

Silvia Gatti

**SUCCESSFUL PATHS.
DESIGNATIONS
OF ORIGIN, FOOD
AND WINE ITINERARIES,
AND TERRITORIAL
DEVELOPMENT**

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1. SUCCESSFUL PATHS. DESIGNATIONS OF ORIGIN, FOOD AND WINE ITINERARIES, AND TERRITORIAL DEVELOPMENT

by *Silvia Gatti**

1.1. Economic crisis and structural weaknesses

In recent years Italy has had to deal with its most serious economic crisis since the post-WWII years: a crisis that has radically changed its economic and financial structure, as well as its prospects for future development and employment.

Over the course of these difficult years, the Organisation for Economic Co-operation and Development (OECD) has analysed the Italian economic situation, identified the problems, and indicated possible solutions.

In addition to the contingent aspects of the financial crisis, with regard to the economic activity and social living aspects the OECD's Economic Surveys on Italy point to the characteristics of its female labour as one of the country's structural weaknesses: "The female labour force participation rate is among the lowest in the OECD: 54.4% against the OECD average of 62.6% in 2013" (OECD, 2015, p.31). Other factors indicated are low levels of education and acquired skills, and a large gender gap:

While life is already enjoyable for many, especially in terms of work-life balance, some dimensions of well-being rank low relative to other OECD countries [...]. Some of these, such as low scores on education and skills, civic engagement and governance, contribute to the economy's poor performance. Large gender gaps between men and women in terms of well-being, labour-market participation and wages deprive the country of an important source of dynamism (OECD, 2015, p. 26).

Labour market policy improving workers' existing skills and matching them with available jobs needs to be supported by an education system that provides initial knowledge and skills needed in the labour market (OECD, 2015, p. 28).

* University of Bologna.

The OECD also recommends public economic incentives:

Make science, technology and innovation policy more business-oriented and receptive to the varied needs across the whole spectrum of firms, including SMEs. Simplify and rationalise public support for business R&D and innovation, by achieving an appropriate mix of direct and indirect measures. Improve linkages between the business sector, universities and the public research system, including through mobility of researchers, and appropriate intellectual property rights. Foster the creation and growth of start-up firms, by lowering regulatory barriers, simplifying bureaucracy, and supporting the collateralization and securitisation of innovation-related assets (e.g. through adhesion to the European Unitary Patent) (OECD, 2015, p. 46).

In addition, it offers suggestions on boosting innovation:

Simplification of criteria for creating start-ups. 50% tax credit (corporate income tax and regional tax on productive activity) on the R&D expenditure of businesses over the 2014-16 period. Subsidies to digitalisation and technological upgrade of SMEs (vouchers of EUR 10 000). Incentives for self-employment business initiatives: subsidized long-term loans for investments. Tax subsidies to ultra-wide broadband investment beyond that already foreseen (in mid-2014) in service providers' business plans. Tax credit for the hiring of highly qualified professionals, with a research doctorate or a specialised degree in a technical or scientific field, involved in research and development activity. The financial resources available for the tax credit are: EUR 25 million for hiring carried out in 2012; EUR 33.2 million for those in the year 2013; EUR 35.5 million for 2014 and EUR 35.5 million for 2015. Tax deductions for investors in innovative start-ups for 2013-15. Rate of deduction varies from 19% to 27% (OECD, 2015, p. 46).

The OECD also considers the environmental context in which the required structural changes must take place:

In addition to reforms to increase productivity and output, important reforms are needed to reduce losses to living standards through pollution and other environmental damage. The recent OECD Environmental Performance Review has many recommendations in this area, which could both improve environmental outcomes and reduce the associated costs (OECD, 2015, p. 32).

Lastly, in its 2017 Economic Survey the OECD stresses that: “Workers skills are deficient. The early school leaving rate is decreasing yet remains high” (OECD, 2017, p. 13). It focuses on the role played by small firms:

Different factors can explain the large share of small firms in Italy, even if highly productive. For instance, firms' controlling stakes are exempt from inheritance taxes, discouraging equity-share sales to outside investors and entrenching

family ownership (which is often averse to hiring professional managers or adopting modern management practices). Other factors concern difficult access to finance and size-based thresholds of the tax regime and other regulations giving businesses incentives to remain small [...]. The fact that many highly productive SMEs do not grow is at the root of resource misallocation, hindering aggregate productivity growth (OECD, 2017, p. 32).

And finally OECD has to highlight the essential points for a real economic and social growth, emphasizing the need for reforms to boost inclusive and sustainable growth: fighting poverty, working towards an inclusive job market, and better matching of the supply and demand of skills (OECD, 2017, p. 48).

Through the OECD surveys on the Italian economic crisis, it is thus possible to obtain an overall picture of the country's structural weaknesses and possible solutions that may be adopted. It is also possible to review the path of reforms that have involved Italy and obtain an assessment of the effects achieved and the necessary corrections.

1.2. Designations of Origin in the 2000s

In this context, there has been a continuing growth and evolution in the appreciation and promotion of Designation of Origin agro-food productions, and the enogastronomy (food and wine products, culinary traditions and culture) has become one of the cornerstones of the country's tourism strategies.

1.2.1. Results of the 2010 Agriculture Census

The 6th General Agriculture Census in 2010 made it possible to collect information on the structure of farms with certified DOP/PDO (Protected Designation of Origin) and/or IGP/PGI (Protected Geographical Indication) productions. On the basis of this information, Greco, Magliocchi, and Consentino (2012) highlighted some of the peculiarities characterising DOP and IGP farms as of 2010, compared to all farms as a whole. Farms with certified DOP and/or IGP productions have a larger number of younger entrepreneurs (but with fewer women) than the average national figure for all farms, where the average age is higher. These farms are, on average, larger, peaking in the under-40 age bracket, where the average farm size stands at around 33 hectares (over double that registered in the corresponding class for all farms: approximately 13 hectares), also due to the greater recourse to the use of

rented land (20.5% vs 17%). DOP/IGP farms are characterised by a greater recourse to related activities, with particular regard to tourist farms, although worthy of note is also that connected with the production of renewable energy, indicating a greater attention paid to the environment and eco-sustainable development. The larger average size of the farms, together with the greater recourse to related activities, is reflected in the higher average number of work days (on average, almost 544 days, versus the approximate 241 registered on the whole). Greco, Magliocchi, and Consentino (2012) show how the activity connected with DOP/IGP production seems to require a higher level of education and/or specialization than the running of farms in general. As a matter of fact, the farm managers of DOP/IGP farms have, in proportion, higher educational qualifications, and amongst those with university degrees, a large number hold specialisations in agriculture. In addition, the high educational qualifications of the farm managers, together with the particularity of DOP/IGP production, are conducive to the use of both IT instruments for farm management and the Internet, as well as of e-commerce. The larger farm size and greater dynamism of DOP/IGP farms, by their very nature more open to foreign markets, makes their legal status more “structured”. While the presence of individual farms remains prevalent, it is emphasised how the gap compared to the total percentage amounts to almost -13 percentage points, compared to a differential of +11 percentage points for partnership farms (Greco, Magliocchi, and Consentino, 2012).

1.2.2. Food and wine tourism

In a recent report, the Osservatorio Nazionale del Turismo (2017) (National Tourism Observatory) highlights how the growing interest for Italy as a food and wine destination, the excellent perception foreign tourists have of it, the positive sentiment inspired by Italian cuisine, and the increases in spending for food-and-wine holidays are the reasons why the ENIT (Italian National Tourism Board) considers the food and wine sector amongst the main thematic clusters on which to base its medium- and long-term strategy: Italian tourism cannot do without classic “Made in Italy” products, excellent foods and wines, and the food culture in general, to promote its identity and value.

“The food and wine sector is representative of the current trend of considering our country as a slow, experience-based tourism destination, for the discovery and enhancement of less travelled areas, in a spirit of sustainability, nature, traditions, and culture” (Osservatorio Nazionale del Turismo, 2017).

According to the Bank of Italy, over 920,000 foreign travellers visited Italy for a food-and-wine holiday in 2015, an increase of 5.9% over 2014 and 11.6% over 2012. The 1.3 million overnight stays generated marked an increase of 10.4% over 2014 and 34.7% over 2012. The amount spent by foreign visitors for a food-and-wine holiday, totalling 192 million euros in 2015, is indicative of the excellent state of health of the sector, which has been enjoying a considerable growth trend from 2012 up to the present (+54,8%), with an ever-growing impact on the total tourism expenditure of foreign tourists coming to Italy (Osservatorio Nazionale del Turismo, 2017).

According to the Osservatorio Nazionale delle Filiere del Turismo (National Tourism Supply Chains Observatory), Unioncamere-Sicamera data, the food and wine sector is one of the main reasons why both Italian and foreign tourists choose to travel to and in Italy. The “typical” food-and-wine tourist is 50.3% foreign; France, Germany, and the United Kingdom are the main areas of origin of the foreign demand, while Italian tourists mainly come from the regions of Lombardy, Lazio, and Veneto (Osservatorio Nazionale del Turismo, 2017).

Both Italian and foreign tourists state they are very satisfied with their food-and-wine holidays in Italy, which receives a score of 8.1. In particular, foreign tourists have an excellent perception of Italy as a food-and-wine destination, making it rank above countries like France and Spain in that sector. Chinese and U.S. tourists indicate Italy as their only food-and-wine destination. For Germans, Italy ranks first as a destination for a culinary holiday. “Cuisine” is the travel reason that achieves the highest level of satisfaction after “artistic heritage” and “natural beauties”, amongst both foreign and Italian tourists (Osservatorio Nazionale del Turismo, 2017).

1.3. The origins of a successful path

The data of the 2010 Agriculture Census on the structure of farms with certified DOP and IGP productions and the food and wine tourism trend presented by the National Tourism Observatory contrast noticeably with the analyses of the Italian economic situation still being made by the OECD.

Thus one cannot help wonder if there were specific factors in the years preceding the economic crisis that permitted not only a stability in Designation of Origin productions, but also a virtuous evolution of the farming businesses and related activities, in line with the solutions indicated by the OECD to emerge from the crisis.

One of the answers may lie precisely in the effort that has been made in studying the situation of Italian agro-food productions since the 1990s. We must not overlook the important investment in public research contributed by the RAISA (Advanced Research for Innovation in the Agricultural System) “finalized project” of the National Research Council (CNR). At the same time, within the Designation of Origin production situations, the actors have worked dynamically, creating new forms of association (including the *Movimento del Turismo del Vino* (Wine Tourism Movement in 1993) with an important female entrepreneurship, and the *Associazione Nazionale Città del Vino* (National Wine Cities Association) in 1987) and new economic initiative possibilities (for example, wine tourism specifically, and food and wine tourism in general). Rural development programmes from European Union to the Regional Administrations have been able to become a policy focus and financial instrument for consolidating the Designation of Origin production system and promoting new initiatives.

The three papers presented in this volume were written in this context. They are, in chronological order: “A Profile of Wine Tourists in Some Italian Region Vineyards: an Application of the Multiple Correspondence Analysis” in 2004, “The Value of Designations of Origin in Emilia-Romagna” and “Designations of Origin, the Wine Route, and the City. The Results of a Survey Conducted Among the Residents of the City of Bologna”, both in 2009.

“A Profile of Wine Tourists in Some Italian Region Vineyards: an Application of the Multiple Correspondence Analysis”, which presents the results of a survey conducted within the framework of the newly formed Wine Tourism Observatory financed by the National Wine Cities Association, offers a picture of the wine tourism characteristics in the most typically dedicated winemaking areas in the early 2000s. What emerges is a more differentiated situation than that presented today by the National Tourism Observatory (2017), with a considerable presence of tourists (Italian, in particular) not yet prepared for and informed about visits to wine cellars, and a primary role for “professional” tourists belonging to the viticultural sector.

“The Value of Designations of Origin in Emilia-Romagna” and “Designations of Origin, the Wine Route, and the City. The Results of a Survey Conducted Among the Residents of the City of Bologna” summarises the research conducted within the framework of a study financed by the Emilia-Romagna Regional Administration on “The Value of Designation of Origin”. They present two different viewpoints.

The first paper assesses the importance of designations of origin for citizens who live in a Designation of Origin area. Specifically the aim of the study was to assess, through more than 100 interviews with social and

economic representatives of the area, if and how living in a Designation of Origin territory contributes to increasing the welfare of individuals. The study 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.

While the second paper discusses the role played by designations of origin for citizens living in a city close to Designation of Origin areas. Specifically the aim of the study was to investigate the relationships between the population residing in the city of Bologna and the Designation of Origin territory of the *Strada dei Vini e dei Sapori "Città Castelli Ciliegi"* – “Towns, Castles, Cherry Trees” Wine and Flavours Route – between Modena and Bologna through a structured questionnaire broken down into six sections: a) information on the respondent and his or her family, b) knowledge of the territory, c) the value of the territory as a place for recreation, d) the value of the territory as a place of residence, e) the value of the Designation of Origin territory as the place of origin of the certified and to generate welfare, f) the value of the territory for the Bolognese identity and the importance of investing in its development.

“Designations of Origin, the Wine Route, and the City. The Results of a Survey Conducted Among the Residents of the City of Bologna”, shows that the relationship between citizens living in a city close to Designation of Origin areas and the Designation of Origin areas themselves is complex, and the value of the designations of origin is not totally agreed upon by all. They are areas sometimes visited as tourists, and thus interpreted as places for relaxation and recreation, while the sense of belonging and protection varies greatly amongst the individuals interviewed.

In “The Value of Designations of Origin in Emilia-Romagna”, the study highlights the complex relationship bonding the citizens who live in a Designation of Origin area (the territory of the *Strada dei Vini e dei Sapori "Città Castelli Ciliegi"*) with their designations of origin. It is a relationship that goes well beyond the possible economic contribution to an individual’s personal wellbeing and that of his family. The designations of origin are a common good that foster social cohesion, design the landscape, and must make it subject to more environmental controls (as requested by the citizens for their full support of the “project”).

The paper presents the structural characteristics of these territories, which turn out to be close to those recommended by the OECD for overcoming the economic crisis in its 2013, 2015, and 2017 surveys. And it is probably in part thanks to this fact that the designations of origins and their productions and

territories have managed to resist the crisis. The other part is undoubtedly played by a strong stability of foreign demand both for DOP and IGP products, and for food and wine tourism, as already emphasized in paragraph 2. It is a resistance against the crisis which today can still enable the designations of origin to create not only wealth, but also social cohesion and a greater control over the healthfulness and beauty of the Designation of Origin territory.

Lastly, it is important to stress how the papers compiled in this volume have, in this decade at the start of a new century, participated in the process of collective intellectual reflection that has made it possible to take an important step forward in the study of designations of origin. The discussion has gone beyond their treatment as a mere collective mark, instead recovering the overall richness of a “project” which has been both economic and social in nature. It is a “project” that has entailed a historic refinement of production know-how. But, in particular during the post-WWII period, it also brought the creation of new forms of economic and social organisation, often connected to the cooperative movement, by simple farmers or sharecroppers striving to overcome – also in this case – the desolation of the war and its devastation.

References

- Greco M., Magliocchi M.G., Consentino F. (2012), Il 6° Censimento generale dell'agricoltura fotografa la struttura delle aziende DOP e IGP, in ISTAT, *Agricoltura di qualità: i numeri di un settore in evoluzione, convegno*, Rome September 18, 2012, <https://www.istat.it/it/archivio/69701>, last access November 24, 2017.
- OECD (2013), *OECD Economic Surveys: Italy 2013*, OECD Publishing, Paris.
- OECD (2015), *OECD Economic Surveys: Italy 2015*, OECD Publishing, Paris.
- OECD (2017), *OECD Economic Surveys: Italy 2017*, OECD Publishing, Paris.
- Osservatorio Nazionale del Turismo (eds.) (2017), Il Turismo Enogastronomico in Italia, in *Presentazione dell'accordo di collaborazione ENIT e FICO Eataly World*, Rome, February 15, 2017, http://www.enit.it/images/stories/comunicati-stampa/turismo%20enogastronomico_cartella%20stampa-2.pdf, last access November 24, 2017.

2. A PROFILE OF WINE TOURISTS IN SOME ITALIAN REGION VINEYARDS: AN APPLICATION OF THE MULTIPLE CORRESPONDENCE ANALYSIS

by *Silvia Gatti**

2.1. The National Body on Wine Tourism

Wine tourism is a relatively recent phenomenon for Italy and in a state of continual growth and requires further study by means of instruments of direct research¹. In 2000, the National Body on Wine Tourism, organized in Italy by the Associazione Nazionale Città del Vino, in collaboration with the Department of Statistics of the University of Bologna undertook research that centred on the characteristics of wine tourists and wine tourism industries (Gatti, 2002). It distributed questionnaires right in the wine areas, involving 43 Italian wine-tourism locations and wine routes and the highly recognized Italian Denominazioni d'Origine Controllata (Protected Denomination of Origin) areas which had already been organized and defined in 2000. Only 25 of these areas took part in the survey, demonstrating a marked difference between the most organized and advanced areas and those where the wine tourism phenomenon is still a spontaneous activity. Of these, 6 are in the southern regions, 19 in the northern and central regions (tab. 1). Altogether 263 questionnaires relating to the characteristics, opinions and attitudes of the wine tourists that visit wine-producing regions, have been handed in.

The results of this survey are presented in this paper.

* University of Bologna. I would like to thank Federico Maroni for research assistance. The paper was presented on May 22nd, 2004 at the Vineyard Data Quantification Society [www.vdqs.net] Symposium No. XI” and was awarded the “The Vérone d’Oenométrie-Domini Veneti Prize”.

¹ A direct research on wine tourism in Italy has been made, in particular, by Antonioli Corigliano (1996). For an analysis of international experiences see Vandecandelaere (2003).

2.2. The survey on the characteristics, habits and opinions of wine tourists who visit wine-producing farms

The questionnaire for the wine tourists visiting the wine-producing farms was prepared in four languages (Italian, German, English and French) and divided into 4 distinct sections (see appendix 1). The first has social-demographic type of information on wine tourists; the second and the third sections deal with means of travel and the procedure of the visit to the winery; the fourth and last section concentrates on the expectations and evaluations of the visitors (ISTAT, 1989).

From the responses to the questionnaires, it can be deduced that 79.1% of those submitted in wine-producing farms were filled in and collected in the wine routes of Tuscany.

An analysis of the 263 collected questionnaires of the wine tourists in wine-making farms proved that 23 were not useful, since they gave generic answers.

The results of the research proved the need for greater in-depth work to reach a higher level of involvement throughout the areas within the research remit. The data collected cannot represent a synthesis on wine tourism in Italy, but nevertheless can be one of the first systematic efforts at gathering information on the wine routes. The commentary on the results of the survey on the habits, opinions and characteristics of wine tourists must therefore be considered as an indication of the trend of a phenomenon that will be undergoing further investigation.

2.3. The results

One of the problems of an information-collection procedure that is not strictly structured is the possibility of receiving questionnaires from homogeneous groups of visitors (example, organized groups, visitors to cantine aperte/open cellar days², etc.). In relation to the research on wine tourists in wine-producing farms, it can be said that, using certain questions such as the means of transport used to reach the wine cellar, the date of compilation of the questionnaire, in overall terms, was not concentrated on the open cellar days. As regards the composition of the groups, a balanced representation can be noted, for while all the areas gave out

² Cantine Aperte (Open Cellar Days) are organized annually in Italy by the "Movimento del Turismo" at the last weekend of May.

questionnaires to people who arrived in the cellars as part of an organized tour, these were all well-matched with other types of wine tourists.

Those that filled in the questionnaire were mainly male (62.1%) and the majority were foreigners (59.2% altogether, with 63.7% females and 56.4% males), and predominantly young people. 7.1% of the respondents were below 25 years of age, the age modal class was between 26 and 35 years with 26.3%, and 25.8% between 36 and 45 years, 25% between 46 and 55 years and 13.3% over 56 years of age. Overall the women were younger than the men: 47.2% were below 35 years, in comparison with the figure of 24.9% of males. 84.6% of the men and 74.7% of the women were working, with 59.5% of the men and 64.7% of the women as employees. The men were mostly white collar workers (50.7%) or in the managerial staff (44%). Majority of the women were managers (45.5%) and white collar workers (43.2%). The men who were working on own were predominantly entrepreneurs (54.9%) and professionals (37.2%). Calculated on the respondings, the women who were working on own were chiefly professionals (69.6%) and entrepreneurs (30.4%). 18.8% of the men and 13.2% of the women's work was related to the wine industry. 95% of them declaring a direct connection to the wine, of which 54.2% undertake wine related commerce (enoteca, hotel and restaurant owners...). It can therefore be concluded that "professional" wine tourists make up 10.8% of the survey, concentrating on the whole on the wine routes of the Maremann hills.

Among the 3 main reasons given for visiting the region were "scenery", "art", "wine" and "gastronomy". For the men, as well as for the women, the first reason for the visit was the scenery (39.1% for the men and 42.8% for the women). The second motivation for the trip in general was the typical local gastronomy (42.3% of the male and 40.2% of the female respondents). The third reason was the wine (55.8% of the male and 56.7% of the female respondents). Wine, in particular, attained the greatest figure on the sum of the three main motivations of the men (31.4%), while women prioritised, before wine (25.6%), the scenery (27.2%). The wine tourists who answered question 6 organized their trip independently (71.6% of the men and 73.9% of the women), the second most popular means was through tourist agencies and tour operators (19.6% of the men and 19.3% of the women) or with the help of friends (answer "others"), above all for the men (8.9%). The wine tourists that responded travel on the whole in couples or in groups (35.6% of the men and 38.5% of the women travel in couples, 32.9% of the men and 31.9% of the women in groups). Around half of them requested information on wine and gastronomic routes, with the men (33.3%) asking mainly in the enotecas and the women principally in the wine routes' welcome offices and tourist offices with the women (24.3%

respectively). Of those that requested information, the 81,7% gave an evaluation of the grade of satisfaction; 66% gave marks from 8 to 10, with only 11.7% from 5 and under marks. The visits to the vineyards, generally is an excursion (49.8%) during a journey or a holiday. Overnight stays were mainly in a hotel (44.2% of the males and 33.8% of the women answering the question), or in agritourist place (19.2% of the males and 35.4% of the females) or in rented houses (11.7% and 16.2%). A third of them found promotional material on the wine and gastronomic routes at their accommodation (43.8% of the males and 49.3% of the females).

Specifically relating to the wine producing farm, the wine tourists received information mainly through specialized guides (38.5% of the first answer for the men and 35.1% for the women) or friends (24.8% of the first answers for the men and 18.7% of the women). Notably important also are the options not on the list and summarized in the answer “other” (23.9% of the men and 17.6% of the women). This answer reveal indications received from associations of sommeliers and from restaurant owners, with the discovery of the wine producing farm often by chance while travelling through the region. One third of the wine tourists had to book their visit directly through the wineries themselves. They reached their destination mainly by car (88.5% of the men and 78.1% of the women), while 8.8% of the men and 14.1% of the women used bus transport. Difficulties in reaching their destinations were not noted. 60.4% of the men and 54.7% of the women that responded to the question (89.2% of the total) found specific tourist indications relating to the wine routes. More than half of the wine tourists that responded to the questionnaire have had previous experience of wine tourism (63.2% of the male and 48.9% of the female respondents). On the whole, this experience has been in Italy and particularly in Tuscany (21.6%), in Piemonte (12.7%) and in the Veneto (9.9%). Abroad, the USA provided the highest experience with 12.7%, France with 8.4% and Germany 8.0%. This experience predominantly took place during a holiday period (52.7%) and for 30.8% of the cases, during work periods. Of a lesser significance (14.9%) came the experience during daily excursions.

The majority of the wine tourists intended to visit the wine producing farm for wine-tasting (80.5% of the first answers of the men and 71.8% of the women) and partly also to buy them (9.3% of the first answers of the men and 14.1% of the women, 60.9% of the second answers of the men and 45.9% of the women), with other aspects of little import that were not linked to wine. The wine tourists above all hoped to get to know the wine producer (78.2% of the men and 79.5% of the women that responded to the question put it as their primary expectation). They also expected to visit the wine cellars (12.6% and 7.9% of the men and women, respectively, that answered the question wrote it

down as their primary expectation, 40.5% of the men and 52.7% of the women that gave the second choice put it down as their second motivation and 21.2% of the men and 23.6% of the women that gave the third choice as their third objective, they also hoped to get to meet the producer (35.5% and 25.7% of the men and women, respectively, who made the second choice) and visit the vineyards (25.2% of the men and 16.4% of the women that made the third choice) and sample the wines for free (33.3% and 32.7% of the men and women, respectively, that made the third choice). All in all, 88.7% of those that answered the questionnaire responded to the question about the level of satisfaction with the various essential tourist items that are offered by the wine producing farms. This centred, most of all, on the quality of the wine, the kind of reception, technical explanations of the wine, tasting procedure and possible cost of tasting. The opinion polled is widely positive for those elements directly linked to wine and slightly less enthusiastic on complementary services: catering, sport and relaxation, camper-van facilities. Positive results prevailed on 87.4% and 86.1% of the men and women respectively that answered question 20, intending to buy typical local produce from the wine producing farm, but above all, wine (94.8% and 93% of the men and women respondents, respectively), but on a small quantity (71.6% of the men and 81.8% of the women respondents). Almost all the wine tourists that replied to the questionnaire planned to repeat the experience.

2.4. Data analysis

The descriptive analysis of the results of the direct research as a whole has shown various notable characteristics of the typology of the wine tourists.

A more articulate information on the results of the research in the wine-producing farms might be gleaned by an application of the multiple correspondence analysis that allow the identification of a synthetic profile of wine tourists that responded to the survey, by an elaborated formulation of the results of the filled in questionnaire.

2.5. Multiple correspondence analysis (MCA)

The multiple correspondence analysis can be defined as a multidimensional factorial analysis that supplies synthetic representations of great matrixes of data (Benzecri, 1973; 1980). For certain mathematical

properties and as a result of the abundance of exercisable options, the multiple correspondence analysis is a tool for:

- synthetic and rational representations of data, inasmuch as the limited amount of the dimensions on which the observations are represented gives an immediate picture of the relationships among the variables;
- critical evaluation of data, by means of the identification of anomalous data, the enforcement of a value rather than not entering any data, the replacement of content by the loophole procedure (“Other”, “I don’t know”, “Indifferent”, etc.);
- the drawing up of synthetic indices;
- getting rid of irrelevant information.

Because the MCA allows the information gathered to be studied for both its quantitative as well as its qualitative characteristics, this technique is more prevalent in the analysis of questionnaires.

The MCA, however, faces certain problems:

- the results are strongly dependent on the samples analysed and on anomalous cases which, if not identified, affect the variables, as a result of the symmetry of the analysed whole;
- the elucidation of the same results through the interpretation of the graph must necessarily be completed by understanding the significance of the contributions;
- the analysis by inference is almost completely subordinated to descriptive analysis.

The MCA is therefore a particularly useful tool in defining a primary overview of the situation on the fundamental relationships existing in a large body of information, being careful of avoiding generalizations. With this viewpoint the MCA has been applied to data collected from questionnaires distributed to wine tourists in wine-producing farms.

2.6. The application of the method

The first stage of the analysis has been to identify the active variables that directly determine the axes and the illustrative variables that are projected on the axes, once these have been determined and have a purely descriptive function.

Among the active variables, those relating to social-demographics were included, so with variables that were more directly linked to the motivations and the organisation of the visit and the level of satisfaction of the services

offered by the wineries. The illustrative ones include all those variables relating to the second and third responses to questions that provided for an arrangement of the procedures in order of time or of preference.

Table 2 shows the first 20 eigenvalues in diminishing order, reassessed inertia according to the Benzecri formula and cumulated reassessed inertia. The first 5 factorial axes helped to explain around 62.7% of the system variables that are of generally satisfactory levels for an understanding of the characteristics of the studied phenomenon. The graphic analysis of the first and second factors is limited (See graph 1).

2.7. Interpretation of the first factorial axis: Not belonging to the sector – Belonging to the sector

2.7.1. The “professional” tourist (Belonging to the sector)

The absolute contributions most relevant in determining the first axis have been the procedures relating to variables linked to working aspects of individuals:

- “profession relating to vineyard activities” (4.6% absolute contribution);
- “previous experience for work” (3.2%).

The first axis shows opposing behaviour between individuals whose work is somehow connected in some ways to vineyard activities and those who do not in any way belong to such sector.

On the positive semi-axis, in fact, are those who seem to have a privileged access to offered services, who have received information from vineyard associations and specialised magazines, besides from restaurants and broaden one’s experience even with visits to other cellars. Besides, these people seem to be characterized as being self-employed and belong to the entrepreneur class. They have booked and organized the visit themselves:

- “self-employed” (2% absolute contribution);
- “role: entrepreneur” (2.6%);
- “wine/restaurant associations as sources of information” (2.4%);
- “visits to other cellars” (1.4%);
- “booking of the visit” (1.5%).

Those “belonging to the sector” group know in advance the wine quality and the formalities of wine tasting, purchase wine during the visit, assign high ratings (9 and 10) to their satisfaction of the type of reception and catering.

They are not indifferent to the purchase of typical food products and are disappointed if such services are not offered:

- “to know the wine product as motivation to make the trip” (1.1% absolute contribution);
- “to purchase typical wine-food products as motivation to make the visit” (0.9%);
- “unmet expectations of typical products or sale” (1.1%);
- “10 point satisfaction rating to catering” (0.7%);
- “10 points satisfaction rating to manner of catering” (1.3%);
- “9 points satisfaction rating to reception” (1%);
- “9 points satisfaction rating to wine quality” (1.1%).

2.7.2. The tourist not belonging to the wine sector

On the first negative semi-axis are placed those whose visit is not related to the wine business.

It is not their first experience, but as has been in the past, they included the visit in their holiday activities. They make their visit by car and their interest in the arts is the main motivation that made them undertake such a trip. They are interested in purchasing wine, although in moderate quantity. They are characteristically employees, but with managerial functions.

The conditions that brought the greatest contributions in determining the first axis, with negative coordinates are in fact:

- “profession not related to vineyard activities” (0.8% absolute contribution);
- “employee workers” (1.1%);
- “travel by car” (1.8%);
- “art-motivated travel” (0.8%);
- “wine-purchase-motivated visit” (1.6%);
- “wine bought from 1 to 12 bottles” (2.2%).

The areas that principally contributed to the determination of the axes are:

- “the Maremman hills” (7.5% absolute contribution, positive semi-axis);
- “Montepulciano” (2.1%, negative semi-axis).

2.8. Interpretation of the second factorial axis: the enthusiastic – the uninterested

2.8.1. The enthusiastic tourist

Amongst the variables that weigh most heavily in the determination of the second axis, that which seems to have a major discriminant power, relates to the information on a past experience connected to wine tourism (independent from the fact that the tourist's profession is closely or not, relating to the wine-industry sector):

- “identical experience already had in the past (1.2% absolute contribution)
- “a similar experience never had in the past” (0.8%).

The enthusiastic tourists who come from abroad and repeatedly visit the wine producing areas, whether for work or for pleasure, are placed on the negative part of this axis. They are very keen on demonstrating such an interest in the wine quality and remain enthusiastic about it. They book their sojourn right in the agro-tourist place or in similar accommodation near wine cellars. They ask information during their trip and, satisfied with requests granted, they would want even more informative materials at the place of the overnight stay to consult with.

The factors that primarily contribute in determining the negative semi-axis are:

- “coming from the USA” (0.7% absolute contribution);
- “emanating from Germany” (0.3%);
- “work-related experience in the past” (0.9%);
- “holiday experience in the past” (1.2%);
- “previous experience in France” (0.9%);
- “sojourn in agro-tourist place” 0.9%);
- “distance ranging from 21 to 50 kms. between accommodation and wine cellar” (1.5%);
- 10 points satisfaction rating with the quality of wine (0.7%);
- “requested information during the trip” (1.2%);
- “10 points satisfaction rating for information received” (0.7%).

2.8.2. The indifferent tourist

Conversely, on the positive semi-axis are the tourists who seem uninterested in visiting wine cellars. It shows this, among others, the

high contributions of the modality “not answer” to the questions which had asked them to assign points to assess the quality of the services offered by the wine producing farm (these modalities have very high positives coordinates). Moreover, for these tourists, such an experience is first ever. There is a lack of involvement on their part, mentioning other more important reasons for their excursion than visiting a wine producing farm. These mainly are Italian (students and pensioners), who go through long distances of even over 100 kilometres to get to a wine cellar and at times are met with some difficulties and yet are not inclined to ask information about directions.

The features with the highest contributions on the positive semi-axis are:

- “reason for the visit: other” (0.7% absolute contribution);
- “coming from Italy” (1.5%);
- “professional student” (1%);
- “occupation pensioner” (0.7%);
- “age bracket below 20 years” (1.1%);
- “101 to 200 kilometre distance between residence and winery” (1.8%);
- “difficulty in reaching winery” (0.9%);
- “request for information not made” (0.7%).

In this case, the one and only Verdicchio wine route has an absolute contribution (1.1%) relevant in determining the factor and is placed on the positive semi-axis.

2.9. It takes all kinds of tourists

The application of technical statistics in the analysis of data derived from results of motivation research on wine tourism, without claiming total representation, showed evidences of variations of behavioural attitudes among wine tourists.

To summarize, there are the enthusiastic tourists belonging to the wine sector, very much keen on wine tourism and all that comes with it; those not pertaining to the sector, but anyhow involved, and on a good professional level, interested in the purchase of wine and in the arts. Lastly, there is the tourist by chance, young Italian and pensioners alike, who have had no previous experience in wine tourism and whose reason for the visit was not closely linked to the wine or the wine territory.

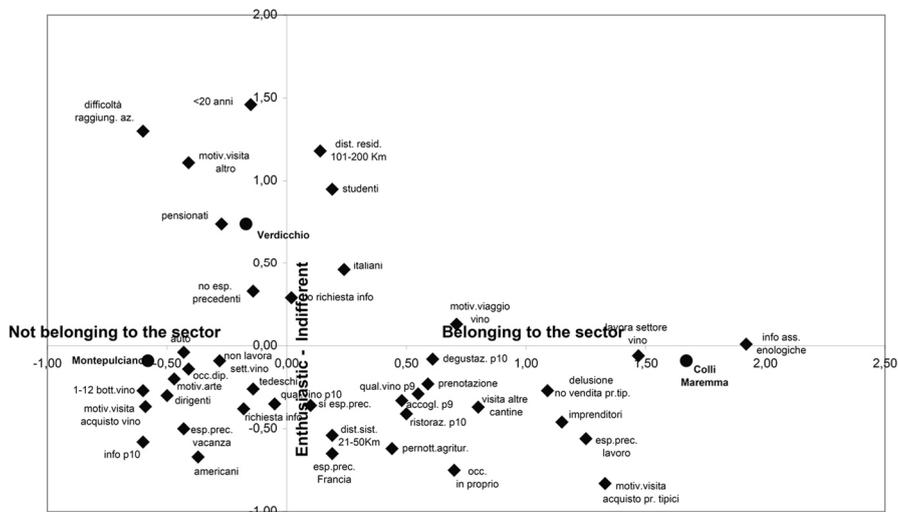
Table 1 – National Body on Wine Tourism: areas involved in the direct survey

Wine Tourism Areas	Region
Donnas	Valle d'Aosta
Langhe	Piemonte
Oltrepò Pavese	Lombardia
Franciacorta	Lombardia
Garda (Lom.)	Lombardia
Vallagarina	Trentino Alto Adige
Collio	Friuli Venezia Giulia
Colli Berici	Veneto
Colli Bolognesi	Emilia-Romagna
Montepulciano	Toscana
Colline Lucchesi	Toscana
San Gimignano	Toscana
Colline Pisane	Toscana
Candia e Lunigiana	Toscana
Colli Maremma	Toscana
Montespertoli	Toscana
Costa Etruschi	Toscana
Verdicchio	Marche
Biferno	Molise
Castelli Romani	Lazio
Taurasi	Campania
Aglianico	Basilicata
Salento	Puglia
Marsala	Sicilia
Alcamo	Sicilia

Table 2 – MCA: eigenvalues, reassessed inertia and accumulated reassessed inertia

	Eigenvalues	Reassessed Inertia	Accumulated reassessed inertia
1	0,1726	0,279358	0,279358
2	0,1259	0,132790	0,412148
3	0,1050	0,084649	0,496797
4	0,1019	0,078428	0,575225
5	0,0874	0,052480	0,627705
6	0,0849	0,048531	0,676236
7	0,0796	0,040671	0,716907
8	0,0725	0,031228	0,748135
9	0,0684	0,026343	0,774478
10	0,0651	0,022712	0,797190
11	0,0625	0,020041	0,817231
12	0,0616	0,019156	0,836387
13	0,0602	0,017818	0,854205
14	0,0580	0,015813	0,870018
15	0,0564	0,014431	0,884449
16	0,0535	0,012086	0,896535
17	0,0509	0,010160	0,906695
18	0,0501	0,009601	0,916296
19	0,0487	0,008661	0,924957
20	0,0472	0,007707	0,932664

Graf. 1 – MCA. Representation of the first two axes



References

- Antonioli Corigliano M. (1996), *Enoturismo: caratteristiche della domanda, strategia di offerta e aspetti territoriali e ambientali*, FrancoAngeli, Milano.
- Benzecri J.P. (1973), *L'Analyse des Données*, Dunod, Paris.
- Benzecri J.P. (1980), *L'Analyse des Correspondences*, Dunod, Paris.
- Gatti S. (ed.) (2002), *Secondo rapporto annuale sul turismo del vino*, Associazione Nazionale Città del Vino, Siena.
- ISTAT (1989), *Manuale di tecniche di indagine*, Roma.
- Vandecandelaere E. (2003), Les "Routes des Vins": des réseaux territoriaux pour valoriser le vin au travers de son territoire. Les cas du Languedoc Roussillon, de Mendoza et du Western Cape, *Eurovin – Etudes*, n. 3.

Appendix 1. Questionnaire

A SURVEY OF CHARACTERISTICS, HABITS AND OPINIONS OF WINE TOURISTS

QUESTIONNAIRE to be proposed to WINE TOURISTS visiting a winery

Area code Winery code Date

Part 1 – The wine tourist's personal data

1. Sex M F

2. Age

3. Origin city country

4. Professional status:

working

in search of work

housewife

student

retired

other (please specify:)

4.1. If you are working please specify your professional condition: em-
ployee

working on your own

4.1.1. If you are an employee please specify your function:

manager/director

clerk

worker

apprentice

- 4.1.2. If you are working on your own account please specify your role: en-
 trepreneur
 professional
 craftsman
 assistant

4.2. Is your work related to wine-production?
 YES NO

4.2.1. If so, how?

Part 2 – The particular features of your trip or excursion

5. Please choose 3 points in order of importance from the list below to explain the main reasons for your visiting this area:

- art
- landscape
- local gastronomy
- wine
- craftsmanship
- local cultural events
- (please specify:)
- others (please specify:)

6. How did you plan your trip?
 by yourself
 travel agency
 through the wine-route reception
 other (please specify:.....)

7. With whom are you travelling?
 alone
 couple
 family (or parts of the family)
 group
 please specify number of persons

8. Did you ask for information on wine and gastronomy? YES NO

8.1. If so, where did you ask?

- wine-route reception
- tourist-office
- restaurants, hotels
- museums
- wine-cellars
- others (please specify:)

8.2. If you asked for information please indicate your satisfaction regarding the answers you were given using a number between 1 and 10.

9. Your stay in this winery is part of:

- a day-trip
- a holiday of days
- a trip during which you will visit other wine-cellars
- other (please specify:)

9.1. If you are on a day-trip please specify when it started:

- in the morning
- in the afternoon

9.2. If you are on a day-trip please indicate how far away you live from this winery: km

9.3. If you are spending the night out, please specify the final destination of your trip:

- the area surrounding this house
- a different area
- home

9.4. Where you are spending the night?

- in this house
- hotel
- agritourism
- bed & breakfast
- house of your own/friend's house
- rented flat
- camping
- other (please specify:.....)

9.5. What is the distance from this winery to where you are staying overnight? km

9.6. Did you find any informative material (posters, booklets, etc.) about wine and gastronomy in the place you stay in?
YES NO

Part 3 – The particular features of your stay in this house

10. How did you know about this house?

- specialized guides
- tv/press
- wine route informative materials
- tourist-information offices
- travel-agencies
- friends
- wine-route receptio
- web-sites (please name:)
- others (please specify:)

11. Did you need to book your stay ? YES NO

11.1. If so, where?

- directly in this house
- through wine-route reception
- others (please indicate:)

12. What means of transport did you use to reach this place?

- car
- motorcycle
- camper
- train
- bus
- bicycle
- other (please specify:)

13. Did you find it difficult to reach this house? YES NO

13.1. If so, where?

- public transport unsatisfactory or not available
- roads insufficient or not available
- street signs insufficient or not available
- others (please specify:)

14. Did you find specific wine-tourism street-signs on the road?

YES NO

14.1. If so, did you find them helpful to reach the winery (1 to 10)?

15. Do you have any previous experience in wine-tourism?

YES NO

16. If so, where did you have the experience?

- 1. zone..... country
- 2. zone..... country
- 3. zone..... country
-

16.1. On which occasion? experiences

- work 1. 2. 3.
- holiday 1. 2. 3.
- excursion 1. 2. 3.
- else (please specify:) 1. 2. 3.

Part 4 – Expectations and evaluation of your stay in this house

17. Please choose in order of importance 3 points from the list below to explain the main reasons for your stay in this house:

- wine tasting
- buying wine
- artistic aspects
- food
- seminares, meetings, conventions
- (please specify subjects:)
- possibility to buy typical local products other than wine
- sports- and leisure-facilities
- camper-services
- other (please specify:)

18. What did you expect this house would offer, as far as wine is concerned? (3 answers possible)
- get to know the wines produced
 - get to know the producer
 - visit the cellars
 - visit the vineyards
 - visit wine-museums and/or wine-exhibitions
 - consult an expert on the technical aspects of wine-making
 - paid-for wine tasting
 - free wine tasting
 - others (please specify:.....)

19. To what degree (1 to 10) are you satisfied with the following features offered by the house you visited?

- wine quality
- hospitality
- technical explanation of wine-making
- wine tasting
- eventual price of wine tasting
- food quality
- quality of sports- and leisure-facilities
- quality of camper services

20. What else would you have liked to be offered during your stay in this house? (Please specify a maximum of 3 wishes in order of importance)

- 1.
- 2.
- 3.

21. Do you intend to buy wine or other local gastronomic products in this house?

YES NO

21.1. If so, what?

- wine
- typical food products (please specify:)
- typical gastronomic specialties (please specify:)
- others (please specify:)

21.1.1. If you wish to buy wine in this house please quantity:

- 1 – 12 bottles
- more than 12 bottles
- 1 demijohn
- more than 1 demijohn
- other (please specify:)

22. Do you think you might repeat this kind of trip connected to wine culture? YES NO

3. THE VALUE OF DESIGNATIONS OF ORIGIN IN EMILIA-ROMAGNA*

by *Silvia Gatti***

3.1. 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).

* To Dr. Giovanni Cheli and Dr. Cristina Pagani with love and gratitude. Please accept my apologies for any mistakes that might have been overlooked.

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Ricardo's labour theory of value made it possible – both in the early 19th 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).

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 labour 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 labour 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).

3.2. Context: Designation of origin and citizens

3.2.1. 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 FEDER-DOC 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 2003¹), i.e. approximately 1.9 billion euro out of a total of more than 5.1 billion euro (ISMEA, 2008)².

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

¹ The drop is due to the strong increase in the commercialization of the *Mela (Apple) della Val di Non DOP* (Fanfani, Pieri, 2008).

² 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).

the years and arrived, in 2007, at 66% of the total production, broken down as follows: 26% DOCs, DOCGs, 40% IGTs (Fanfani, Pieri, 2008).

Table 1 – DOPs and IGP 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, Salami italiani alla cacciatoria IGP, Mortadella di Bologna IGP, Zampone di Modena IGP, Cotichino 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 Nectarina (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, Pieri (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, Forli 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

3.2.2. 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 IGP, 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).

3.2.3. *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

products³ 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 grants⁴.

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 Ciliegi”* (“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 area⁵.

3.3. The territory of the Strada dei Vini e dei Sapori “Città Castelli Ciliegi”

3.3.1. “La Strada” (The Route)

The *Strada dei Vini e dei Sapori “Città Castelli Ciliegi”* originates from a previous experience – connected, in particular, with the EU/LIFE project – which was known by the same name⁶.

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

³ 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).

⁴ 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).

⁵ 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”.

⁶ For a previous analysis of the Wine Routes see Gatti (2001) and Gatti (2003).

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 Cilegi"* 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).

Table 3 – Types of members of the *Strada dei vini e dei sapori "Città Castelli Cilegi"* (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
TOTAL	186

Source: Strada dei Vini e dei Sapori "Città Castelli Cilegi"

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.

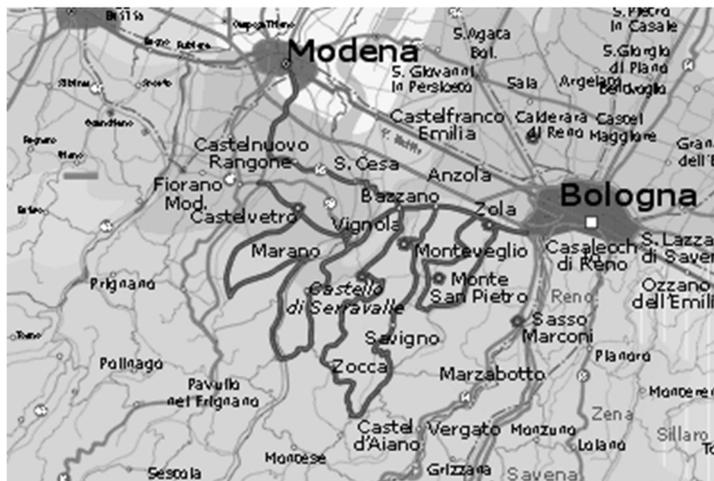
The farmers' unions and consortia for the protection of typical local products – with the exception of the *Consorzio dei Colli Bolognesi* – did not join the "*Strada*". This is rather odd, if one considers that the "*Strada*" has a very strong potential impact on the various production phases of the 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 (5⁷), 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 "acetate" (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) 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

⁷ 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.

3.3.2. 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 Geographic Indications (*Zampone di Modena IGP*, *Cotechino di Modena IGP*, *Mortadella di Bologna IGP*), 1 proposal of Protected Geographic Indication (*Ciliegia di Vignola*), 2 Traditional Agro-food Products (PT) (*Crescentine fritte PT*, *Tigelle modenese 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</i> (Cherry) <i>di Vignola</i> (which are soon to become an IGP)
[05] <i>Parmigiano Reggiano DOP</i> (Parmesan Cheese)
[06] <i>Prosciutto</i> (Ham) <i>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 modenese PT</i>
[14] <i>Torta Barozzi</i> (Barozzi cake)

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 20th 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 dairies⁸ 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 territory⁹.

3.4. Features of the territory and population in the *Strada*

3.4.1. 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.

The municipalities in the “*Città Castelli Ciliegi*” 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.

⁸ Johnson, himself, in his *The Story of Wine* of 1989, mentions the Lambrusco of Emilia and the Cantine Cooperative Riunite of Reggio Emilia.

⁹ 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).

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).

Table 5 – Total resident population in the “Città Castelli Cilegi” 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
TOTAL	180,861	197,207
TOTAL IN THE PROVINCE OF MODENA	604,680	633,993
TOTAL IN THE PROVINCE OF BOLOGNA	906,856	915,225
TOTAL IN THE EMILIA-ROMAGNA REGION	3,909,512	3,983,346

Source: ISTAT – Census of Population and Dwellings

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%), Serramazzone (26.81%), Castello di Serravalle (43.42%), Monte San Pietro (35.84%).

The incidence of the youngest population (0 to 14 years of age) in municipalities in the “*Città Castelli Ciliégi*” 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)¹⁰.

Table 6 – Youngsters 0-14 years old 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	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
TOTAL	11.65	12.45
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

¹⁰ 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.

In the “*Città Castelli Ciliégi*” 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 7 – Population 65 and over 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	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
TOTAL	18.92	20.82
TOTAL IN THE PROVINCE OF MODENA	20.57	22.71
TOTAL IN THE PROVINCE OF BOLOGNA	19.37	21.44
TOTAL IN THE EMILIA-ROMAGNA REGION	19.58	22.42

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 Ciliégi*” 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).

Table 8 – Working-age population 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	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
TOTAL	69.43	66.73
TOTAL IN THE PROVINCE OF MODENA	67.01	64.97
TOTAL IN THE PROVINCE OF BOLOGNA	69.02	66.33
TOTAL IN THE EMILIA-ROMAGNA REGION	68.96	65.97

Source: ISTAT – Census of Population and Dwellings

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

The percentage of women of childbearing age in the “*Città Castelli Cilięi*” 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 Serramazzoni 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 9 – Women of childbearing age (15-50 years) in the “Città Castelli Cilięi” 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
TOTAL	48.11	45.93
TOTAL IN THE PROVINCE OF MODENA	45.31	44.62
TOTAL IN THE PROVINCE OF BOLOGNA	47.38	45.18
TOTAL IN THE EMILIA-ROMAGNA REGION	46.49	44.05

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 Ciliégi*” 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).

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
TOTAL	12.84	19.63
TOTAL IN THE PROVINCE OF MODENA	11.60	18.30
TOTAL IN THE PROVINCE OF BOLOGNA	12.87	19.83
TOTAL IN THE EMILIA-ROMAGNA REGION	15.32	21.66

Source: ISTAT – Census of Population and Dwellings

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).

Table 11 – University graduates 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	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
TOTAL	2.39	4.49
TOTAL IN THE PROVINCE OF MODENA	1.91	3.44
TOTAL IN THE PROVINCE OF BOLOGNA	2.30	4.38
TOTAL IN THE EMILIA-ROMAGNA REGION	4.00	6.57

Source: ISTAT – Census of Population and Dwellings

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%.

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 12 – Activity rates of the total population in the territory “Città Castelli Cilegi” 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
TOTAL	49.12	48.86
TOTAL IN THE PROVINCE OF MODENA	47.14	47.47
TOTAL IN THE PROVINCE OF BOLOGNA	48.36	48.22
TOTAL IN THE EMILIA-ROMAGNA REGION	46.37	46.56

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).

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
TOTAL	5.21	3.35
TOTAL IN THE PROVINCE OF MODENA	5.72	3.82
TOTAL IN THE PROVINCE OF BOLOGNA	5.65	3.48
TOTAL IN THE EMILIA-ROMAGNA REGION	7.3	4.21

Source: ISTAT – Census of Population and Dwellings

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 Serramazzoni, 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.

People employed in the “*Città Castelli Cilegi*” 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).

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
TOTAL	37.89	31.05
TOTAL IN THE PROVINCE OF MODENA	40.09	32.50
TOTAL IN THE PROVINCE OF BOLOGNA	34.71	28.84
TOTAL IN THE EMILIA-ROMAGNA REGION	35.74	29.91

Source: ISTAT – Census of Population and Dwellings

Table 15 – Employees 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	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
TOTAL	62.11	68.95
TOTAL IN THE PROVINCE OF MODENA	59.91	67.50
TOTAL IN THE PROVINCE OF BOLOGNA	65.29	71.16
TOTAL IN THE EMILIA-ROMAGNA REGION	64.26	70.09

Source: ISTAT – Census of Population and Dwellings

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
TOTAL	9.76	5.76
TOTAL IN THE PROVINCE OF MODENA	12.38	7.29
TOTAL IN THE PROVINCE OF BOLOGNA	9.25	5.73
TOTAL IN THE EMILIA-ROMAGNA REGION	8.05	5.96

Source: ISTAT – Census of Population and Dwellings

Table 17 – People employed in the industrial sector 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	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
TOTAL	44.25	44.80
TOTAL IN THE PROVINCE OF MODENA	47.33	48.68
TOTAL IN THE PROVINCE OF BOLOGNA	42.14	41.26
TOTAL IN THE EMILIA-ROMAGNA REGION	38.02	37.66

Source: ISTAT – Census of Population and Dwellings

Table 18 – People employed in the commercial 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	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
TOTAL	30.27	31.03
TOTAL IN THE PROVINCE OF MODENA	25.69	27.71
TOTAL IN THE PROVINCE OF BOLOGNA	31.50	32.63
TOTAL IN THE EMILIA-ROMAGNA REGION	33.21	33.44

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
TOTAL	15.72	18.41
TOTAL IN THE PROVINCE OF MODENA	14.59	16.33
TOTAL IN THE PROVINCE OF BOLOGNA	17.10	20.39
TOTAL IN THE EMILIA-ROMAGNA REGION	20.71	22.94

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
TOTAL	1,451	8,178
TOTAL IN THE PROVINCE OF MODENA	6,438	27,560
TOTAL IN THE PROVINCE OF BOLOGNA	6,521	32,203
TOTAL IN THE EMILIA-ROMAGNA REGION	28,762	135,453

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 Ciliegi” 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
TOTAL	0.89	4.62
TOTAL IN THE PROVINCE OF MODENA	0.86	4.02
TOTAL IN THE PROVINCE OF BOLOGNA	0.65	3.95
TOTAL IN THE EMILIA-ROMAGNA REGION	0.74	3.40

Source: ISTAT – Census of Population and Dwellings

The immigration into the “Città Castelli Ciliegi” 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.

3.4.2. *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).

Table 22 – UAA in the “Città Castelli Cilegi” territory (ha) by municipality and UAA class (absolute value) – Year 2000

Municipality	UAA Class										100 and over	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		
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
CRESPPELLANO	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
TOTAL	0	503.9	1,233.75	1,590.25	3,731.49	7,217.46	8,445.78	4,653.71	5,396.39	4,868.36	4,640.45	42,281.54
TOTAL IN THE PROVINCE OF MODENA	0	1,074.80	2,935.55	4,009.49	9,020.24	19,773.36	25,702.74	16,383.01	18,519.41	19,389.97	20,238.29	137,046.86
TOTAL IN THE PROVINCE OF BOLOGNA	0	1,224.10	3,228.91	4,176.01	10,045.72	24,083.86	34,504.35	19,386.68	23,658.65	24,871.34	41,877.17	187,056.79
TOTAL IN THE EMILIA-ROMAGNA REGION	0	8,739.04	20,780.08	26,231.90	60,079.08	144,424.84	206,134.52	130,197.71	154,706.74	159,058.74	205,027.19	1,115,379.8

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

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 Cilegi” 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 23 – Number of farms in the “Città Castelli Cilegi” 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 RAN- GONE	2	14	16	14	37	24	13	8	4	4	-	136
CASTELVETRODI 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
PAVULLONEL 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 SER- RAVALLE	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
SASSOMARCONI	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
ZOLAPREDOSA	3	79	33	24	28	55	25	7	7	1	1	263
TOTAL	120	967	863	660	971	1045	614	194	138	70	27	5,669
TOTAL IN THE PROVINCE OF MODENA	361	2,118	2,039	1,651	2,326	2,806	1,855	677	484	286	108	14,711
TOTAL IN THE PROVINCE OF BOLOGNA	612	2,387	2,282	1,731	2,600	3,432	2,491	798	621	365	177	17,496
TOTAL IN THE EMILIA- ROMAGNAREGION	1,999	17,084	14,578	10,794	15,519	20,427	14,794	5,362	4,064	2,354	913	107,888

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

Table 24 – Average age of farmers in the “Città Castelli Ciliégi” 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
TOTAL	56.22	58.86	61.55
TOTAL IN THE PROVINCE OF MODENA	57.49	59.45	60.94
TOTAL IN THE PROVINCE OF BOLOGNA	57.17	58.83	61.14
TOTAL IN THE EMILIA-ROMAGNA REGION	57.3	59.04	60.18

Source: ISTAT – Census of Agriculture

Table 25 – Total days of work in agriculture in the “Città Castelli Ciliègi” 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
TOTAL	2,916,017	2,052,862	1,345,715
TOTAL IN THE PROVINCE OF MODENA	7,687,968	5,297,986	3,692,240
TOTAL IN THE PROVINCE OF BOLOGNA	8,523,305	5,646,538	3,547,847
TOTAL IN THE EMILIA-ROMAGNA REGION	54,689,831	38,283,447	25,817,860

Source: ISTAT – Census of Agriculture

3.4.2.1. Crops

In the “Città Castelli Ciliègi” 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 Ciliégi*” 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 Ciliégi*” 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
TOTAL	3,989	3,517	2,588
TOTAL IN THE PROVINCE OF MODENA	6,431	5,197	4,288
TOTAL IN THE PROVINCE OF BOLOGNA	8,698	8,036	5,695
TOTAL IN THE EMILIA-ROMAGNA REGION	43,984	41,108	30,500

Source: ISTAT – Census of Agriculture

Table 27 – Orchard areas (ha) in the “Città Castelli Cilegi” 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
CRESPELLANO	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
TOTAL	5,071.44	5,290.72	4,253.94
TOTAL IN THE PROVINCE OF MODENA	10,958.00	11,576.71	11,452.03
TOTAL IN THE PROVINCE OF BOLOGNA	19,757.18	20,018.27	14,339.24
TOTAL IN THE EMILIA-ROMAGNA REGION	100,014.41	108,758.82	85,973.86

Source: ISTAT – Census of Agriculture

There are 2,361 vineyards in the “Città Castelli Cilegi” 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).

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
TOTAL	4,538	3,424	2,361
TOTAL IN THE PROVINCE OF MODENA	12,499	8,733	5,918
TOTAL IN THE PROVINCE OF BOLOGNA	13,625	9,435	6,023
TOTAL IN THE EMILIA-ROMAGNA REGION	95,922	67,531	44,444

Source: ISTAT – Census of Agriculture

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.

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
CRESPPELLANO	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
TOTAL	3,740.33	3,242.20	2,875.78
TOTAL IN THE PROVINCE OF MODENA	11,796.70	8,896.40	8,106.17
TOTAL IN THE PROVINCE OF BOLOGNA	11,790.95	9,263.21	7,722.16
TOTAL IN THE EMILIA-ROMAGNA REGION	85,607.30	67,622.46	60,013.11

Source: ISTAT – Census of Agriculture

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).

Table 30 – DOC/DOCG wine grape vineyard farms in the “Città Castelli Cilegi” 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
TOTAL	655	691	810
TOTAL IN THE PROVINCE OF MODENA	3,424	3,028	2,857
TOTAL IN THE PROVINCE OF BOLOGNA	859	1,191	1,312
TOTAL IN THE EMILIA-ROMAGNA REGION	9,351	10,674	11,110

Source: ISTAT – Census of Agriculture

DOC and DOCG wine grape vineyards in the “Città Castelli Cilegi” 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 31 – DOC/DOCG wine grape vineyard areas (ha) in the “Città Castelli Ciliégi” 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
TOTAL	919.73	1184.98	1500.05
TOTAL IN THE PROVINCE OF MODENA	4,184.84	3,549.77	4,165.88
TOTAL IN THE PROVINCE OF BOLOGNA	2,286.13	2,486.52	3,319.65
TOTAL IN THE EMILIA-ROMAGNA REGION	17,238.23	20,075.46	24,633.40

Source: ISTAT – Census of Agriculture

3.4.2.2. Livestock

In the “Città Castelli Ciliégi” 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).

Table 32 – Cattle in the “Città Castelli Cilegi” 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
TOTAL	63,474	55,988	40,578
TOTAL IN THE PROVINCE OF MODENA	183,517	157,248	109,232
TOTAL IN THE PROVINCE OF BOLOGNA	108,663	68,542	41,776
TOTAL IN THE EMILIA-ROMAGNA REGION	1,060,339	871,425	621,748

Source: ISTAT – Census of Agriculture

These include 18,402 dairy cows (45.35% of the cattle in the “*Città Castelli Cilegi*” 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).

Table 33 – Dairy cows ≥ 2 years in the “*Città Castelli Cilegi*” 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
TOTAL	24,378	25,348	18,402
TOTAL IN THE PROVINCE OF MODENA	70,785	71,840	50,674
TOTAL IN THE PROVINCE OF BOLOGNA	30,342	22,338	13,385
TOTAL IN THE EMILIA-ROMAGNA REGION	378,034	374,436	274,606

Source: ISTAT – Census of Agriculture

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 34 – Farms with cattle in the “Città Castelli Ciliégi” 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
TOTAL	2,723	1,694	845
TOTAL IN THE PROVINCE OF MODENA	7,232	4,404	2,160
TOTAL IN THE PROVINCE OF BOLOGNA	4,832	2,642	1,320
TOTAL IN THE EMILIA-ROMAGNA REGION	40,548	23,986	11,960

Source: ISTAT – Census of Agriculture

The 2000 Agriculture Census counted 78,132 head of pigs in the “*Città Castelli Ciligè*” 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).

Table 35 – Pigs in the “*Città Castelli Ciligè*” 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
TOTAL	148,001	93,849	78,132
TOTAL IN THE PROVINCE OF MODENA	721,173	564,202	491,646
TOTAL IN THE PROVINCE OF BOLOGNA	137,983	85,219	63,072
TOTAL IN THE EMILIA-ROMAGNA REGION	14,798,283	5,754,435	2,442,294

Source: ISTAT – Census of Agriculture

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 36 – Farms with pigs in the “Città Castelli Ciliégi” 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
TOTAL	1269	477	220
TOTAL IN THE PROVINCE OF MODENA	2,727	1,082	484
TOTAL IN THE PROVINCE OF BOLOGNA	5,388	2,118	920
TOTAL IN THE EMILIA-ROMAGNA REGION	27,772	11,091	4,521

Source: ISTAT – Census of Agriculture

3.4.3. A summary of the characteristics of the “*Città Castelli Ciliégi*” territory

In conclusion, analyzing the Census data, the “*Città Castelli Ciliégi*” 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 Ciliégi*” 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 Ciliégi*” 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 Ciliègi*” territory is the traditional production basis for obtaining the *Prosciutto di Modena DOP* as well as other IGP cold cuts.

3.5. 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 Ciliègi*” 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.

3.5.1. 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)¹¹.

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 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

¹¹ 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).

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.

3.5.2. 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 interviews¹² 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 regard to both nature protection, and relationships between designations and the nature and food education

¹² They often contributed to this work with enthusiasm, and to them go my sincere thanks.

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.

3.5.3. *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*.

3.5.3.1. 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 consumers¹³; they also demand alternative market proposals that enable direct contact between agricultural producers, small transformation enterprises and consumers.

3.5.3.2. 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 origin¹⁴.

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

¹³ 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).

¹⁴ 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).

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*.

3.5.3.3. 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)¹⁵.

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

¹⁵ At the economic level the agro-food districts in this area had a similar role (Brigo, Fiorani, Gatti, 1992).

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 productions¹⁶.

3.6. 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.

3.7. 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.

¹⁶ 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, Ciliégi*” 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.

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 Ciliégi"*.

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. (2008), Predicting the Quality and Price of Bordeaux Wines, *Economic Journal*, vol. 118, no. 529, June.
- Ashenfelter O., Jurajda Š. (2004), *Cross-Country Comparisons of Wage Rates: The Big Mac Index*, Princeton University, mimeo
- 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.
- 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. (1979), *Agricoltura ricca e classi sociali*, Milano, Feltrinelli.
- Brusco S. (1982), The Emilian Model: Productive Decentralisation and Social Integration, *Cambridge Journal of Economics*, vol. 6, no. 2.
- European Commission (2008), *Europeans, Agriculture and the Common Agricultural Policy*, Special Eurobarometer 294, Wave 68.2 TNS Opinion and Social.
- Fabrizi 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. (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, FrancoAngeli.
- 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.
- Gatti S. (ed.) (2001), *La valorizzazione delle produzioni tipiche: gli itinerari enogastronomici dell'Emilia-Romagna*, Milano, FrancoAngeli.
- 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 (Mass.), 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.

4. DESIGNATIONS OF ORIGIN, THE WINE ROUTE, AND THE CITY. THE RESULTS OF A SURVEY CONDUCTED AMONG THE RESIDENTS OF THE CITY OF BOLOGNA

by *Silvia Gatti**

4.1. Introduction

Within the framework of the research on the Value of Designations of Origin in Emilia-Romagna¹, the second phase of the direct study² focused on understanding the ties between this “*Città, Castelli, Ciliegi*” (Cities, Castles, Cherry Trees) Designation of Origin Territory, the Wine and Flavours Route organized on it, and the populations of the cities around it.

In particular, the study focused on the connection with the city of Bologna: the largest city in the Emilia-Romagna region, its administrative centre, the seat of one of the most important Italian universities with 80,000 students enrolled, and the seat of a major trade fair centre. Around it a rich economic fabric has developed, particularly concentrated in the mechanics and agro-food sectors. It is a city, as we will see, of complex socioeconomic and demographic dynamics.

The territory we analysed arrives up to the city limits and has always existed in continuous osmosis with the city (fig. 1). In the original intentions of

* University of Bologna. I would like to thank Davide Colla for research assistance. A wider version of the paper was presented on May 22nd, 2009 at the Vineyard Data Quantification Society [www.vdqs.net] Symposium No. XVI”.

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² The first phase of the research on the Designations of Origin for the citizens living there produced the paper “The Value of Designations of Origin in Emilia-Romagna” presented in 2008 at Enometrics XV in Collioure (Gatti, 2008).

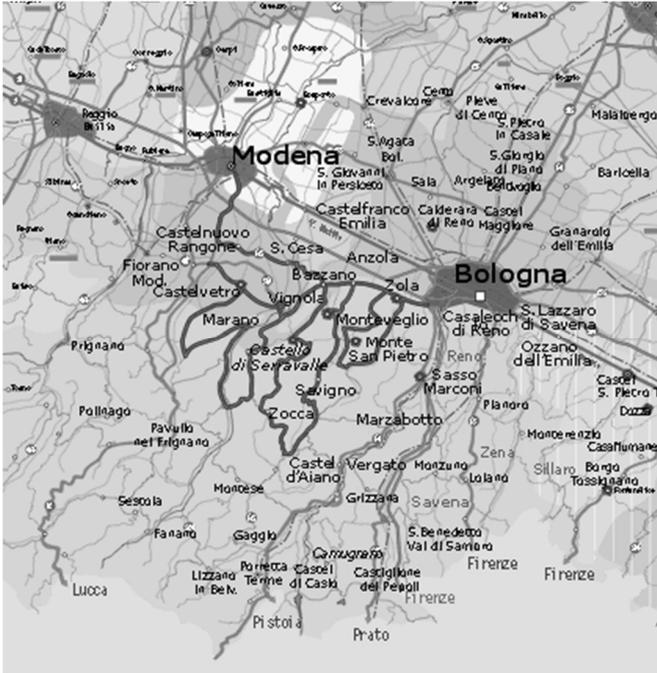
the first environmental promotion projects, this mostly hilly territory between Modena and Bologna was to serve, first of all, as a peri-urban belt for the city's environmental and recreational needs [Nijkamp, Mills (1987); Cavailhès, Peeters, Sekeris, Thisse (2003), Natali (2002)]. The development of the "*Città, Castelli, Ciliégi*" Wine and Flavours Route in 1999 probably completed this plan with a particular attention to Designation of Origin agro-food products, attracting a large number of food and wine tourists from other areas and honing the possibilities for exploiting the belt.

During the contacts with the Designation of Origin "*Città, Castelli, Ciliégi*" territory and with those in charge of the Route, it had emerged how the Route, with its headquarters in the town of Vignola, had found some difficulty working with Bologna. There is still no office in the city, no shops for marketing the Route's products. The officials of the Emilia-Romagna region wondered about this lost opportunity and the starting point for the drafting of the questionnaire for the population living in Bologna was the idea of "measuring" the level of proximity between the Route and the city.

In concrete terms, the questionnaire also offered the opportunity to investigate the complex view Bolognese citizens have of this territory, and to attempt to understand what value it holds for them, analysing how they use it for their leisure time, what value it has in the residential choices they make for themselves and their families, and what value they attribute to the relationship between this territory and Designation of Origin products.

The project consists of an initial presentation of the questionnaire submitted to a sample group of 200 citizens residing in the city of Bologna and the results obtained. It ends with the results of the application of the multiple correspondence analysis of the data from the questionnaires.

Figure 1 – Bologna city and the “Città, Castelli, Ciliegi” territory



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

4.2. The questionnaire

The questionnaire investigating the relationships between the population residing in the city of Bologna and the Designation of Origin territory of the “Città, Castelli, Ciliegi” Wine and Flavours Route is broken down into six sections: a) information on the respondent and his or her family, b) knowledge of the territory, c) the value of the territory as a place for recreation, d) the value of the territory as a place of residence, e) the value of the Designation of Origin territory as the place of origin of the certified and to generate welfare, f) the value of the territory for the Bolognese identity and the importance of investing in its development.

The first section contains the questions on gender, age, educational level, job, number of family members, its make-up, and the number of children younger than 15 years of age.

The second section investigates the knowledge of the “Città, Castelli, Ciliegi” Wine and Flavours Route, the knowledge of how many towns make

it up, and if and why the interviewee has ever been to one or more of the towns in the provinces of Bologna and Modena making up the Route.

The third section seeks, through a detailed battery of questions, to define the areas of the Route's territory where the Bolognese population's recreational activities are concentrated, the frequency of their yearly use for recreation, the periods preferred for recreational activities in that territory, the means of transport used and mobility difficulties encountered, the recreational activities they engaged in there, what kinds of overnight stays they had arranged, if any, the aspects of the territory they preferred and, if the interviewees had never been in that territory for recreation, the reasons why, and what might inspire them to go there.

The fourth section investigates the residential function of the "*Città, Castelli, Ciliégi*" territory for Bolognese citizens, asking whether the interviewee has ever lived in any of the territory's towns and, if so, for what reasons, and then why he later moved; if he has never lived there, it is asked if he would like to go live in the territory and, if so, because of which aspects of the territory.

The fifth section – highlighting how this territory is characterized by the production of numerous typical local products with Designation of Origin, Geographic Indication, etc. – looks into the Bolognese citizens' knowledge of these products and the link with the territory, how they perceive the differentiation of these products from common ones, and the level of confidence and trust in the Designation of Origin certification. Lastly, referring to the work on the value of the designations for the citizens of the "*Città, Castelli, Ciliégi*" territory (Gatti, 2008), this section evaluates how much Bologna's residents agree with the statement that the presence of Designations of Origin in the "*Città, Castelli, Ciliégi*" territory contributes to economic welfare, environmental protection and conservation, and social cohesion.

The last section investigates the opinion of residents of the city of Bologna concerning the integration into the city's identity and the importance of investing in the protection and development of the "*Città, Castelli, Ciliégi*" territory.

4.3. The sample group interviewed

The questionnaire was submitted by telephone to a sample of 200 persons, representing the population resident in the municipality of Bologna, between

September and October 2006, with the support of the MeDeC³, which has been using polls to study the opinions and behaviours of the Bolognese population for years.

Of the total 930 telephone contacts made, 288 persons refused to take part in the survey either because they were uninterested or wary, or because they felt they would not be able to answer.

To take into account the possible differences in attitude among the resident population with regard to the “*Città, Castelli, Ciliégi*” territory, situated to the west of the city of Bologna, the sample group was split evenly between the city’s eastern and western parts (101 interviewees in the East Bologna area and 99 interviewees in the West Bologna area).

Following the characteristics of the resident population, the sample group structure is made up of 48.5% males and 51.5% females. The structure by age range has 14.5% of the interviewees in the 18-to-29-year age range, 33.0% between 30 and 44 years, 27.0% between 45 and 59 years, and 25.5% of the interviewees between 60 and 74 years of age.

20.0% of the interviewees hold a degree or university diploma, 37.5% hold a high school diploma, 13.5% have a vocational school diploma, 20.5% have a middle school certificate, 7.5% finished elementary school, and 1.0% do not answer.

10.0% of those interviewed are self-employed, 46.5% are employed, 8.0% are students, 7.5% are homemakers, 25.5% are retired, 2.0% are unemployed, and 0.5% do not answer.

Of those who are self-employed, 5.0% are entrepreneurs, 5.0% are craftsmen or unpaid family helpers, 5.0% are farmers, 80.0% are freelance professionals, and 5.0% carry on another type of self-employed work, for example as a sales agent, representative, etc.

Of those who are employed, 3.2% are middle, elementary, or nursery school teachers, 4.3% have middle management or management positions,

³ The Centro Demoscopico Metropolitano (MeDeC: Metropolitan Opinion Polling Centre) is a structure that conducts polls on the population’s opinions and behaviours, which is used by the Province of Bologna. Since 1997 it has been carrying on analysis and research activities, on commission from local institutions (Municipalities, Provinces, Regions) and semi-public companies. It is a totally new instrument in the public administration panorama, proving to be very useful at the local government level for acquiring in real time information on the opinions of the citizens governed: from their approval of the planning of new infrastructure, to the degree of their satisfaction with public services such as day care centres, schools, and municipal offices. The Centre also makes it possible to survey the local economic and productive situation, thus contributing to providing administrations with information useful for their governing activities.

32.3% are civil servants, 47.3% are white-collar employees of private companies, and 12.9% are blue-collar workers in industry and the service sector.

With regard to the family, 18.5% of the cases consist of just a single family member, 36.5% have two members, 27.5% have three members, 15.0% have four members, and 2.5% have five members. The average number of members is 2.46 per household.

In 39.3% of the cases the family is made up of a couple without children and possible other cohabitants, in 49.1% there is a couple with children and possible other members, in 6.7% there is a single parent with children and possible other cohabitants, in 4.3% there are individuals living together who are related, and in 0.6% of the cases there are individuals living together who are not related.

In 66.3% of the cases, in the interviewee's family there are no children under 15 years of age, in 23.8% of the cases there is one, in 7.9% of the cases there are two, in 1.0% of the cases there are three, and 1.0% of the interviewees did not answer this question.

4.4. Results

This paragraph is devoted to the analysis of the body of answers to the questionnaire on the relationship of the Bolognese with the “*Città, Castelli, Ciliégi*” Wine and Flavours Route territory given by all those interviewed, without differentiations by gender, age, education, etc. The differentiations by groups will be analysed effectively in the following paragraph by using a specific data analysis method: multiple correspondence analysis.

4.4.1. Knowledge of the Designation of Origin territory

Therefore, as a whole, the sample group of 200 citizens residing in the city of Bologna and representing the total resident population answered the first question of the questionnaire on the relationships between the Bolognese citizens and the “*Città, Castelli, Ciliégi*” Wine and Flavours Route territory concerning their knowledge of the Route as follows: 49.5% are not familiar with the Route, 39.0% have heard about it, and 11.5% know it well.

The second question (asked only of those who know the territory: 101 interviewees out of 200), on the knowledge of the towns that are part of the Route, reveals that the most well-known town is Vignola (32.7%), followed by Bazzano (25.7%), Monteveglio (14.9%), Savigno (13.9%), Monte San

Pietro (9.9%), Zola Predosa (8.9%), and Castello di Serravalle (6.9%). Below the 5% mark are all the other towns along the Route, i.e.: Crespellano (4.0%), Sasso Marconi (3.0%), Vergato (1.0%), Castelnuovo Rangone (1.0%), Castelvetro di Modena (3.0%), Marano sul Panaro (1.0%), Pavullo nel Frignano (3.0%), Savignano sul Panaro (5.0%), Serramazzoni (2.0%) Spilamberto (1.0%), and Zocca (4.0%). But 46.5% of the interviewees indicate no particular town, and 2.0% indicate all of them. Therefore, in substance, only one fourth of the sample group of 200 Bolognese citizens has some notion of what the Route's territory is like. The most well-known towns are mainly those of the province of Bologna that hold the major events connected with their typical local products (Table 1).

Table 1 – The knowledge of the towns belonging to the Wine and Flavours Route territory (do not read)

	Total %	
Do you know which towns belong to the Wine and Flavours Route territory? (do not read)	Bazzano	25.7
	Castello di Serravalle	6.9
	Crespellano	4.0
	Monte San Pietro	9.9
	Monteveglia	14.9
	Sasso Marconi	3.0
	Savigno	13.9
	Vergato	1.0
	Zola Predosa	8.9
	Castelnuovo Rangone	1.0
	Castelvetro di Modena	3.0
	Marano sul Panaro	1.0
	Pavullo nel Frignano	3.0
	Savignano sul Panaro	5.0
	Serramazzoni	2.0
	Spilamberto	1.0
	Vignola	32.7
	Zocca	4.0
	Does not indicate any town	46.5
	Indicates all towns	2.0
Total	Cases 101	

When the question about the knowledge of the territory is asked separately from the Route and the towns are listed, much more positive data on their frequentation and knowledge of the territory emerge. 8 towns out of 19 have been visited by more than 70% of the interviewees (all 200): Bazzano (75.0%), Monte San Pietro (75.0%), Monteveglio (71.0%), Sasso Marconi (94.5%), Vergato (71.5%), Zola Predosa (86.0%), Vignola (84.5%), and Zocca (75.5%). In this case, also, they are mostly towns of the province of Bologna. The other towns show, in any case, fairly high percentages: Tizzano di Casalecchio⁴ (44.0%), Castello di Serravalle (52.5%), Crespellano (68.0%), Savigno (66.0%), Castelvetro di Modena (23.0%), Marano sul Panaro (26.0%), Pavullo nel Frignano (49.5%), Savignano sul Panaro (37.5%), Serramazzoni (23.0%), and Spilamberto (43.0%). Only for the town of Castelnuovo Rangone, one of the Route's most active towns, a truly low percentage of interviewees have visited its territory (15.0%).

If the fact of having actually been to the town's territory is added to its general familiarity among the interviewees, with the exception of Castelnuovo Rangone, and Castelvetro di Modena (other important town of the Route), all the towns have a "fame factor" of over 60%.

4.4.2. The value of the Designation of Origin territory as a place for recreation

The 199 interviewees who have been to at least one of the Route's towns were then asked if they had also gone for recreation. With the exception of the 11.6% that state they have never gone for recreation and the 1.5% who don't remember, the other 86.9% answered "yes". The most frequent visits are to the towns of Vignola (65.3%), Sasso Marconi (62.3%), Zocca (54.8%), Bazzano (54.3%), Monte San Pietro (52.3%), Zola Predosa (49.7%), Monteveglio (45.7%), and Vergato and Savigno (43.2% for each). In short, these are the same towns that were the most frequently visited, with the exception of Savigno (which hosts the truffle festival in the fall!).

The frequency of visits for recreation during the past year for 36.4% of the 173 interviewees who visited the towns of the Route's territory is low (1

⁴ Only the locality of Tizzano was included in the questionnaire, since it is the part of the large municipality of Casalecchio most involved in the Route, thus avoiding the inclusion in the questionnaire of a town right next to the city of Bologna with numerous functions and reasons for being frequented, which would have caused great distortion in the answers.

to 2 times), for 34.7% it fluctuates between 3 and 10 times. 14.5% of the 173 interviewees state they have not been to those towns for recreation in the past year.

The favourite period is spring, with 52.0% of the preferences, followed by summer (34.7%) and then autumn (27.2%). Winter is not a preferential season for visiting these towns for recreation, while 21.4% of those interviewed state that they have no preferences, seemingly indicating that the ways they relax and engage in recreation are more detached from the climatic characteristics of the territory.

The means of transport used to reach the Route's towns, including for recreation, is almost always the private car (97.7%). The train is used by 1.7% of those interviewed, 2.3% go by rented car, 3.5% go by public bus, 2.9% by motorcycle or scooter, and 2.3% by bicycle.

90.8% of those interviewed state they have never had any problems reaching the Route's towns when they went for recreation; when they rarely did encounter problems, these were due to intense traffic (80.0%) and bumpy roads (13.3%).

The recreation-related reasons for which the interviewees visited the Route's towns are mainly to take part in festivals, events, etc. (67.1%), to purchase and eat local products in restaurants, holiday farms, and shops (50.3%), to take walks or go bike riding (45.7%), to visit friends and relatives (42.2%), to breathe some "good" air (18.5%), to hunt for or pick mushrooms, chestnuts, cherries, truffles, or other (17.9%), for picnics and trips to the country (13.3%), for vacation stays (5,8%), and to go hunting and fishing (4.0%) (Table 2).

Thus, the strongest motivation seems to be connected with traditional recreation and the consumption or purchase of typical products; indicating a link with the Designation of Origin territory which it seems, however, the interviewees do not recognize. Another reason not to be overlooked is that of personal care and fitness.

Table 2 – The recreational reasons for having been to the towns of the “Città, Castelli, Ciliegi” territory

		Total %
In particular, for what recreational reasons have you been to these towns of the “Città, Castelli, Ciliegi” territory?	to breathe good air	18.5
	vacation stays	5.8
	hunting and fishing	4.0
	walking-biking	45.7
	hunting/picking of mushrooms, chestnuts, cherries, truffles, other	17.9
	purchase and consumption of typical local products in restaurants, holiday farms, shops	50.3
	picnics, trips to the country	13.3
	festivals, events, etc.	67.1
	visiting friends/relatives	42.2
	other	3.5
	don't know	0.6
Total	Cases	173

Rarely do the interviewees stay overnight on the territory (92.5% never do) and 5.2% do so in their own vacation homes, while only 2.3% stay in accommodation structures.

The aspects of the territory most enjoyed by the interviewees representing the Bolognese resident population are: the presence of greenery and nature (58.4%), typical local products, food and wine (45.7%), festivals, sports and various amusements (40.5%), peace and tranquillity (38.2%), historic centres and towns (36.4%), and then – with a significant gap – hotels, restaurants, and holiday farms (12.7%), environmental protection (11.0%), climate (10.4%), and lifestyle (6.9%).

The 23 interviewees who had never been to the Route’s towns for recreation were asked for what reasons, other than recreation, they had visited at least one of these towns. 39.1% went for business, 30.4% to purchase goods or services, 21.7% to care for relatives or elderly persons, and 8.7% do not remember.

The latter respondents have never visited the Route’s territory for recreation because they have never thought of it or haven’t had the chance (77.3%); much lower percentages show a preference for other country and hilly areas immersed in nature (27.3%) and for the city (13.6%).

36.4% of the interviewees who have been to the Route's towns, but never for recreation, have no intention to go there even if they can request improvements. 27.3% think they might be tempted to go there in their leisure time if events or festivals were organized, and 22.7% might be interested by more information on the places. Moreover, with lower percentages, other reasons might inspire the interviewees (actually not very many: fewer than 10%) who haven't gone there to start to frequent these places: more sports facilities and more parks, including those with playgrounds for children (13.6% both). Only 9.1% feel that an improvement of the road system and traffic might encourage them to go to the Route's towns for recreation, and only 4.5% would like an upgrading of public transport and accommodation structures (restaurants and holiday farms).

Nevertheless, this continues to be a territory that the Bolognese citizens intend to visit for brief trips with their own car.

4.4.3. The value of the Designation of Origin territory as a place of residence

94.0% of the interviewees have never lived in one or more towns of the “*Città, Castelli, Ciliégi*” territory. Those few who have (12 interviewees) come mainly from the towns in the area of Bologna (Castello di Serravalle, Crespellano, Monteveglio, Sasso Marconi, Zola Predosa), even though three towns near Modena also appear: Pavullo nel Frignano (mountain), Savignano sul Panaro, and Zocca (mountain). They were mainly born there (50%) and left mostly for work (50%) and family reasons (marriage, family unification, divorce) (41.7%), to have a more comfortable home (16.7%), to be closer to friends and relatives (8.3%), or to live on their own (8.3%), or to be able to get more recreational facilities and sports (8.3%).

Of those who have never lived in those towns, 81.8% would not like to go live there, but 11.8% of the interviewees residing in Bologna would like to go live in those towns now or in the future, and 5.9% would have liked to in the past.

The main reasons that lead, or have led, people to want to go to one of the towns of the “*Città, Castelli, Ciliégi*” territory (or perhaps the hilly part of it closest to Bologna) are above all the presence of greenery and nature (51.5%), more peace and tranquillity (48.5%), less traffic (48.5%), better lifestyle (30.3%) and, to a much lesser extent, homes that are more comfortable and suitable for family needs (12.1%) (Table 3).

Table 3 – The aspects of the “Città, Castelli, Ciliégi” territory for which to go live there

		Total %
For which aspects of the “Città, Castelli, Ciliégi” territory would you like to go live there? (do not read)	less expensive living	3.0
	less traffic	48.5
	homes more comfortable and suitable for family needs	12.1
	fewer social conflicts	6.1
	better lifestyle	30.3
	more tranquillity, silence, peace	48.5
	better interpersonal relationships	3.0
	presence of greenery and nature	51.5
	beauty of historic centres and towns	6.1
	climate	9.1
	they're close to the city	9.1
	other	3.0
	Total	Cases

4.4.4. The value of the Designation of Origin territory as a place of origin of certified products

In the section devoted to the relationship between the Route’s territory, meant as a Designation of Origin territory that has generated a particular way of producing agro-food products (involving all the area’s natural characteristics⁵, economic and social, historic and cultural capacities and know-how), and the Bolognese citizens, it emerges how moving away from this territory

⁵ In particular for the role played by the climatic characteristics of the territories of origin of wines see Ashenfelter (2008).

even by a few kilometres toward Bologna⁶ this sense of Designation of Origin territory fades⁷.

The interviewees are generally not familiar with the Typical and DOC, DOP, and IGP products of the “*Città, Castelli, Ciliégi*” territory. Without the products being listed for them, 45% of them remember the *Ciliegia di Vignola* (cherry) and almost nothing more: 6% remember the *Colli Bolognesi* DOC wines, 6% remember the *Tigelle* PT, 4.5% remember *Parmigiano Reggiano* DOP, 4.5% remember *Lambrusco Grasparossa di Castelvetro* DOC wine, 4.0% remember the *Tartufo di Savigno* (truffle), and 3.0% the *Patata di Tolè* (potato). *Aceto Balsamico Tradizionale di Modena* DOP (Traditional Balsamic Vinegar of Modena DOP) is remembered by 3.5% of the interviewees (7 persons out of 200!), and *Prosciutto di Modena* DOP (0.5%), *Zampone di Modena* IGP (1.0%), *Cotechino di Modena* IGP (1.0%), and even *Mortadella di Bologna* IGP (0.5%) are practically totally overlooked (Table 4).

Once the products are listed, the interviewees remember, generally with high percentages, having heard of all the products produced along the Route. But we will never know if the memory becomes attached to the identity of our Designation of Origin territory.

The products remembered after having been listed⁸ are *Crescentine* PT (93.5%), *Tigelle* PT (90.0%), *Aceto Balsamico Tradizionale di Modena* DOP (89.5%), *Parmigiano Reggiano* DOP (88.5%), *Mortadella di Bologna* IGP (84.0%), and *Colli Bolognesi* DOC wines (75.0%), while *Lambrusco Grasparossa di Castelvetro* DOC wine only reaches 49.5%, after *Patata di Tolè* (66.0%) and *Tartufo di Savigno* (51.0%) (Table 5).

⁶ And thus from the Designation of Origin territory part that had already shown a values system less centred on the designations of origin (Gatti, 2008).

⁷ On value of Designation of Origin information for consumers inside and outside the country of origin see (Basoche, Combris, Giraud-Héraud, 2009).

⁸ Of course, the products spontaneously remembered by the interviewee are not listed for him. This explains the relatively low figure for *Ciliegia di Vignola*, at 55.5%.

Table 4 – Knowledge of typical local products with designation of origin (DOC and DOP) and geographic indication (IGP) of the “Città, Castelli, Cilieg” territory (do not read)

	Total %	
We have said that the “Città, Castelli, Cilieg” territory is characterized by the production of typical local products with designation of origin (DOC and DOP) and geographic indication (IGP). Which are you familiar with? (do not read)	Colli Bolognesi DOC wines: Pignoletto, Barbera, Cabernet, Sauvignon	6.0
	Lambrusco Grasparossa di Castelvetro di Modena DOC wine	4.5
	Aceto Balsamico Tradizionale di Modena DOP	3.5
	Ciliegia di Vignola	45.0
	Parmigiano Reggiano DOP	4.5
	Prosciutto di Modena DOP	0.5
	Zampone di Modena IGP	1.0
	Cotechino di Modena IGP	1.0
	Mortadella di Bologna IGP	0.5
	Tartufo di Savigno (truffle)	4.0
	Patata di Tolè (potato)	3.0
	Crescentine PT	2.5
	Tigelle PT	6.0
	Torta Barozzi	1.0
	none of these	43.5
Other	16.0	
Total	Cases	200

Table 5 – Knowledge of typical local products with designation of origin (DOC and DOP) and geographic indication (IGP) of the “Città, Castelli, Ciliegi” territory (read)

	Total %
(Products not indicated in the preceding question)	
Are you familiar with, or have you ever heard of:	
<i>Colli Bolognesi DOC</i> wines: Pignoletto, Barbera, Cabernet, Sauvignon	75.0
<i>Lambrusco Grasparossa di Castelvetro di Modena DOC</i> wine	49.5
<i>Aceto Balsamico Tradizionale di Modena DOP</i>	89.5
<i>Ciliegia di Vignola</i>	45.0
<i>Parmigiano Reggiano DOP</i>	88.5
<i>Prosciutto di Modena DOP</i>	55.5
<i>Zampone di Modena IGP</i>	64.5
<i>Cotechino di Modena IGP</i>	63.5
<i>Mortadella di Bologna IGP</i>	84.0
<i>Tartufo di Savigno</i> (truffle)	51.0
<i>Patata di Tolè</i> (potato)	66.0
<i>Crescentine PT</i>	93.5
<i>Tigelle PT</i>	90.0
<i>Torta Barozzi</i>	26.5
none of these	0.5
Total	Cases 200

Among the most well-known products, *Colli Bolognesi DOC* wines, *Aceto Balsamico Tradizionale di Modena DOP*, and *Parmigiano Reggiano DOP* were chosen to attempt to understand how and how much, according to those interviewed, they differ from common products.

The *Colli Bolognesi DOC* wines differ fairly much from common products according to 36.1% of the Bolognese citizens interviewed, very much according to 13.5%, not very much according to 13.5%, and not at all according to 7.1%. 29.7% answer that they do not know.

These results are distinctly different from the more enthusiastic ones obtained for *Aceto Balsamico Tradizionale di Modena DOP* and *Parmigiano Reggiano DOP*. For *Aceto Balsamico Tradizionale di Modena DOP*, 71.1% of those interviewed answer that it differs very much from the common products, 14.4% answer “fairly much”, only 2.2% “not very much”, and only 0.6% “not at all”. Only 11.7% state that they do not know.

For *Parmigiano Reggiano DOP*, 72.5% of the interviewees state that it differs very much from common products, 18.0% state that it differs fairly much, one 2.2% say it differs not very much, and no one answered that it doesn't differ at all. 7.3% do not know.

When asked to state the reasons why these products differ from common ones, for *Colli Bolognesi DOC* wines 40.8% of the 98 interviewees who had indicated in the preceding question that there is a difference, indicate unique taste and flavour, 32.7% state that they are closely and effectively controlled, 26.5% say the origin of the products is always verifiable, and 20.4% say they are connected with tradition. 12.2% of the 98 interviewees do not know (Table 6).

In this case, also, the answers for *Aceto Balsamico Tradizionale di Modena DOP* and *Parmigiano Reggiano DOP* are clearer.

For the 158 interviewees who stated that there is a difference between *Aceto Balsamico Tradizionale di Modena DOP* and common products, 83.5% of the answers indicate that it has a particular taste and flavour, 47.5% state that it is connected with tradition, and 39.2% answer that it is controlled closely and effectively. Only 8.9% of the answers indicate that the difference lies in the origin of the product, which is always verifiable, and only 2.5% answer "I don't know" (Table 7).

For *Parmigiano Reggiano DOP*, the 165 interviewees who identified differences between it and common products state as their first reason that it has a particular taste and flavour (87.9% of the answers), second is the close and effective control (61.8%), third is its ties with tradition (31.5%), and last, at 12.7%, is the fact that the product's origin is always verifiable. The percentage of "I don't know" answers is practically nonexistent (0.6%) (Table 8).

The case of the *Colli Bolognesi DOC* wines is emblematic of a relationship that has not been settled between the Bolognese and their agriculture and farmers.

Already in the study on the value of Designations of Origin, for the citizens of the "*Città, Castelli, Ciliégi*" territory it had emerged that this designation was not felt as a common value by the citizens of central towns like Monteveglio. The Director of the Park of the Abbey of Monteveglio, who runs various educational programmes for schools on agricultural and environmental topics, stressed how this designation of origin was desired and promoted by the farmers of the 1960s and 70s and how it has remained an individual, not a collective, heritage. She compared this experience with the experience of organic farming which has involved the most sensitive and open-minded farmers, and which has become one of the symbols of this territory (in addition to the emergency electrical products industry, Beghelli). Another

element for concern with respect to the answers given by the Bolognese citizens is the fact that the regional Administration has identified in this controlled designation of origin one of the points of excellence of the wine production of Emilia-Romagna, in which to invest through advanced zoning and entrepreneurial development projects.

Table 6 – How the Colli Bolognesi DOC wines differ from common ones

		Total %
How do the <i>Colli Bolognesi</i> DOC wines differ from common ones?	They have a particular taste-flavour	40.8
	They are connected with tradition	20.4
	The origin of the products is always verifiable	26.5
	They are carefully and effectively controlled	32.7
	Other	1.0
	I don't know	12.2
Total	Cases	98

Table 7 – How Aceto Balsamico Tradizionale di Modena DOP differs from common ones

		Total %
How does <i>Aceto Balsamico Tradizionale di Modena DOP</i> differ from common ones?	It has a particular taste-flavour	83.5
	It is connected with tradition	47.5
	The origin of the product is always verifiable	8.9
	It is carefully and effectively controlled	39.2
	Unique, inimitable	5.7
	Other	1.3
	I don't know	2.5
Total	Cases	158

Table 8 – How *Parmigiano Reggiano DOP* differs from common ones

	Total %	
How does <i>Parmigiano Reggiano DOP</i> differ from common ones?	It has a particular taste-flavour	87.9
	It is connected with tradition	31.5
	The origin of the product is always verifiable	12.7
	It is carefully and effectively controlled	61.8
	Unique, inimitable	3.6
	Other	0.6
	I don't know	0.6
Total	Cases	165

Lastly, the confidence and trust in the certification of the designations of origin is strong: 54.0% of those interviewed feel fairly well protected by the certification, 37.0% feel very well protected, only 4.5% feel not very protected, and only 1.5% feel not protected at all. The “I don’t know” answers are very few: 3.0%.

4.4.4.1. The presence of designation of origin and welfare

The last part of the section is devoted to polling the opinion of the sample group of the Bolognese resident population on the economic, environmental, and social value of the designations of origin for the “*Città, Castelli, Ciliegi*” territory.

The results of this last part must, of course, take into account the facts that two thirds of the interviewees live in households without children and teenagers (younger than 15 years of age); almost half of them are not familiar with the Route; around forty percent have heard of it; and 11.5% knows it well; even when they know the Route, 46.5% of the interviewees don’t remember the name of any town belonging to it or, apart from the town of Vignola, remember the towns of the Bologna area without hearing them listed first. Generally speaking the interviewees do not know the Typical and DOC, DOP, and IGP products of the “*Città, Castelli, Ciliegi*” territory. Without hearing the list first, 45% remember the *Ciliegia di Vignola* (cherry) and almost nothing more.

In answer to the question of whether they agree with the assertion that, for the “*Città, Castelli, Ciliegi*” territory, the presence of designations of origin produces economic welfare, 55.5% say they agree pretty much and

31.0% agree very much. The percentages on the critical side are very low: 5.5% mostly disagree and 1.0% totally disagree. A significant figure is that of the “I don’t knows”, accounting for 7.0% of the answers (Table 9).

In answer to the question of whether they agree on the fact that, for the “*Città, Castelli, Ciliegi*” territory, the presence of designations of origin produces protection and conservation of the environment, 56.0% of the interviewees say they agree pretty much and 28.0% agree very much; on the other hand, those who mostly disagree are more numerous than for the preceding question (10.0%), the “totally disagrees” remain at very low levels (1.5%), and the “I don’t knows” fall significantly (4.5%) (Table 10).

In answer to the question on how much they agree on the fact that for the “*Città, Castelli, Ciliegi*” territory the presence of designations of origin produces social cohesion, 48.5% of the interviewees say they agree pretty much and 17.0% agree very much. Thus the percentage of fully positive judgments decreases considerably (65.5% vs. 86.5% for economic welfare and 84.0% for protection of the territory). The critical views account for a percentage of 15.0% for the “mostly disagree” and 1.0% for the “totally disagrees”. The percentage of the “I don’t knows” is significant: 18.5% (Table 11).

Table 9 – Designation of origin and economic welfare for the “Città, Castelli, Ciliegi” territory

	Total %	
How much do you agree on the fact that the presence of designation of origin produces economic welfare for the “ <i>Città, Castelli, Ciliegi</i> ” territory?	Very much	31.0
	Pretty much	55.5
	Not very much	5.5
	Not at all	1.0
	I don’t know	7.0
	Total	100.0
Number of cases	200	

Table 10 – Designation of origin and conservation of the environment for the “Città, Castelli, Ciliegi” territory

	Total %	
How much do you agree on the fact that the presence of designation of origin protects and conserves the environment for the “Città, Castelli, Ciliegi” territory?	Very much	28.0
	Pretty much	56.0
	Not very much	10.0
	Not at all	1.5
	I don't know	4.5
	Total	100.0
	Number of cases	200

Table 11 – Designation of origin and social cohesion for the “Città, Castelli, Ciliegi” territory

	Total %	
How much do you agree on the fact that the presence of designation of origin produces social cohesion for the “Città, Castelli, Ciliegi” territory?	Very much	17.0
	Pretty much	48.5
	Not very much	15.0
	Not at all	1.0
	I don't know	18.5
	Total	100.0
	Number of cases	200

4.4.5. The value of the territory for the Bolognese identity and the importance of investing

Finally in the last section of the questionnaire it was asked how much, from the social, economic, environment, and tradition standpoints, the “Città, Castelli, Ciliegi” Designation of Origin territory is a part of the Bolognese identity. For 47.0% of the interviewees it is pretty much a part, for 19.0% it is very much a part, and on the critical side we find 25.5% who say it is not very much a part and 1.5% who answer “not at all”. 7.0% don't know. It is a result which nonetheless seems to indicate a strong tie for more than 60% of those interviewed.

46.5% of those interviewed answered the question on the importance of investing for the development of the Designation of Origin territory, by saying

it is very important⁹ and 42.5% say that it is fairly important. Only 4.0% answer “not very important”, 3.0% answer “totally unimportant”, and 4.0% don’t know.

When asked to indicate, out of different alternatives, the investment priorities for the territory, 65.6% indicate environmental protection and defence, 44.1% indicate improvement of product quality, 40.3% say food controls, 20.4% indicate the landscape, 0.5% don’t know, and 0.5% give no answer (Table 12).

It is not easy to reconcile these last answers, and in particular the accent on environmental protection and defence, with a fruition of the territory accomplished almost totally with the use of private cars.

Table 12 – Aspects on which to invest for promoting the development of the “Città, Castelli, Ciliégi” Designation of Origin territory

	Total %	
On what aspects would it be most advisable to invest money for promoting the development of the “Città, Castelli, Ciliégi” Designation of Origin territory?	Landscape	20.4
	Environmental protection and defence	65.6
	Food controls	40.3
	Improvement of product quality	44.1
	Other	4.8
	I don’t know	0.5
	No answer	0.5
	Cases	186

4.5. Multiple correspondence analysis

The application of multiple correspondence analysis to the binary tables of socioeconomic survey results - where the lines refer to individuals and the columns are the ways they answered (answering modes) - makes it possible to obtain a more complete and detailed interpretation of the phenomena of interest. This interpretation enables us to identify affinities among answering modes and thus among individuals (Lebart, Morineau, Piron, 2000, p. 120).

In particular, in our case, through multiple correspondence analysis we can highlight different individual profiles among interviewees and also see

⁹ We will see in the multiple correspondences analysis results as this answer will result not easy to completely interpret.

how the different socio-demographic groups stand with respect to their profiles, through the use of explanatory variables.

We applied multiple correspondence analysis to a selection of nine questions, corresponding to 81 associated answering modes, which made up the central core of the survey conducted. In fact, we included the questions concerning the knowledge of the Route, the fact of having been to the Route's towns, the knowledge of the Route's Typical, Designation of Origin and Geographic Indication products, and the opinions on the certification of the Designation of Origin products, the economic, environmental and social value of the Designations of Origin for the territory, territory's belonging to the Bolognese identity and, lastly, the question on the importance of investing for the territory. These formed the active variables of the analysis (Table 13).

Five explanatory variables were chosen, with 25 associated answering modes: gender, age range, education, employment situation, and number of household members (Table 14).

Table 13 – Active variables introduced into the multiple correspondence analysis

9 VARIABLES	81 ASSOCIATED MODES
16. Are you familiar with, or have you ever heard of the Wine and Flavours Route?	(3 MODES)
44. Have you ever been to the towns or areas of the "Città, Castelli, Ciliegi" territory?	(22 MODES)
119. We have said that the "Città, Castelli, Ciliegi" territory is char... (products)	(17 MODES)
166. How much do you feel protected by the control of these products?	(5 MODES)
167. Does the presence of DO in the territory produce economic welfare?	(6 MODES)
168. Does the presence of DO in the territory produce environmental conservation?	(7 MODES)
169. Does the presence of DO in the territory produce social cohesion?	(7 MODES)
171. Is the territory a part of the Bolognese identity?	(7 MODES)
172. Is it important to invest for the development of the "Città, Castelli, Ciliegi" DO territory?	(7 MODES)

Table 14 – Explanatory variables introduced into the multiple correspondence analysis

5 VARIABLES	25 ASSOCIATED MODES
3. Gender	(2 MODES)
6. Age range	(4 MODES)
7. Education	(7 MODES)
8. You are: (self-employed, employed)	(9 MODES)
12. Number of household members	(3 MODES)

The programme used is SPAD, which provides the table of eigenvalues, the coordinates of the active modes for making the charts, their absolute and relative contributions, and the test-values. For the explanatory mode, the programme provides the coordinates, and the test values for evaluating their significance.

The presence of an extremely high number of answering modes often generates low inertia levels in the multiple correspondence analysis, explained by the axes identified.

Table 15 shows the eigenvalues in decreasing order, the inertia percentage explained by each eigenvalue, and the cumulative inertia percentages. We did not reassess the inertia, and therefore 60% of explained inertia is reached with 14 axes, even if the first three axes differ in explained inertia percentages that are clearly higher than the subsequent axes (7.59%; 6.10%; 5.31%). The hypothesis of independence of the answers from any differentiating element seems not to be confirmed by the cloud shape of the points in the chart of the first and second axis and of the second with the third. In fact, there is no placement of the points in a spherical shape around the origin (independence), but instead diagonally with respect to the axes (dependence) (Lebart, Morineau, Piron, 2000, p. 93) (chart 1 and 2).

Table 15 – Table of eigenvalues

Number	Eigenvalues	% inertia	% cumulative inertia	Number	Eigenvalues	% inertia	% cumulative inertia
1	0.2950	7.59	7.59	19	0.0960	2.47	73.38
2	0.2373	6.10	13.69	20	0.0936	2.41	75.79
3	0.2063	5.31	18.99	21	0.0903	2.32	78.11
4	0.1793	4.61	23.61	22	0.0849	2.18	80.30
5	0.1637	4.21	27.81	23	0.0799	2.05	82.35
6	0.1594	4.10	31.91	24	0.0758	1.95	84.30
7	0.1560	4.01	35.93	25	0.0733	1.89	86.18
8	0.1481	3.81	39.73	26	0.0698	1.80	87.98
9	0.1399	3.60	43.33	27	0.0689	1.77	89.75
10	0.1368	3.52	46.85	28	0.0651	1.67	91.43
11	0.1312	3.37	50.22	29	0.0622	1.60	93.03
12	0.1280	3.29	53.51	30	0.0568	1.46	94.49
13	0.1270	3.27	56.78	31	0.0510	1.31	95.80
14	0.1194	3.07	59.85	32	0.0465	1.20	96.99
15	0.1168	3.00	62.85	33	0.0417	1.07	98.07
16	0.1127	2.90	65.75	34	0.0405	1.04	99.11
17	0.1028	2.64	68.40	35	0.0346	0.89	100.00
18	0.0979	2.52	70.91				

4.5.1. Interpretation of the first axis: the value of the designations for the territory (very much-not very much) and the advisability of investing

The first axis explains 7.59% of the total inertia. Both the analysis of the test values¹⁰ provided by the output of the SPAD multiple correspondence analysis (Table 16) and the verification of the absolute contributions of the axes (Annex 1) highlight how the highest levels of significance assumed along this axis are reached by the very much (for the negative semi-axis) and not very much (for the positive semi-axis) answers to the questions in the last part of the questionnaire on the agreement or disagreement with the idea that the presence of designations of origin on the “*Città, Castelli, Ciliégi*” territory creates economic welfare, environmental conservation, and social cohesion. Moreover, it is possible to point out the contraposition between two opposite assertions in the answers to the next-to-last question of the questionnaire: “It is very important to invest for the development of the ‘*Città, Castelli, Ciliégi*’ designation of origin territory,” and “It is fairly important to invest for the development of the ‘*Città, Castelli, Ciliégi*’ designation of origin territory”, with one having the greatest significance for the negative semi-axis and the other having one of the greatest significances in the positive semi-axis. In the positive semi-axis, the assertion “It is totally unimportant to invest for the development of the ‘*Città, Castelli, Ciliégi*’ designation of origin territory” also assumes a major significance. Connected with the negative semi-axis is the fact of knowing (well or not so well) the Route with middle-range test values. In the positive semi-axis the lack of knowledge of the Route ranks with high test values.

The frequentation of towns of the Route shows less important, but in any case noteworthy, test values, while the absolute contributions are insignificant. The town of Bazzano appears clearly significant in the negative semi-axis, and the town of Sasso Marconi in the positive semi-axis one.

For the explanatory variables, the only significant answers according to the test values are in the positive semi-axis one and are no answer to the question on employment status and the presence of just one member of the household (Table 17).

¹⁰ This coefficient expresses the statistical significance of the distance of the mode from origin of the factor to which it refers. Generally considered as occupying significant positions are the modes for which the test values are higher than 2 in absolute value, corresponding approximately to the threshold of 5%.

Table 16 – Description of axis 1: Active Modes

Test-value	Wording of variable	Wording of answer mode
-8,90	Is it important to invest for the development of the DO territory?	Very - invest
-7,98	Does the presence of DO in the territory produce environmental conservation?	very much-conservation
-7,70	Does the presence of DO in the territory produce economic welfare?	very much (welfare)
-6,39	Does the presence of DO in the territory produced social cohesion?	very much-social
-5,78	Is the territory a part of the Bolognese identity?	very much-identity
-5,51	How protected do you feel by the control of these products?	very much (protection)
-4,52	Have you been to the towns or zones of the "Città, Castelli, Ciliegi" territory?	Bazzano
-3,71	Are you familiar with or have you ever heard of the Wine and Flavours Route?	do not know well
-2,87	We have said that the "Città, Castelli, Ciliegi" territory is char... (products)	Lambrusco G DOC wine
-2,30	Are you familiar with or have you ever heard of the Wine and Flavours Route?	Yes, I know it well
-2,01	Does the presence of DO in the territory produce social cohesion?	pretty much-social
-2,01	Is the territory a part of the Bolognese identity?	pretty much-identity
-1,35	To the towns or zones of the "Città, Castelli, Ciliegi" territory	Castelvetro di Moden
-1,22	We have said that the "Città, Castelli, Ciliegi" territory is char...	Ciliegia di Vignola
M I D D L E Z O N E		
2,08	Does the presence of DO in the territory produce economic welfare?	pretty much (welfare)
2,13	Does the presence of DO in the territory produce economic welfare?	not at all-welfare
2,32	Been to the towns or zones of the "Città, Castelli, Ciliegi" territory	Zocca
2,86	We have said that the "Città, Castelli, Ciliegi" territory is char... (products)	no product
2,86	Does the presence of DO in the territory produce environmental conservation?	pretty much-conservation
2,89	Is the territory a part of the Bolognese identity?	*No answer*
3,02	Does the presence of DO in the territory produce economic welfare?	not very much (welfare)
3,07	Been to the towns or zones of the "Città, Castelli, Ciliegi" territory	Sasso Marconi
3,30	Does the presence of DO in the territory produce environmental conservation?	*No answer*
3,34	Is it important to invest for the development of the DO territory?	not at all-invest
3,38	Is it important to invest for the development of the DO territory?	not very-invest
4,16	Does the presence of DO in the territory produce social cohesion?	*No answer*
4,37	How protected do you feel by the control of these products?	Don't know (protection)
4,49	Does the presence of DO in the territory produce environmental conservation?	not very much- conservation
4,73	Does the presence of DO in the territory produce social cohesion?	not very much-social
4,80	How protected do you feel by the control of these products?	not very much (protection)
5,09	Are you familiar with or have you ever heard of the Wine and Flavours Route?	No, I don't know it
5,78	Is it important to invest for the development of the DO territory?	fairly-invest
5,87	Is the territory a part of the Bolognese identity?	not very much-identity
6,38	Does the presence of DO in the territory produce economic welfare?	*No answer*

Table 17 – Description of axis 1: Explanatory Modes

Test value	Wording of variable	Wording of answer mode
-1,58	Age range	30-44
-1,32	What is your level of education	vocational diploma
-1,10	Number of members in household	NO ANSWER
M I D D L E Z O N E		
1,27	Age range	18-29
1,38	You are: (self-employed, employed...)	student
1,42	What is your level of education	Does not answer
1,97	You are:	homemaker
2,01	You are:	*No answer*
2,43	Number of members in household	ONE MEMBER

4.5.2. Interpretation of the second axis: the value (very much-pretty much) and the knowledge of the Route and protection of certifications

The explanation capacity of the second axis is 6.10% of the total inertia. The test values for the second axis of the active modes of the selected questions on the questionnaire, together with the values of the absolute contributions, highlight that in this axis, also, the modes referring to the value of the designations of origin for the territory and the certification protection are important, with the contraposition between the negative semiaxis characterized by the *very much* and the *pretty much* of the positive semiaxis. But in this case, in the negative semiaxis we find, with high significance values, *not very much* with regard to the importance of investing in the territory (Table 18).

The second semiaxis is also characterized by the contraposition between *no, I don't know* the Route in the negative semiaxis e *I don't know it well* in the positive semiaxis.

As for the towns of the Route to which the interviewees have been and the Route's typical products, the test values are significant, but distinctly lower, as are the absolute contributions. In the negative semiaxis appear the negative elements: *no town* and *no product* known, as do the towns of *Cresspellano* (a town in the plain and an important road junction) and *Savignano*

sul Panaro and, as the known product, the *Tartufo di Savigno* (Truffle)¹¹. In the positive semiaxis we find significant test values and very low absolute contributions for the *Colli Bolognesi DOC wines* and the towns of *Vignola* and *Bazzano*.

There are no explanatory modes with significant test values. Thus, the behaviour discrimination on the second axis does not seem to be significantly referable to socio-demographic differences (Table 19).

Table 18 – Description of axis 2: Active Modes

Test value	Wording of variable	Wording of answer mode
-6,44	Are you familiar with or have you ever heard of the Wine and Flavours Route?	No, I don't know it
-6,03	Does the presence of DO in the territory produce economic welfare?	very much (welfare)
-5,39	How protected do you feel by the control of these products?	very much (protection)
-5,37	Is it important to invest for the development of the DO territory?	not very-invest
-5,37	Does the presence of DO in the territory produce environmental conservation?	*No answer*
-5,30	Does the presence of DO in the territory produce environmental conservation?	very much-conservation
-5,15	Does the presence of DO in the territory produce social cohesion?	*No answer*
-5,11	Does the presence of DO in the territory produce economic welfare?	*No answer*
-4,15	Does the presence of DO in the territory produce social cohesion?	very much-social
-3,71	Been to the towns or zones of the "Città, Castelli, Cilieg" territory	NO TOWN
-2,91	Is the territory a part of the Bolognese identity?	*No answer*
-2,79	Is the territory a part of the Bolognese identity?	not very much-identity
-2,77	Been to the towns or zones of the "Città, Castelli, Cilieg" territory	Crespellano
-2,74	We have said that the "Città, Castelli, Cilieg" territory is char... (products)	no product
-2,64	Been to the towns or zones of the "Città, Castelli, Cilieg" territory	Savignano sul Panaro
-2,26	We have said that the "Città, Castelli, Cilieg" territory is char... (products)	<i>Tartufo di Savigno</i>
-1,81	Is it important to invest for the development of the DO territory?	*No answer*
-1,74	Does the presence of DO in the territory produce economic welfare?	not at all-welfare

¹¹ The association between the Savigno Truffle and Savignano sul Panaro leads us to suspect that perhaps some of the interviewees mixed up the town of Savigno with the town of Savignano (!).

-1,35	Is the territory a part of the Bolognese identity?	very much-identity
-1,21	To the towns or zones of the "Città, Castelli, Cilieg" territory	*No answer*
M I D D L E Z O N E		
1,12	We have said that the "Città, Castelli, Cilieg" territory is char... (products)	Lambrusco G DOC wine
1,49	How protected do you feel by the control of these products?	not very much (protection)
1,98	Are you familiar with or have you ever heard of the Wine and Flavours Route?	Yes, I know it well
2,35	Been to the towns or zones of the "Città, Castelli, Cilieg" territory	Bazzano
2,73	Does the presence of DO in the territory produce environmental conservation?	not very much-conservation
3,03	Does the presence of DO in the territory produce economic welfare?	not very much (welfare)
3,07	Been to the towns or zones of the "Città, Castelli, Cilieg" territory	Vignola
3,35	Is it important to invest for the development of the DO territory?	fairly-invest
3,45	Does the presence of DO in the territory produce social cohesion?	not very much -social
4,11	We have said that the "Città, Castelli, Cilieg" territory is char... (products)	Colli B DOC wines
4,47	Does the presence of DO in the territory produce social cohesion?	pretty much-social
5,02	Is the territory is a part of the Bolognese identity?	pretty much-identity
5,12	How protected do you feel by the control of these products?	pretty much (protection)
5,31	Are you familiar with or have you ever heard of the Wine and Flavours Route?	I don't know it well
5,63	Does the presence of DO in the territory produce environmental conservation?	pretty much-conservation
7,21	Does the presence of DO in the territory produce economic welfare?	pretty much (welfare)

Table 19 – Description of axis 2: Explanatory Modes

Test value	Wording of variable	Wording of answer mode
-1,93	You are: (self-employed, employed...)	*No answer*
-1,53	What is your education level	middle school diploma
-1,47	What is your education level	Doesn't answer
-1,09	Age range	45-59
M I D D L E Z O N E		
1,10	What is your education level	vocational diploma
1,38	What is your education level	middle school diploma
1,50	Age range	30-44

4.5.3. Interpretation of the third axis: the value (not very much-pretty much) and the trust in the designation for environmental conservation

The third axis explains 5.31% of the total inertia. It is characterized by high test values and absolute contributions for the answer mode not very much environmental conservation (negative semiaxis) and pretty much environmental conservation (positive semiaxis) for the question on the creation of environmental conservation thanks to the presence of designations of origin on the “*Città, Castelli, Cilieg*” territory (Table 20).

The third axis manages to discriminate within the pretty much answers that were previously all concentrated in the middle part of axes one and two.

With regard to the towns and products, we find as significant in the negative semiaxis the towns of Zocca and Monte San Pietro and the Colli Bolognesi DOC wines. In the positive semiaxis we find Bazzano and Lambrusco Grasparossa di Castelvetro DOC wine.

The explanatory modes with significant test values on the third axis are, in the negative semiaxis, the degree and university diploma educational level and, in the positive semiaxis, the age range 60 to 74 years (Table 21).

Table 20 – Description of axis 3: Active Modes

Test value	Wording of variable	Wording of answer mode
-7,54	Does the presence of DO in the territory produce environmental conservation?	not very much-conservation
-5,65	Does the presence of DO in the territory produce economic welfare?	not very much (welfare)
-5,17	How protected do you feel by the control of these products?	not very (protection)
-4,51	We have said that the “ <i>Città, Castelli, Cilieg</i> ” territory is char... (products)	<i>Colli B DOC wines</i>
-4,38	Is the territory a part of the Bolognese identity?	not very much-identity
-4,33	Does the presence of DO in the territory produce social cohesion?	not very much-social
-4,31	Does the presence of DO in the territory produce economic welfare?	very much (welfare)
-4,31	Does the presence of DO in the territory produce social cohesion?	very much-social
-3,36	Does the presence of DO in the territory produce environmental conservation?	very much-conservation
-3,11	Been to the towns or zones of the “ <i>Città, Castelli, Cilieg</i> ” territory	Monte San Pietro
-2,77	Does the presence of DO in the territory produce social cohesion?	not at all-social
-2,31	Been to the towns or zones of the “ <i>Città, Castelli, Cilieg</i> ” territory	Zocca

-2,14	Been to the towns or zones of the "Città, Castelli, Cilieg" territory	Castello di Serravalle
-1,95	Been to the towns or zones of the "Città, Castelli, Cilieg" territory	Marano sul Panaro
-1,94	How protected do you feel by the control of these products?	not at all (protection)
-1,85	Is it important to invest for the development of the DO territory?	fairly-invest
-1,40	We have said that the "Città, Castelli, Cilieg" territory is char... (products)	Tartufo di Savigno
-1,37	Are you familiar with or have you ever heard of the Wine and Flavours Route?	I don't know it well
-1,25	Does it produce environmental conservation?	*No answer*
-1,11	Is it important to invest for the development of the DO territory?	very-invest
M I D D L E Z O N E		
1,08	In the towns or zones of the "Città, Castelli, Cilieg" territory	Savigno
1,18	We have said that the "Città, Castelli, Cilieg" territory is char... (products)	Ciliegia di Vignola
1,31	We have said that the "Città, Castelli, Cilieg" territory is char... (products)	Prosciutto di Modena DOP
1,50	Is it important to invest for the development of the DO territory?	not very-invest
1,56	Is the territory a part of the Bolognese identity?	not at all-identity
1,63	Is the territory a part of the Bolognese identity?	pretty much-identity
1,97	We have said that the "Città, Castelli, Cilieg" territory is char... (products)	OTHER PRODUCTS
2,01	Is it important to invest for the development of the DO territory?	not at all-invest
2,18	Does the presence of DO in the territory produce economic welfare?	*No answer*
2,21	To the towns or zones of the "Città, Castelli, Cilieg" territory	Bazzano
2,38	How protected do you feel by the control of these products?	I don't know (protection)
2,55	Does the presence of DO in the territory produce social cohesion?	*No answer*
2,67	We have said that the "Città, Castelli, Cilieg" territory is char... (products)	Lambrusco G DOC wine
2,77	Been to the towns or zones of the "Città, Castelli, Cilieg" territory	*No answer*
2,78	Are you familiar with or have you ever heard of the Wine and Flavours Route?	Yes, I know it well
2,93	Is the territory a part of the Bolognese identity?	*No answer*
4,20	Is it important to invest for the development of the DO territory?	*No answer*
4,94	Does the presence of DO in the territory produce social cohesion?	pretty much-social
5,48	Does the presence of DO in the territory produce economic welfare?	pretty much (welfare)
8,01	Does the presence of DO in the territory produce environmental conservation?	pretty much-conservation

Table 21 – Description of axis 3: Explanatory Modes

Test value	Wording of variable	Wording of answer mode
-2,07	What is your educational level	degree-university diploma
-1,66	You are: (self-employed, employed...)	employed
-1,41	Age range	30-44
-1,35	Gender	male
-1,12	Number of members in household	*No answer*
CENTRAL ZONE		
1,32	You are:	*No answer*
1,35	Gender	female
1,58	Number of members in household	NO ANSWER
1,83	You are: (self-employed, employed...)	retired
1,97	What is your educational level	middle school diploma
2,56	Age range	60-74

4.5.4. Chart interpretation

The analysis of the chart obtained by intersecting the first with the second factorial axis shows the same circular process of evaluations we observed when studying each axis individually (chart 1).

It seems possible to assert that the questionnaire brings out answers on the value of the designations of origin, their protection, and the advisability of investing which fluctuate biunivocally as far as the knowledge level is concerned: I don't know it very well and I know it well, speaking of the Route.

The two groups of modes (and thus of individuals who expressed them) of very much in the third quadrant, and pretty much and not very much in the first quadrant, are found to the right and left of the fourth quadrant, in which the knowledge of the Route is situated. With a number of modes which is undoubtedly less numerous than the other quadrants, the fourth quadrant is in contrast with the second quadrant of the no knowledge of the Route.

The analysis of the chart 2 obtained by intersecting the second with the third factorial axis gives a possibility to identify a differentiation between answers of different socio-demographic groups, that didn't emerge in the chart of the first two axes. It emerges as, in the first quadrant, the group of

4.6. Conclusion

The results of the study on the relationships between the population residing in the city of Bologna and the Designation of Origin territory of the “*Città, Castelli, Ciliegi*” Wine and Flavours Route have highlighted a view and use of the territory in keeping with the deep needs of the Bolognese population that emerged in the preceding surveys conducted by the MeDeC (1998a-2008).

In particular, as seen in the multiple correspondence analysis, the knowledge of the Route does not lead to univocal evaluations by Bolognese citizens on the value of this designation of origin territory.

The study may thus provide an incentive to work both on the activities of the Route – in order to bring it to be better known by Bolognese citizens and enable them to enjoy a privileged use of this territory (which belongs to them) – and on the management and enhancement of the designations of origin, in order to improve the communication of their action on the territory and contribute to changing the arrangements that may cause problems (see *Colli Bolognesi DOC* wines).

References

- Ashenfelter O. (2008), Predicting the Quality and Price of Bordeaux Wines, *Economic Journal*, vol. 118, no. 529, June.
- Basoché P., Combris P., Giraud-Héraud E. (2009), Willingness to Pay for Appellation of Origin: Results of an Experiment with Pinot Noir Wines in France and Germany, *Working Paper ALISS 2009-02*.
- Cavaillès J., Peeters D., Sekeris E., Thisse J.-F. (2003), La ville périurbaine, *Revue Economique*, 54, 5-23.
- Gatti S. (2008), The Value of Designations of Origin in Emilia-Romagna, paper presented at *Enometrics XV*, Collioure, May 29-31st.
- Lebart L., Morineau A., Piron M. (2000), *Statistique exploratoire multidimensionnelle*, Paris, Dunod.
- MeDeC (1998a), *Suburbanizzazione e riurbanizzazione: modalità e moventi della mobilità residenziale nell'area bolognese*.
- MeDeC (1998b), *I bolognesi e il mondo. Un sondaggio sui viaggi, le vacanze, l'immaginario geografico*.
- MeDeC (2002), *Montagna, collina, città: un'indagine sui rapporti reciproci, gli usi, le identità, le opinioni*.
- MeDeC (2003a), *Valori e stili della postmodernità*, (ed. Anderlini F.), Clueb, Bologna.
- MeDeC (2003b), *Il rapporto tra cittadini e amministrazione comunale a Savigno*.

- MeDeC (2003c), *Il rapporto tra cittadini e amministrazione comunale a Sasso Marconi*.
- MeDeC (2003d), *Il rapporto tra cittadini e amministrazione comunale a Vergato*.
- MeDeC (2003e), *Il rapporto tra cittadini e amministrazione comunale a Loiano*.
- MeDeC (2003f), *Il rapporto tra cittadini e amministrazione comunale a Monzuno*.
- MeDeC (2003g), *La qualità della vita in Provincia di Bologna*.
- MeDeC (2004), *La qualità della vita in Provincia di Bologna*.
- MeDeC (2005a), *Sondaggio di posizionamento sul rapporto cittadini amministrazione comunale di Bologna*.
- MeDeC (2005b), *Comportamenti di consumo e inflazione percepita dalle famiglie in provincia di Bologna*.
- MeDeC (2005c), *Indagine sugli aspetti socio-assistenziali negli ambiti del Piano di Zona della provincia di Bologna*.
- MeDeC (2005-6-7), *Indagine in materia di trasporto pubblico locale in provincia di Bologna, 2005, 2006, 2007*.
- MeDeC (2006), *I consumi culturali in provincia di Bologna*.
- MeDeC (2007a), *Il rapporto tra cittadini e amministrazione comunale a Monte San Pietro*.
- MeDeC (2007b), *Il rapporto tra cittadini e amministrazione comunale a Zola Predosa*.
- MeDeC (2007c), *Il rapporto tra cittadini e amministrazione comunale a Casalecchio di Reno*.
- MeDeC (2007d), *Il rapporto tra cittadini e amministrazione comunale a Grizzana Morandi*.
- MeDeC (2007e), *Il rapporto tra cittadini e amministrazione comunale a Pianoro*.
- MeDeC (2008), *Indagine sulla qualità della vita nei quartieri di Bologna*.
- Natali A. (2002), La valorizzazione delle risorse ambientali: i saperi e le regole, speech to the Conference *Lo sviluppo locale in Sebastiano Brusco*, Artimino, 9-13 settembre 2002 <http://www.economia.unimore.it/sezioni/pag279.aspx?id=652&liv=4&numpag=279>.
- Nijkamp P., Mills E. S. (1987), Advances in Regional Economics, *Handbook of Regional and Urban Economics*, vol. 1, (P. Nijkamp ed.), North Holland.

Annex 1.

Contributions des modalités actives

Libellé	Poids relatif	Distance à l'origine	Axe 1	Axe 2	Axe 3	Axe 4	Axe 5
Lei conosce o ha mai sentito parlare della Strada dei vini e							
si, conosco bene	1,291	7,60870	0,90	0,82	1,87	8,77	5,72
non conosco bene	4,265	1,60526	1,62	4,13	0,32	2,28	1,82
no, non la conosco	5,556	1,00000	2,47	4,92	0,03	0,01	0,00
È stato nei comuni o zone del territorio "Città, Castelli, Ciliegi"							
Bazzano			6,117	0,81651	1,88	0,61	0,68
Tizzano di Casalecch			0,337	32,00000	0,50	0,33	0,00
Castello di Serraval			0,505	21,00000	0,04	0,05	1,15
Crespellano			0,449	23,75000	1,10	2,30	0,06
Monte San Pietro			0,898	11,37500	0,01	0,03	2,81
Sasso Marconi			0,281	38,60000	0,86	0,45	0,00
Vignola			0,505	21,00000	0,09	1,75	0,01
Zocca			0,337	32,00000	1,00	0,00	1,42
NESSUN PRODOTTO			1,291	7,60870	0,49	2,89	0,06
Reponse manquante			0,393	27,28570	0,45	0,10	3,36
Abbiamo detto che il territorio "Città, Castelli, Ciliegi" è car (prodotti)							
Vini dei Colli B DOC	0,673	15,50000	0,01	3,77	5,22	0,15	2,53
Vino Lambrusco G DOC	0,505	21,00000	1,63	0,35	1,78	1,04	13,04
Ciliegia di Vignola	4,265	1,60526	0,23	0,08	0,27	0,16	0,00
Tartufo di Savigno	0,281	38,60000	0,01	1,51	0,53	9,43	1,46
nessun prodotto	4,938	1,25000	0,86	0,94	0,05	1,26	2,97
ALTRI PRODOTTI	0,449	23,75000	0,07	0,10	1,17	3,74	1,03

Quanto si sente tutelato dal controllo di questi prodotti?							
molto (tutela)	4,097	1,71233	3,56	4,91	0,10	1,26	1,20
abbastanza (tutela)	6,117	0,81651	0,32	3,07	0,08	4,51	0,29
poco (tutela)	0,561	18,80000	3,11	0,33	7,46	5,60	5,76
non so (tutela)	0,337	32,00000	3,53	0,23	1,50	4,32	2,46
Le DO nel territorio producono benessere economico?							
molto (benessere)	3,479	2,19355	7,80	5,94	3,49	0,29	0,01
abb (benessere)	6,117	0,81651	0,37	5,56	3,70	1,14	0,00
poco (benessere)	0,617	17,00000	1,64	2,06	8,24	0,58	0,78
Reponse manquante	0,898	11,37500	8,08	6,48	1,08	1,21	0,92
Le DO nel territorio producono conservazione ambientale?							
molto-conservazione	3,086	2,60000	9,14	4,70	2,23	0,36	0,12
abb-conservazione	6,341	0,75221	0,83	3,28	7,95	0,02	0,13
poco-conservazione	1,122	8,90000	3,47	1,59	13,97	0,11	0,11
Reponse manquante	0,561	18,80000	1,95	7,76	0,47	1,98	2,35
Le DO nel territorio producono coesione sociale?							
molto-sociale	1,908	4,82353	6,46	3,39	4,20	0,98	1,89
abb-sociale	5,387	1,06250	0,40	2,44	3,44	0,01	1,84
poco-sociale	1,796	5,18750	3,88	2,56	5,65	0,03	0,25
Reponse manquante	2,020	4,50000	2,71	5,15	1,45	1,61	0,16
Il territorio è parte dell'identità bolognese?							
molto-identità	2,245	3,95000	5,21	0,40	0,06	0,29	2,39
abb-identità	5,163	1,15217	0,41	3,20	0,39	0,74	4,11
poco-identità	2,862	2,88235	4,89	1,38	3,88	3,75	1,82
Reponse manquante	0,842	12,20000	1,54	1,53	2,89	5,37	0,00
È importante investire nel territorio?							
molto-investire	5,163	1,15217	8,10	0,03	0,18	0,03	2,11
abb-investire	4,714	1,35714	3,68	1,54	0,54	1,01	4,64
poco-investire	0,449	23,75000	2,10	6,58	0,59	1,42	1,09
per niente-investire	0,337	32,00000	2,07	0,00	1,07	10,34	7,46
Reponse manquante	0,449	23,75000	0,55	0,75	4,63	1,28	1,81

In recent years Italy has had to deal with its most serious economic crisis since the post-WWII years. A crisis that has radically changed the Italian economic and financial structure, as well as the prospects for future development and employment. In this context, there has been a continuing growth and evolution in the appreciation and promotion of the Designation of Origin agro-food productions, and the enogastronomy has become one of the cornerstones of the Country's tourism strategies. In light of the above, the author wants to bring together and annotate in this book the studies that she conducted during the first decade of this century on the value of Designations of Origin, wine tourism, and the development of Designation of Origin territories, with the aim of understanding and communicating the factors that have come to determine these successful paths. These studies were conducted in collaboration with some of the most important Italian organizations in this field, from the Emilia-Romagna Regional Administration to the Associazione Nazionale Città del Vino (National Association of Wine Cities).

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