FOOD, AGRI-CULTURE AND QUALITY OF LIFE: THE CASE OF ITALIAN LOCAL SYSTEMS

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Abstract

The typical product is not just a food, but it is the product of a local system, of its natural and cultural resources; it is the representation of several material and immaterial assets of territorial capital. The balance between quality of food production and quality of territory is the new competitive edge. In this work we move from this idea and apply a model to describe the relation between well being (represented by quality of life and a subjective measure of life satisfaction), quality of territory, quality of food as well as wine production. The model is then applied to the case of Italian local agro food systems.

1. Introduction

Local agro-food systems that show good economic performance are characterized by patterns of integrated development combining quality of production, quality of territory and landscape and quality of life (Abraham et al., 2010; Thompson, 2011; Azadi et al., 2011; Marsden and Sonnino, 2012). The objective of this work is to study the contribution of some specific features and phenomena regarding quality of territorial capital (Camagni and Capello, 2012) on well being of local agro-food systems. A conceptual framework is adopted (Kweon et al., 2010; Bessiere and Tibere, 2013; Kim et al., 2013; Wu, 2013) to represent the relations between well being and these assets in local agro-food systems.

This scheme is applied to the case study of Italian agro-food systems. The aim of the work is to obtain a map of Italian local systems and to describe it, using different dimensions, with a focus on food production and, in particular, wine production. The choice of this focus depends on the fact that wine production and tourism represent today an economic and cultural model that designs new trajectories of local development (Miele, 2008; D'Amico et al., 2014).

2. The model of the local agro-food system

The model of the agro-food system is described by theoretical and empirical frameworks that highlight the importance of the different dimensions of territorial capital and the relationships among attractiveness, quality of food and wine production, tradition, cultural and environmental protection (Moragues and Sonnino, 2012; Marsden et al., 2013; Symbola, 2015).

Some of these features can be described using the marshallian district framework: high density of small and medium size companies, geographic concentration, networks of external economies that support informal and formal links between producers, workers, institutions (OECD, 2006). But the balance between quality of product and quality of territory, reminds some characteristics of institutional cultural district: strong connection between quality of territorial products and local *savoir vivre*, development of aesthetic, technological, anthropologic and historic resources of territory (Santagata, 2002).

The typical product is not just food, it is the product of a territory, of its natural and cultural resources. It has a story to tell. It is not just a raw material, a method of production or a taste: but it refers to a socio-cultural system (Allaire et al., 2011). The parable "from flavors to places and from places to people" makes the taste an important descriptive element of the territory and its identity. Local products are often the focus of specific territorial branding strategies aim at defining and rebuilding the image of territories, according to an inside-out approach (Anholt, 2007; Dioli and Rizzi, 2010; Kavaratzis, 2005; Morgan et al., 2007).

The French term terroir is a key point of reference in order to define territorial attractiveness[5]. The social and agronomic meaning of the term terroir is linked to the morphological, agronomic, historical, human and cultural markers of local systems (Waltert et al., 2011) which differentiates territories, enhances competitiveness of individual products, increases the appeal of the area in view of quality and uniqueness, promoting full respect of natural environment and landscape.

The wine tourist destinations offer precisely these regional characteristics and especially, human relationships and quality of landscape, which are hard to find in urban destinations or mass tourism (Rizzi and Virtuani, 2010). The wine fits with the food products in the policies to promote the area as local added value, enriching projects of place marketing/branding through events exhibitions and museums, able to attract visitors as well as consumers. The cases of excellent Barolo/Langhe (Piedmont), Franciacorta (Lombardy) and Chianti (Tuscany) in Italy reveal that wine can brands an entire region, working first as a promotional mean and tourist attractor, integrating environmental, physical and cultural dimensions.

Nature, culture, events, tasting are increasingly designed as opportunities for direct involvement for the consumer / visitor looking for experiences rather than products or goods, human relations and cultural events rather than consumption (Scott et al., 2010; Sengel et al., 2015). Places of wine production are naturally oriented to promote experiential tourism and intercept these new dimensions of the consumption demand because the visitor is now "an active producer of meaning". The territories have to face the competitive challenge that involves not only producers and their associations or business unions, but the local systems in their articulated structures, educational institutions, local governments, cultural institutions and museums (Casini et al., 2010; Bertella, 2011).

A conceptual framework is adopted (Kweon et al., 2010; Bessiere and Tibere, 2013; Kim et al., 2013; Wu, 2013) to represent the relations between well being and sustainable competitiveness in local agro-food systems. Well being is the output of

[5] It is defined as "an expanse of land with certain characteristics identifying it from an agronomic perspective. These characteristics originate from the terroir physical qualities (e.g. elevation, climate, exposure, soil, etc.) and are also consequence of human intervention such as irrigation, drainage, terracing (Vaudour, 2003: 336)".

this model and it is defined by two dimensions: quality of life and life satisfaction. Sustainable competitiveness is identified as multidimensional driver of well being and several components are associated in the sphere of environment, economic and human development. This model is shown in the Figure 1.

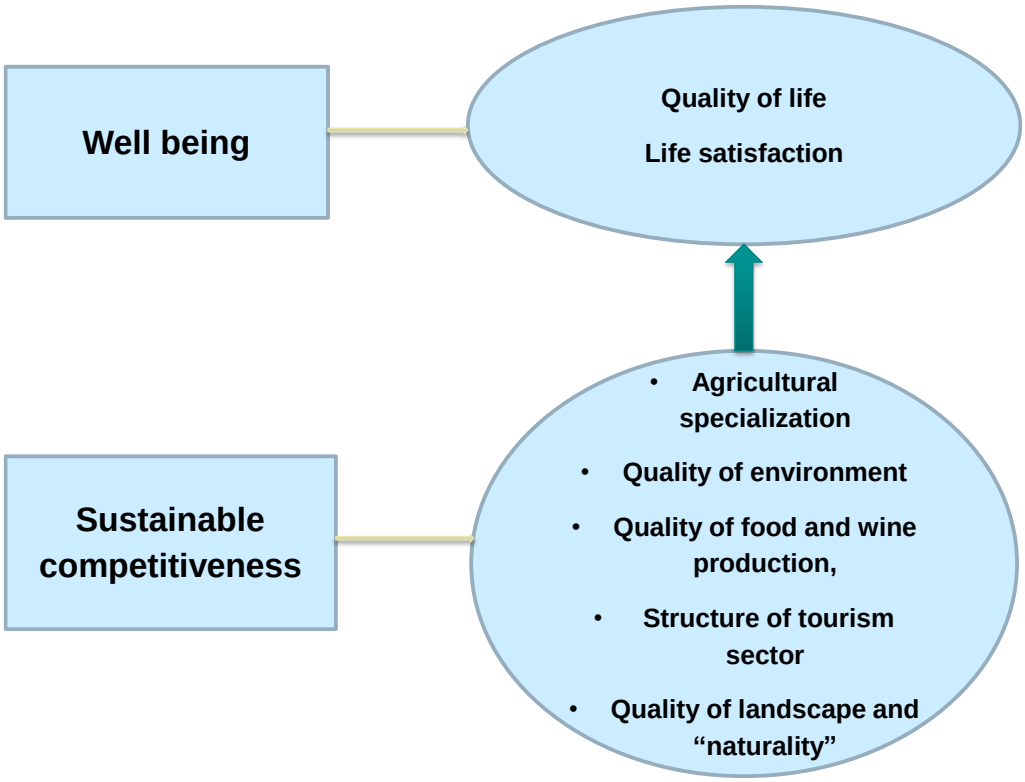

Figure 1: The model of local agro-food systems

3. Quality of food production in the Italian agro-food system

In the ranking according to the distribution of quality labels in Europe Italy shows the best performance, with 261 quality labels in food products (Pdo, Pgi, Tsg), followed by France with 208 products and Spain with 173, as shown in Figure 2. To investigate the reasons of the best performance of Italy we use the described scheme using elementary variables and composite indicators with a focus on wine production.

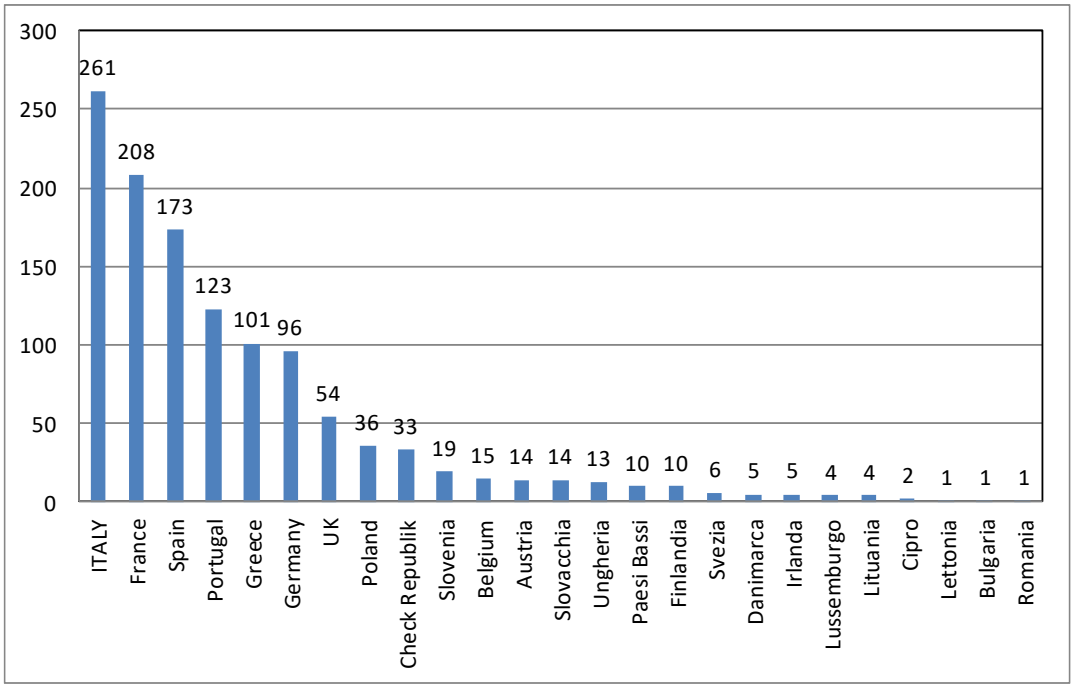

Figure 2: Distribution of quality labels in Europe

Source: European Commission - Geographical indications and traditional specialities, 2014

We choose to run a territorial analysis because of the different distribution of Pdo, Pgi and Tsg at both regional and provincial level as we can see from figure 3, which highlights the best results of Emilia Romagna and Lombardia (126 and 125 products with quality labels). This result is partially reflected at provincial level as shown in the corresponding ranking, where the provinces of Bologna, Forlì-Cesena, Modena and Ravenna in Emilia Romagna and Brescia and Bergamo in Lombardy are in the group of the best. For the empirical application of the theoretical framework both the region and the province as units of analysis and a period of time from 2009 to 2014 are considered.

In order to apply the proposed conceptual framework to the case of local agro-food systems in Italy the composite indicators of quality of life calculated by Sole24ore and a subjective indicator of life satisfaction are used to represent well being. For the representation of the multidimensional driver 18 variables were collected, using as sources the main Italian datasets, reports and studies conducted periodically in Italy on the social, environmental and economic systems. We obtained one dataset made of 20 observations for regional analysis and another one made of 103 observations for provincial level.

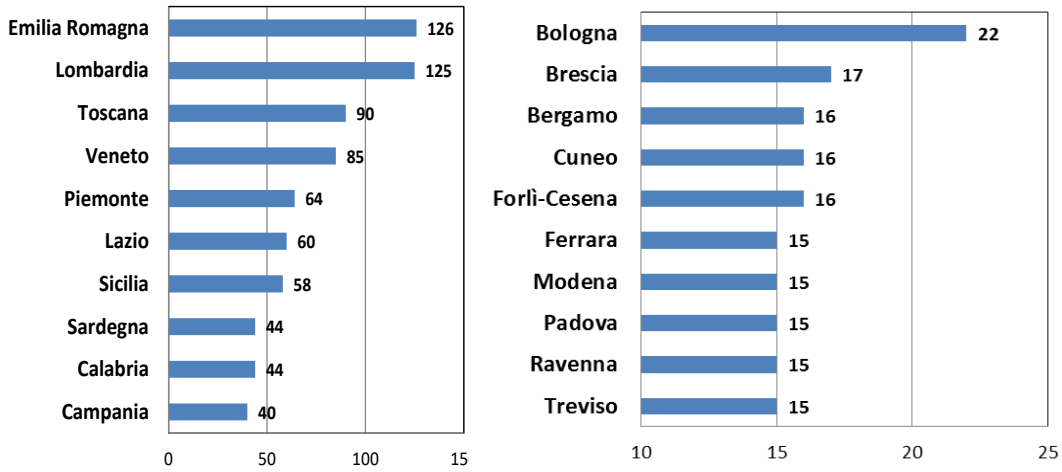

Figure 3: Top 10 regions and provinces in Italy for quality labels in food products
Source: Ismea - Qualivita, 2014

The variables were associated with the dimensions that define the theoretical framework: agricultural specialization, quality of environment, quality of food and wine production, structure of tourism sector, quality of landscape and "naturality". Starting from this dataset of 15 variables were selected through the study of their structure, using descriptive statistics and graphical representations, to verify, by examining asymmetry and kurtosis, the normality of the distributions and the homogeneity of their variation range. Where deemed appropriate, some steps were taken to a transformation of the elementary variable and subsequent standardization. Two different multivariate approaches are used to explain the relationships among dimensions that describe well being in local agro-food systems, according to its representation as region or provincial level. The statistical technique chosen for the representation of relations between well being and sustainable competitiveness of Italian regions is bivariate correlation and the one chosen for Italian provinces is ordinary least squares (OLS) to estimate the unknown parameters in a linear regression model.

4. Results

At regional level a correlation coefficients of Pearson is calculated between life satisfaction and each driver variables associated to sustainable competitiveness dimension. The analysis shows some interesting evidences and Figure 3 highlights these results. Statistical analyses show positive correlations between quality of life (or life satisfaction) and Gdp per capita (correlation coefficient equal to 0,7) and quality of environment at regional scale (0,6). Some regions of North East of Italy such as Valle d'Aosta and Trentino Alto Adige show a good performance, because they reach a balanced result in the sphere of well being: a high level in GDP per capita but also in the dimensions that go beyond the economic sphere such as life satisfaction and environmental quality. Some regions of the South of Italy don't show a good performance: for example Campania has a very low level of GDP per capita and life satisfaction, Calabria has a negative score in the environmental index and it doesn't even reach the average level of life satisfaction.

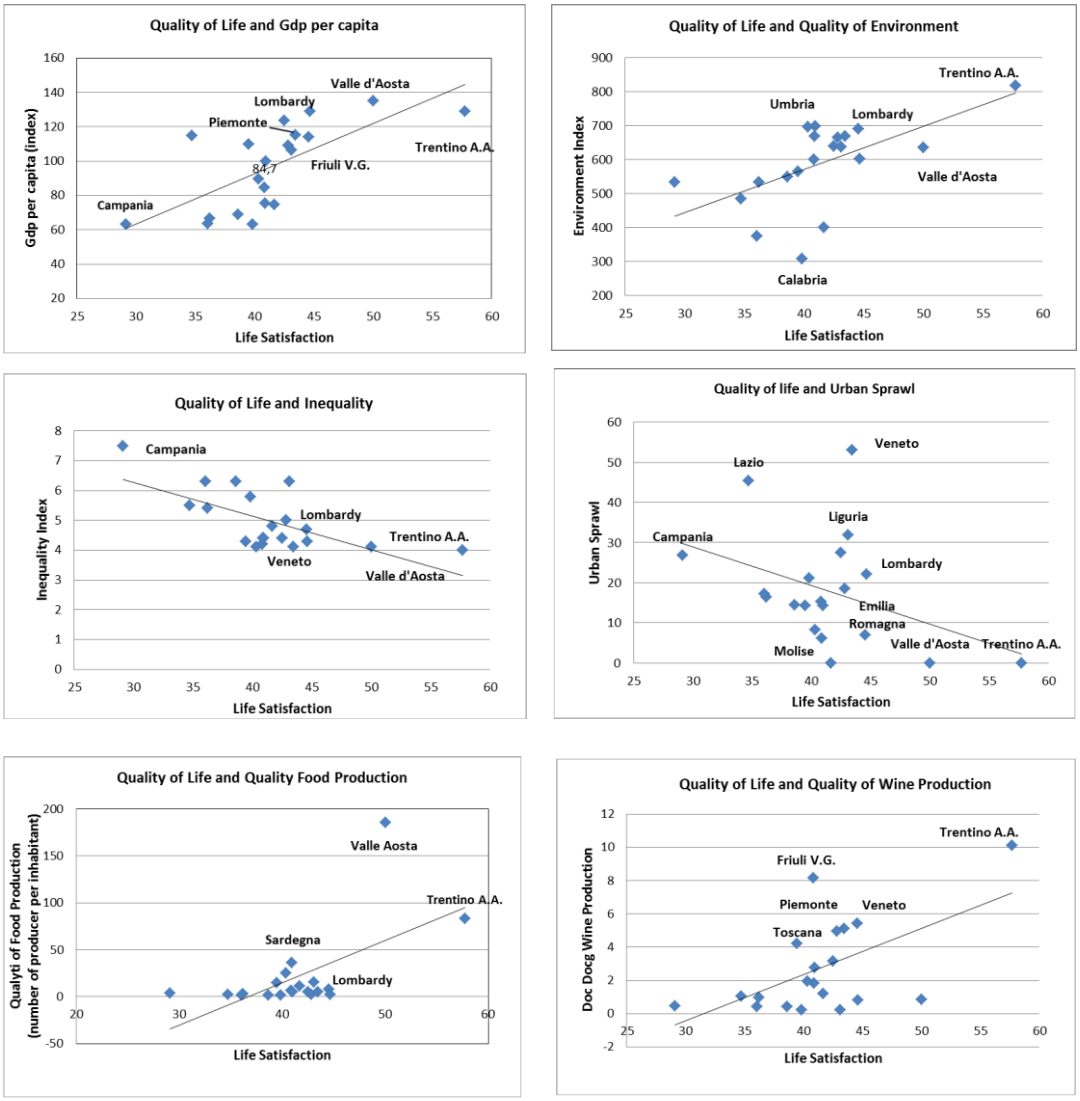

Figure 3: The relations between well being and sustainable competitiveness in Italian regions

There is a negative relation between quality of life and inequality index of income distribution at regional scale (correlation coefficient equal to -0,7), with an equal distribution of income in Trentino Alto Adige and Valle d'Aosta and an unequal one in Campania. Sometimes the growth of economic wealth has a high social cost that is reflected in a high inequality in income distribution and it penalizes life satisfaction. We can also notice a weak inverse relation with urban sprawl, which highlights the effects of another social and environmental cost of industrialization and urbanization on regional well being. The analysis of correlation between life satisfaction and food and wine production produces a first positive result but suggests a further in-depth analysis.

At provincial scale we run a regression in order to analyse the effects on a quality of life index (2008-2014 Sole24ore) of some explanatory variables (Table 1). We use GDP per capita which represent the economic dimension of development and the Ecosistema Urbano 2014 composite indicator which represent the environmental state of territory. Quality of food production is represented by Controlled Denomination of Origin (Doc and Docg) and Protected Geographical Indication

(Pgi) in the wine sector, and Designation of origin (Pdo) or Protected Geographical Indication (Pgi) in the sector of cheese and food (Allaire et al., 2011). We use tourism flow per inhabitant to represent territorial attractiveness and the density of agrotouristic enterprises to represent this specific sector of local touristic offer.

	OLS 1	**OLS 2**
Indipendent variable	**Stand. Coeff. (t, Sig.)**	**Stand. Coeff. (t, Sig.)**
Doc Docg production	0,317 (3,06; 0,003)	0,301 (3,02; 0,003)
Pdo/Pgi firms per inahb	0,168 (2,03; 0,045)	0,174 (2,24; 0,027)
Tourism flow per inahb	0,287 (3,04; 0,003)	0,301 (3,33; 0,001)
Enogastronomy index	0,134 (1,26; 0,211)	0,194 (1,85; 0,067)
Agroturistic enterprises pc	0,018 (0,185; 0,854)	-0,055 (-0,56; 0,575)
Pdo/Pgi per million inhab		0,257 (3,11; .002)
Adjusted R2	0,35	0,41
Durbin Watson	1,6	1,9

Table 1: Provincial well being: output and drivers
(Dependent variable: quality of life composite indicator)

Wine production is not linked to quality of life but we notice a good relation between this composite indicator and quality wine production (stand. coefficient equal to 0,301 in the OLS 2). Other explanatory variables that highlight a positive impact on quality of life are tourism flow per inhabitant (stand. coefficient 0,301) and Pdo/Pgi per million inhabitant (stand. coefficient 0,257). At the provincial scale the analysis shows the performance of Bolzano, Trento and Gorizia in the Easter North of Italy, with good results in quality of life and touristic and gastronomic sectors. The local attractiveness and the orientation of gastronomic production towards quality and diversification has an high impact on the composite indicator which summarizes several dimensions of economic and social well being. Quality of life of Arezzo and Firenze in Tuscany seems to be explained by the cultural and gastronomic specialization of the touristic offer of these territories. The Adriatic areas Macerata and Ancona complete the map of the best provinces.

5. Conclusions

This work offers some insights on the relations among the dimensions of local development with a focus on some specific territorial assets such as quality of landscape and environment and rural development. The aim is to contribute to the knowledge of the importance of sustainable and innovative use of the resources (Graziano, 2013), with particular emphasis on food as expression of the historical heritage of the rural communities and as product for shaping the agricultural

landscape. (Sonnino and Griggs-Trevarthen, 2013). The improvement of these territorial assets represents a goal for territorial planning and the heart of a modern sustainable tourism in search of authenticity and life quality, food and territory. A conceptual framework is adopted to define the relations between well being and these assets in local agro-food systems and it is applied to the case of Italian regions and provinces. In this model the output variable is represented by life satisfaction in the regional case and life quality in the provincial one. Agricultural specialization, quality of environment, quality of food and wine production, structure of tourism sector, quality of landscape and "naturality" are associated to sustainable competitiveness as driver of life quality.

The analysis shows some interesting evidences such as the negative relation between life quality and inequality index of income distribution and inverse relation with urban sprawl, as social and environmental cost of urbanization and economic development. Valle d'Aosta and Trentino Alto Adige show a good performance, because they reach a balanced result in the sphere of well being.

At provincial scale wine production is not linked to quality of life but we notice a good relation between this composite indicator and quality wine production. Other explanatory variables that highlight a positive impact on quality of life are tourism flow per inhabitant and quality label of products per million inhabitant. Bolzano, Trento and Gorizia in the Easter North of Italy, Macerata and Ancona in the Adriatic area, Firenze and Arezzo in Tuscany highlights a strong specialization in the sector of gastronomic tourism as well as quality wine and food production.

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