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Productive district for the valorization of wine-making in Sicily*

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1. Introduction

Identified in the planning phase for the implementation of cohesion policy, the industrial district is a new instrument for territorial/industrial governance, called upon to act as the beneficiary of a number of funding actions and thus as a driving force for the local economy.

In Sicily, those industrial districts instituted pursuant to Art. 56 of regional law LR 17/2004 (which charges the Regional Department of Cooperation, Trade, Crafts and Fishing with establishing selection criteria), have been recognized as priority actors in the growth and development of local production; this action will be implemented through the strategic planning tool known as "Patto per lo sviluppo del distretto" ("Pact for district development") which in turn must comply with all other regional actions concerning local development and the internationalization of the regional economy.

Pursuant to regional regulations, industrial districts must be made up of a cluster of businesses which operate in similar markets as well as a range of institutional actors, such as universities, centers for research and advanced training, local government bodies, and they must act as horizontal or vertical production chains (including premises or activities in other countries); they must contain no fewer than fifty firms and have no fewer than 150 employees; they must present a high degree of integration; and, finally, they must demonstrate a high degree of technological innovation.

Where the requisite conditions for the identification of an industrial district exist, a number of "interstitial opportunities" present themselves. These vary in function of the degree of inter-connectedness, competition and cooperation that exists among the various firms involved and are demonstrated by flexible specialization in both their production methods and types of products produced broken down by sector and the specialization of individual firms and the increase in production efficiency achieved; in relation to an endogenous process of innovation (whereby the needs of the firms play a significant role in determining innovation at local level); by the presence of a widespread vocation for entrepreneurship, the presence of highly trained, quality human capital (which can lead to significant competitive advantage); followed by the role played by local institutions and bodies (which may play a significant role in the supply and quality of general services, such as schools, healthcare, transport, and the creation of infrastructure).

2. Characteristics and peculiarities of Sicilian wine-making districts

The "Sicilian Wine-making District" ("DPVS") and the "Western Sicilian Wine-making District" ("DVSO") have been set up by a number of different firms, research bodies, local bodies and other stakeholders in local development, with the aim of establishing a multi-year plan for an integrated framework of actions to provide every link in the wine-making chain with the competitive and organizational advantages required to overcome the sector's traditional weaknesses and to underscore the sector's potential for growth, closely tied as they are with the region's vocation for vine-growing and wine-making.

The first business layer, as it were, involves a wide range of firms located throughout the region, corresponding to the modern concept of the metadistrict, a dynamic structure featuring a number of industry leaders and constituted along rectilinear lines; it is the ideal vehicle to convey know-how, and features a high level of specialization, producing opportunities on a territory-wide scale. The second layer focuses on the others around Trapani and Palermo, which are key players in the region's wine-

making sector, representing, as Marshall has pointed out, "the fruit of correlation and integration among the various producers concentrated within a narrow area" (Becattini, various years). Given the general opinion that traditional districts will evolve into metadistricts (if they do not, they will face extinction due to their lack of competitiveness compared with other business areas), further functional aggregation and concentration in the regional wine-making sector would also be advisable, to be achieved by uniting the two existing districts.

The two clusters feature 121 and 171 firms respectively (table 1) and (based on information recorded on company books) employ around 2,745 units 39.7% of which belong to the DPVS and the remaining 60.1% to the DVSO. In each case, the firms involved in the districts belong to businesses operating along the vertical and horizontal chain (grape-growers, wine must producers, wine, rectified, concentrated and distilled musts, bottling and distribution), as well as actors from the world of research (public and private), local government (municipal and provincial levels especially), and services supporting agro-food firms (food safety, cooperation and international partnerships, local development agencies), credit providers, and industry representatives, Chambers of Commerce, and so on. The DVPS features a high concentration of private, marketing-oriented firms, present in both the national and international markets, with turnover on the increase and strong commitment to investment in production. This situation is confirmed by ASSOVINI Sicilia, the producers' association set up in 1998 to represent firms involved in the highly-competitive bottled fine wines market and contains those firms which have done most to change the image of wine-making in Sicily (Bacarella A, 2009). The DVSO features a large number of "Cantine sociali" (wine-making cooperatives), 44 in total, concentrated in the provinces of Trapani and Palermo, made of up producers which, due to the size of their operation and/or the organization of their business, do not ferment or bottle themselves. This district embraces 60,000 hectares under vine with potential production of around 3.2 million hectoliters of wine, 20% of which is bottled (a little under 640,000 hectoliters), and with sales of around 250 million euro. It is worth pointing out that despite the long-standing commitment to production (the area produces a number of fine DOC and IGT wines), the "cantine sociali" have not as yet achieved a sufficient match between their production and what the market wants. There are, however, a number of industry leaders in the district in question which have overcome this difficulty, imposing themselves both at home and abroad, with acclaimed quality wines (especially whites, special wines and liqueurs); there are also other activities connected with the sector, such as laboratories, barrel-making, labels, other wine-related products, marketing and distribution, and tools and machinery for vine-growing and wine-making as well as road haulage and shipping.

The strategic actions planned by the wine-making districts - which fall within the regional policy framework for strategic actions in 2007-2013 - highlight the interest the industry has for industrial research, experimentation and technological transfer, further professional training, and the promotion and implementation of IT systems and technology. Less attention is paid to other issues such as energy saving, environmental improvement in production areas, cooperation with other regional and inter-regional districts which are encouraged by regulations covering promotion of the districts. There are also provisions for branding, product support and appropriate marketing actions, among others.

The strategic priorities identified aim to reinforce the traditional strengths and opportunities of the region's wine-making sector (*terroirs* with well-established vocations and potential; varietal conversion; high quality; positioning firms in the mid-to-high bracket; modernizing cellars in response to market demand; development of cultural itineraries, such as wine routes; research into improving local vines; potential for further growth; adoption of rigorous standards and methods), as well as working on how to overcome the chronic internal weaknesses and external threats (mechanization of planting and harvesting; insufficient integration across the production chain; spread of eco-compatible production; excessive number of cooperatives with little or no market-orientation; the breakdown and fragmentation of businesses; contraction in domestic consumption; low level of bottling; increase in foreign competition). Both "strategic plans" take as their starting point the need to valorize the local territory and the ties between the land and wine; it is hardly surprising that in recent years there has been an active drive to relocate wine production to those areas which have the strongest potential to produce quality grapes, the basis of quality wines. Furthermore, the plans both call for networking, internationalization and a boost to the economy. There are proposals to participate in the governance of

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the regional development plans and in the case of the DPVS there also proposals to introduce tax credits and simplify bureaucratic procedures, as well as develop tailor-made financial products and easier access to credit. In the case of the DVSO, there are proposals to set up a portal for the district linked to the Wine Exchange as well as shared logistic hubs in Northern Italy and Northern Europe, district wine-galleries in main towns and cities in Italy and abroad, and the creation of a consortium.

3. Outline of investigative methodology

Our research was articulated in two phases. The first made use of Geographic Information System (GIS) technology which allowed us to verify and assess the “level of cover” of governance tools by territorial overlapping of the various planning instruments used at local level and/or the classification of the territories (presence of fine wine production – DOC, IGT, DOCG labels, etc.)

To this end, we archived, analyzed and modeled the geo-referenced data we obtained, which also allowed us to reach a fair approximation of the spatial distribution of the information available for the various districts, focusing on the exclusive use of information on wine-making firms. We used GIS to overlay and combine various data linked to the territory in order to create new levels of information to use in the analysis of actions to be carried out.

The second phase of our investigation involved the identification of firms belonging to the Sicilian Wine-making District (“DPVS”). We used a carefully prepared questionnaire in order to obtain technical and financial information regarding: firm’s registered name and premises, the business owner, organization, personnel, production, characteristics of supply and sales markets, relationships with other actors/stakeholders in the district, degree of product and process innovation, transfer of know-how, competitive factors and strategic choices, public instruments available to support business activity, strengths and weaknesses, judgment of how well district works. The decision to concentrate on this district was made because, given the District’s regional nature, it represents a range of particularly interesting and significant characteristics (the type and form of wine-making firm; it provides a clearer picture of the cooperation and competition existing between the different actors; the presence of a high degree of endogenous innovation).

In this way, we obtained a considerable quantity of data and information on wine-making districts, data which in part will be illustrated in this paper and which will prove to be very useful in bridging gaps in our knowledge and understanding of the structure and organization of the sector and in our further assessment of the industry’s traditional strengths and weaknesses. Moreover, policy makers may use the data to draw up projects for territorial development linked to wine-making and based on the promotion of the best in local production and on the region’s peculiar wealth of culture, food and wine.

4. First results of GIS analysis of Sicilian wine-making districts

Focusing on vine-growing and wine-making, Figures 1 and 2 clearly show the principal structural and territorial data for the approved districts in Sicily. The DPVS involves 48 municipalities in the region, equivalent to a surface of roughly 627,000 hectares, with focal points – characterized by the high density of wine-making firms involved in the district – at Marsala (in the province of Trapani), and Palermo. In the case of the DVSO, the GIS information shows 27 municipalities involved in the district, spread across 329,000 hectares and with a polarization of firms in the municipalities of Marsala, Mazara del Vallo, Partinico, S. Cipirello, Palermo, etc. Cross-referencing these data leads one to question whether it is opportune to continue maintaining these two Sicilian wine-making districts as distinct entities, which, while there are differences in size and spread, could well be overlaid and unified in a single strategic vision for growth or, at least, networked, especially given the clear evidence of the polarization of wine-making firms operating in the same areas which, moreover, are strongly characterized by regional wine-making. All of the foregoing may well contribute to an improvement in “lifestyle”, or, in other words, in wellbeing as understood in terms of per capita income, and in working and consumption conditions, insofar as, as Becattini pointed out (2008), there is a direct link between the district’s “social cohesion” and its long-term competitiveness.

Towards the end of 2009, in Sicily the authorities issued a call for co-financed projects as part of the “Piani di sviluppo di filiera” (“plans for production chain development”), part of the PO FESR Sicilia 2007-2013 funding allocation, in particular to sustain the development and consolidation of districts, the creation of shared services (promotion, marketing, logistics, environmental certification, etc.), the introduction of innovations supporting businesses and eco-innovation in production processes. This opportunity cannot at the current time be fully analyzed as the deadline for the presentation of projects is still open. Nevertheless, an early effect can be seen in the creation of a network by eight of the 11 Sicilian agro-food districts, which also includes the DVSO. This is a functional network created with a view to answering the call for projects and could well contribute to improving the competitiveness of the different systems involved, through actions which favor the quality of products and services, making systemic and planned use of marketing, finance and managerial training.

5. First results of the survey of wine-making firms in the DPVS

The tailor-made questionnaire was mailed in December 2009 to all the wine-making firms present in the DPVS, but in light of the tight deadline and after reminders, we received 13 positive replies. Of these, a number had to be discarded due to incomplete information; thus, the final survey sample counted nine complete questionnaires (Table 2).

One third of the respondent firms are located in the province of Trapani, and are incorporated as stock companies (publicly traded, or limited companies); almost all present functional links with grape-growing, controlling surfaces under vine, and in all cases the firms are integrated with regional production.

The firms in question present differing profiles with regards to employment, with the number of fixed employees ranging from a minimum of three to a maximum of 73, and with a number of seasonal workers ranging from four to 150 units. The questionnaires show that while for those phases connected with the planting and harvesting of the grapes, no particular degree of specialization is required from the labor force (this is also due to the increasing use of mechanization), for the processing and transformation phases, workers are required to have a greater level of specialization (including wine-making knowledge). This in turn creates greater difficulty in sourcing personnel and reduces workers’ mobility. The difficulty is overcome by one of the district’s particular strengths, namely, the intense network of relationships established at local level which makes it easier to recruit qualified workers as employers find it easier to assess the personal and professional qualities of potential workers.

Another specific feature of the district is the membership of the wine-making firms in question in networks (including contractual arrangements) with other firms from the sector at national level (on average 40% of cases) and international level (25%), as well as the relationships with a range of institutions – in the sphere of education (10%) and public bodies (40%) – actively involved in promotion in national and international markets (trade fairs), where they establish commercial partnerships and act as ambassadors for the industry. This type of action has been slow to take off because since the official recognition of the district in 2007, the first public call to tender has been issued only very recently (the call for production chain projects in 2009), opening the way to resources capable of stimulating growth of the whole production system through actions concerning process sustainability, innovation, environmental certification, more aggressive marketing, the promotion of foreign exchanges and international partnerships. Finally, the degree of firms’ market-orientation (in 20% of cases), albeit limited, has supported the growth and development of firms involved in the district and, through promotion of packaged and quality bottled products in foreign markets, has contributed to enhancing the image and knowledge of the whole Sicilian wine-making sector.

6. Final considerations

The survey has allowed us to identify a number of characteristics that are typical of the Sicilian wine-making district model, in light of the recent recognition and approval of the industrial districts provided for under Art. 56 of regional law LR 17/2004. The essential features are the presence of a large number of small and medium firms alongside industry leaders; the production of quality products which determine a high level of market segmentation; (relatively intense) ties between agriculture, firms which process and commercialize the grapes, and other support or supply services; the development of human capital; flexible specialization (flexibility in production methods and in the type of products offered); the established links with the territory; a network of social connections and relationships which link the local community with businesses; support from local bodies.

The results obtained from our analysis of the firms involved allow us to formulate a number of considerations which, while not conclusive, point the way forward for further investigation. Our survey shows the presence of a dynamic, forward-thinking business community, able to keep pace with the market and which, despite growing competition from other European and non-European countries, successfully competes in foreign markets on the strength of the quality of its products.

The presence of two wine-making districts in Sicily is further evidence of the particular vitality of this industry, as can be seen by the willingness of many firms to commit to investing in enhancing production performance over the next few years. The same dynamism that drives the districts also means that they will have to engage with the changing nature of their product and the marketplace in order to keep pace with changes in the wider economy. One way forward, which could well dovetail with the new directions and forms that the socio-cultural, technical and productive forces at work in the district will bring to the fore, could be aggregation, the setting up of networks of districts to make more efficient use of limited available resources, firmly based, it goes without saying, on grassroots strategies.

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Table 1 - Structural aspects of "Sicilian wine-making districts" (2007) (*)

Districts	Firms		Employees n.	Potential of the district				Turnover mio euro
	n.	which cellars n.		Surface ha	Production hl	which bottled hl	Production value mio euro	
DPVS	121	101	1,091	n.d.	n.d.	n.d.	n.d.	n.d.
DVSO	172	130	1,654	60,180.0	3,200,000.0	638,956.4	270.6	249.8

(*) Elaborations on strategic planning tool known as "Patto per lo sviluppo del distretto" ("Pact for district development").

Table 2 - Main characteristics of the wine-making firms in the "Sicilian wine-making district" (*)

<u>Location, %</u>		<u>Fixed employees, n.</u>	
- Agrigento	22.2	- minimum	3
- Trapani	44.5	- maximum	73
- Palermo	22.2	- average	22
- Catania	11.1		
<u>Legal status, %</u>		<u>Seasonal employees, n.</u>	
- Cooperative	11.1	- minimum	4
- joint-stock company	33.3	- maximum	150
- limited liability company	33.3	- average	43
- simple society	22.3		
<u>Vine surface, ha</u>		<u>Network with other firms, %</u>	
- minimum	13.00	- national	40.0
- maximum	5,500.00	- international	25.0
- average	1,137.10		
<u>Origin raw material, %</u>		<u>Relationships with institutions, %</u>	
- regional	100.0	- training	10.0
- other regions	-	- promotion	40.0
- foreign markets	-	- commercialization	15.0
		<u>Marketing oriented, %</u>	20.0

(*) Our processing on data obtained through direct survey.

FIGURE 1 - TERRITORIAL DISTRIBUTION OF THE PRODUCTIVE DISTRICT "VITIVINICOLO SICILIANO"

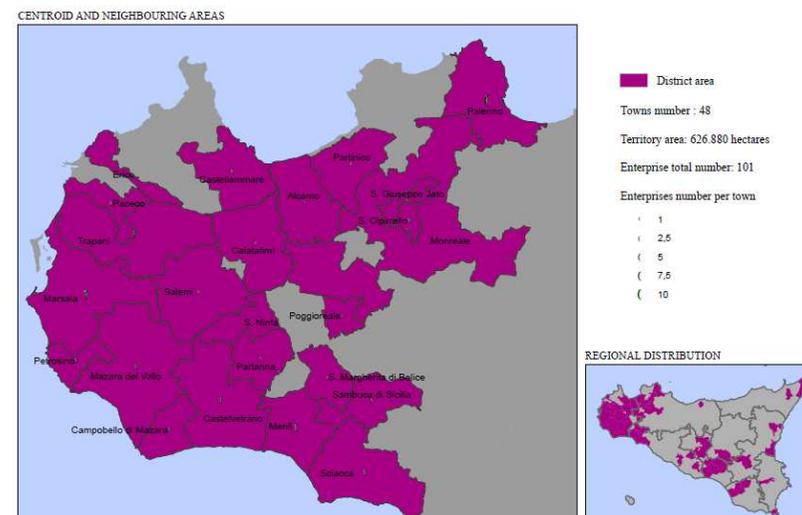


FIGURE 2 - TERRITORIAL DISTRIBUTION OF THE PRODUCTIVE DISTRICT "VITIVINICOLO SICILIA OCCIDENTALE"

