questionnaire – and to accept all the observations addressing the analysis according to the suggestions received time by time from the social and economic representatives of the area.

The parties involved in these interviews<sup>13</sup> belong first of all to the economic and association world related to quality products in the territory and, especially, designations of origin. I interviewed farmers, cooperatives and agro-food transformation industrialists, heads of the bodies for the protection of designations, and heads of the Route and of promotional and sale facilities. Parties who are active in the field of funding for the projects on designations of origin, especially Foundations, were involved, as well as those who run the Local Action Groups. The administrators of the municipalities in the territory and the representatives of the Chambers of Commerce were interviewed. Thus there was the involvement of operators in the local healthcare and education sectors: community paediatrician service, public food control, public mental healthcare service, ... , teachers and territorial school coordinators, and the managers of school refectories and public social services. People working in the regional Park of the Abbey of Monteveglio were involved, with

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<sup>13</sup> They often contributed to this work with enthusiasm, and to them go my sincere thanks.

regard to both nature protection, and relationships between designations and the nature and food education activities they carry out with many schools in the Province. Representatives of Catholic associations were involved and there was an attempt to involve representatives of the Islamic community as well.

For the territorial urban planning, the already-mentioned contribution of administrators was obtained, as well as that of officers of the Province of Bologna, planners who took part in drawing up municipality-planning schemes in that territory (as well as architects who drafted the entire plans for the safeguard of the hill of Bologna in the 1960s and '70s), the area's real estate agents, and, taxi drivers, also, in relation with the problems of the transport networks of the two provinces.

### **4.3 The Designation of Origin values for population**

When I asked if and how designations of origin contribute to increase the welfare of the population in the area where they have been developed, the citizens of the “*Città Castelli Ciliégi*” territory acknowledged designations as a common value and recalled their historical and cultural aspects. It is certainly true that in this territory there are some of the most well-known and most successful designations of origin, and those with a greater tradition in the agro-food sector of Emilia-Romagna and Italy in general: *Parmigiano Reggiano DOP* and *Aceto Balsamico Tradizionale di Modena DOP*, but also *Lambrusco Grasparossa di Castelvetro DOC*. This idea of a shared, common value makes it possible to go beyond the idea of the promotion of designations of origin as a sectoral type of intervention only, even though it can set some significant constraints and limits to initiatives.

Our interviews showed that the concept of welfare in connection with the ideal place where wishing, having, and raising one's offspring had a three-fold meaning: *Wealth, Health and Environmental Protection, and Social Peace*.

#### 4.3.1 The economic value of designations of origin

According to the interviewed parties, the designations of origin of the “*Città Castelli Ciliégi*” territory provide a significant contribution to the welfare of the local population through the revenues of farmers and the agro-food chain in general, as well as through the indirect consequences originating from related activities, not least the wine-tourism activity run by the Route.

Thus, designations of origin can increase the sensation of welfare in the territory through the perception of a greater widespread wealth and its long-term stability.

Generally, the sale of designation of origin products obtains higher prices than those without the “Designation of Origin” label. The characteristics of the territory’s farms – which are numerous and small in size – would rule out the possibility of significant rent-seeking behaviours. The problem of the high price for the territory products with designation of origin, however, is stressed by citizens as consumers<sup>14</sup>; they also demand alternative market proposals that enable direct contact between agricultural producers, small transformation enterprises and consumers.

#### 4.3.2 The environmental value of designations of origin

The environmental value of designations of origin for the citizenry of the “*Città Castelli Ciliégi*” territory, first of all takes the sense of the landscape as outlined by designations of origin: the vineyards of the designations *Lambrusco Grasparossa di Castelvetro DOC* and *Colli Bolognesi DOC*, alfalfa fields and, higher up, the *Parmigiano Reggiano DOP* pastures, and the endless expanse of tall cherry trees of the “low lands”, in bloom in the springtime along the Panaro River in Vignola.

The environmental value is also: a) the project of “integrated pest management production” which is coordinated and funded by the Regional Administration and applied with special effectiveness to *Lambrusco Grasparossa di Castelvetro DOC* vineyards; and b) the wholesomeness and quality control systems applied to productions with designation of origin<sup>15</sup>.

The widespread sensation is one of a territory rendered attractive by the designations of origin, and kept particularly under control in its environmental aspects and production.

From the landscape standpoint, however, there are problems of safeguard of the designation of origin territories from urban and industrial spreading, and from the construction of large roads and railways. On the one hand there is the “erosion” of areas which are traditionally devoted to quality agriculture and, on the other hand, there is the problem of the impact of air and water pollution on designation of origin products. In general, the area’s landscape structure is subjected to strong pressure.

Furthermore, the parties interviewed demand a careful surveillance over the use of agricultural chemicals throughout the entire area as well as the maintaining of certain historical characteristics of designations of origin, such as traditional crop varieties, especially for the *Ciliegie di Vignola*.

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<sup>14</sup> The Designation of Origin products of the area under study are also now at the basis of the daily food consumption of the local population and of the local traditional food preparations (eg. Parmigiano Reggiano DOP and Prosciutto di Modena DOP for *Tortellini* pasta). In Emilia-Romagna 65% of the population 14 years old and over drink wine, and in general in Italy 34.8% of the men and 15.3% of the women drink one or two glasses of wine per day (ISTAT, 2003).

<sup>15</sup> On the relationship between Designations of Origin and environmental sustainability, it is possible to see the results of a previous study, also regarding Emilia-Romagna (Gatti, 2009).

### 4.3.3 The social value of designations of origin

This is perhaps the least analyzed aspect, although its importance did emerge strongly in our study. Undoubtedly, as already pointed out, the social value of Designations of Origin intersects that of the forms of cooperative production which had a very significant role in the agricultural development of our area. In this context, cooperation developed within the domain of quality productions: DOC wines, *Parmigiano Reggiano* DOP cheese, IGP fruit and vegetables. This brought about the creation of basic economic structures: the winery, cheese dairy, and refrigerating/storage cooperative structure, which had an impact of social cohesion, overall organizational growth, and extremely important social support and cultural promotion actions, especially in areas where the public social structures were less present (for example, in mountain areas the cheese dairy cooperative also accomplish numerous economic, social, and aggregation functions)<sup>16</sup>.

The settled social role of the designation of origin could become a strategic point for the role of the designation of origin protection bodies. I think they should also stress this role by investing a part of the gains in new social actions on their territories: for example to finance a wing of the new hospital in Modena.

Instead, our interviewees stress the role of designations of origin as a factor of territorial identity and as a tool for the integration of newcomers into the territory. This regards both the children of families from Bologna who have moved into the territory and who, through the work of the primary school on local agricultural productions, and in particular on biodiversity, find a common language and interests, and the non-EU women encountered by the community paediatricians of the Vignola healthcare district. The operators believe it would be important to be able to give them a vegetable garden to cultivate. Land and a new growing culture (something like synchronizing the breath) to pacify a society with emerging problems of integration and conflict.

The designations of origin social value can be also reduced to the opportunity for seasonal work offered to the patients of the local mental healthcare service, consisting of harvesting the cherries in the Vignola lowlands.

Another social value is the sense of joy that the designations of origin and their territories offer to all those (and to young people in particular) who want to take part in the festivals devoted to the various typical local productions<sup>17</sup>.

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<sup>16</sup> At the economic level the agro-food districts in this area had a similar role (Brigo., Fiorani, Gatti, 1992).

<sup>17</sup> Within the total area, the Modena area and Bologna area have provided different accents in this values system. The Modena area, more centrally located with respect to the birth of most of the Designations of Origin of the “*Città, Castelli, Ciliegi*” area, responded by identifying itself almost completely with the Designations of Origin, whereas the Bologna area placed more emphasis on the amusement aspects and, sometimes, offered alternative references such as organic production or accents on a development model for the area centered around innovative industry.

## **5. The alternative public spending choices**

We asked our interviewees to evaluate whether it would have been useful, in their opinion, to use the funds (i.e. 4.82 million euro for the year 2007 and 14 million through the 2004-2006 three-year period) in a different, alternative way. In general, no objections to the present funding system were found. As was mentioned previously, constraints, however, were set: a control of the use of chemicals, control of the local retail prices of products with designation of origin, and the maintaining of the traditional crop varieties.

Of course, numerous funding needs were mentioned, especially in the fields of healthcare (for example, to enable the new radiology structures of the hospital of Vignola to function fully), for education and culture, and for environmental protection, but not putting them in opposition with the policies on designations of origin.

## **6. Beyond the concept of economic welfare**

The work presented is still an exploratory study; subsequent stages of theoretical analysis and in-the-field research are necessary.

However, this study first of all shows that a new way to identify a geographic area is possible through a well-organized process of enhancement of food and wine characteristics: in our case reference is made to the territory of the *Strada dei vini e dei sapori "Città Castelli Ciliegi"*.

The survey showed that the relationship between designations of origin and the territory goes beyond the strong characterization of the agricultural sector and is an identifying and balancing element from the economic, health (and environmental) and social standpoints.

Therefore, it is difficult to compare the promotion of the local development through designations of origin with that obtained through other economic tools for territorial development (for instance, the implementation of new agro-food enterprises, and the development of networks of enterprises). While acknowledging the specificity of the reported experience, it would be important to take this specific function of territory development more into account when making decisions at an international level.

By returning to the basic factors (food self-sufficiency, food safety, farmers' guaranteed income, development of rural areas, etc.) on which it was decided to base the European agricultural policy in the 1960s, it would be possible to re-launch, once again, a way of analyzing the interrelationships between designations of origin and the territory that goes beyond the concept of economic welfare.

## References

- Ashenfelter O., Rouse C. (2000), Schooling, Intelligence, and Income in America: Cracks in the Bell Curve, in *Meritocracy and Inequality*, (K. Arrow, S. Durlauf, and S. Bowles eds.), Princeton, NJ, Princeton University Press
- Ashenfelter O., Jurajda Š. (2004), *Cross-Country Comparisons of Wage Rates: The Big Mac Index*, Princeton University, mimeo
- Ashenfelter O. (2008), Predicting the Quality and Price of Bordeaux Wines, *Economic Journal*, volume 118, no. 529, June
- Brigo L., Fiorani L., Gatti S. (1992), Un esempio di distretto agroindustriale: l'attività di trasformazione della carne suina nel modenese, *La Questione Agraria*, no. 45
- Brusco S. (1982), The Emilian Model: Productive Decentralisation and Social Integration, *Cambridge Journal of Economics*, vol. 6, no. 2
- Brusco S. (1979), *Agricoltura ricca e classi sociali*, Milano, Feltrinelli
- European Commission (2008), *Europeans, Agriculture and the Common Agricultural Policy*, Special Eurobarometer 294, Wave 68.2 TNS Opinion and Social
- Fabbri F. (ed) (1979), *Il movimento cooperativo nella storia d'Italia*, Milano, Feltrinelli
- Fanfani R., Pieri R., (eds.) (2008), *Il sistema agroalimentare dell'Emilia-Romagna. Rapporto 2007*, Rimini, Maggioli Editore
- FEDERDOC (2008), *VQPRD d'Italia*, Faenza, Edit Faenza
- Gatti S.(ed.) (2001), *La valorizzazione delle produzioni tipiche: gli itinerari enogastronomici dell'Emilia-Romagna*, Milano, Franco Angeli
- Gatti S. (2003), Wine Economics and its External Effects: The case of Wine Tourism, in *Wine in the Old World, New Risks and Opportunities* (S. Gatti, E. Giraud-Héraud, S. Mili eds.), Milano, Franco Angeli
- Gatti S. (2009), Protected Designation of Origin, Sustainable Development and International Policies: a Survey of DOC Wines from Emilia-Romagna, in *Traditional Food Production and Rural Sustainable Development* (T. de Noronha Vaz, P. Nijkamp and J. L. Rastoin eds.), London, Ashgate
- ISMEA (2008), *Dossier - Il mercato delle DOP e IGP in Italia nel 2007*
- ISTAT (2003), *Stili di vita e condizioni di salute. Indagine multiscopo sulle famiglie "Aspetti della vita quotidiana", Anno 2003*
- Johnson H. (1989), *The Story of Wine*, London, Mitchell Beazley Publishers
- Pigou A.C. (1960), *The Economics of Welfare*, London, Macmillan

Regione Emilia-Romagna (2008), *Bilancio 2008*

Ricardo D. (1951a), On the Principles of Political Economy and Taxation, in Ricardo D., *The Works and Correspondence of David Ricardo*, (ed. P. Sraffa with the collaboration of M. H. Dobb), Cambridge, Cambridge University Press, vol. I

Ricardo D. (1951b), Essay on the Low Price of Corn on the Profits of Stock, in Ricardo D., *The Works and Correspondence of David Ricardo*, (ed. P. Sraffa with the collaboration of M. H. Dobb), Cambridge, Cambridge University Press, vol. IV

Saccani F., Ferrari Amorotti V. (1999), *Il Balsamico della tradizione secolare*, Modena, Artestampa

Sylos Labini P. (1956), *Oligopolio e progresso tecnico*, Bari, Laterza, English ed. *Oligopoly and Technical Progress*, Cambridge, Massachusetts, Harvard University Press, 1962

Sylos Labini P., (1972) Sindacati, inflazione e produttività, Laterza, Bari; English trans. Trade unions, inflation and productivity, Lexington (Mass.), Lexington Books, 1974.

Vianello F. (1976), Introduzione, to Ricardo D., *Sui Principi dell'Economia Politica e della Tassazione*, Milano, ISEDI

Zannoni M. (1999), *Il Parmigiano Reggiano nella storia*, Parma, Silva Editore

Bologna, August 18, 2009