

## **Social Network Analysis (SNA) and Business Performance Assessment: the case study of a Sicilian wine farm**

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Formal organisation, usually set out in organisation charts, is an essential tool to describe tasks and main duties within a firm; it is therefore suitable for the management of stable and standardised situations, where formalisation is functional to define what to do and how to do it.

On the contrary, the use of formal organisation is not appropriate when it is necessary to deal with unsettled and unpredictable situations. A dynamic firm needs a flexible and easy-fitting structure, with a self-organizing capacity in real time in order to adapt to external changes. It is therefore extremely interesting and useful to identify people who operate in a firm not only by means of their offices and professional qualities, but also by completing this information with an analysis of their characteristics and “social” skills which represent the individual resources.

More in detail, informal organization is defined as the body of the relationships actually acted by the actors of an organization, and of their individual characteristics (age, firm office, professional skills, negotiating capabilities, etc.): in the social network theory, each actor relates to the others and such interactions modify their behaviours.

The findings of the early experiments carried out at the Eastern Electric Company in Chicago are reported by F. J. Roethlisberger and W. J. Dickson in their work of *Sociology of Management and Organization* that laid the groundwork for the Human Relations Movement in organizational behaviour: *“Many of the actually existing patterns of human interaction have no representation in the formal organization at all, and these are inadequately represented by the formal organization ... Too often it is assumed that the organization of a company corresponds to a blueprint plan or organization chart. Actually it never does.”* (“Management and the Worker: 5”, 1939, p. 559)”

To summarize, a general view of the resources effectively available within a firm can be better provided through the display of the social relationships actually operating, rather than by means of organisational charts.

A growing number of sociological and firm management studies define innovation as a social process through which learning from different fields can deeply interact and thus create new knowledge.

The knowledge essential to innovative processes can be transferred also through “invisible” and unforeseeable paths, mainly based on interpersonal relationships and values of trust and cooperation.

Interactions among the members of network are variables responsible for the decisional processes within the firm. Such a methodological approach severely undermines the assumptions of neoclassical economics, which considers price as the sole source of information obtainable from the exchange, and market as the virtual place where atomistic individuals and firms can meet.

Within a network of subjects the firm is not to be seen as a single unit, but as a social subject interacting with the environment which affects or is affected by it. The size and density of social networks and the nature of interpersonal interactions, significantly affect the efficiency of firm performance. For the above mentioned reasons many companies invest in social capital, as they usually do with regard to other professional skills.

The effectiveness and efficiency of an organization (innovation, productivity, and employee satisfaction) hinge on the strength of the relationships of its people. When the manager/principal understands the patterns of interaction among the people in his organization, he can leverage this knowledge to:

- accelerate the flow of knowledge and information across functional and organizational boundaries;
- identify the thought leaders, key information brokers and bottlenecks;
- target opportunities where increased knowledge flow will have the most impact.

Through the application of the "Social Network Analysis" to a case study, this paper aims to explore the existing relationships within a Sicilian winery in its own socio-economic and institutional framework.

More precisely, when the concepts of Social Network Analysis are applied to management, and therefore are adapted to work interactions within the informal organization of a firm, then we deal with the "Organizational Network Analysis" (ONA).

Another related objective of the study concerns - through the historical observation of the firm along its expansion path towards a more and more effective penetration in the wine market - the assessment of the contribution provided by the "Network" factor to the company performance.

In the present study we propose to use an "ad hoc" methodology for the assessment and the mapping of the informal organization among the actors of a wine farm. This methodology is supposed to offer an integral outlook of the "forces" which actually pull the firm development processes.

With respect to other economic activities, the relational dimension of agricultural firms - especially when they are small and located in marginal rural areas - is still more affected by family links and daily practices. The ONA analysis, applied to a wine farm located in the province of Palermo, firstly intends to allow the identification of the agents potentially able to hold bargaining power due to their centrality and interposition (thought leaders, key information brokers and bottlenecks);

secondly, ONA analysis aims to identify underutilized people in the firm environment, in order to improve their positioning in the informative and decision-making flows.

The operational part of the research takes the start with the interviews conducted with the principal and all the other agents involved in the firm system, aiming at the identification of their relationships and the impact they may have on firm performance.

The next step is the classification of the firm relationships into homogeneous categories. At the same time, data concerning Human Capital attributes (age, qualifications, role in the firm, personal and professional skills, propensity to innovation, ability to listen and communicate, coordination and organisation, etc.) are collected, and such information, together with the reconstruction of the most remarkable events in the firm history, is utilised to get an insight of roles and relational affinity. The extant relationships are displayed in an “ad hoc” actor-to-actor symmetrical matrix and mathematical processing carried out by means of the 6.232 version of UCINET software. Further graphical representations is carried out through the NETDRAW software (2.089 version), effective in setting analysis characterised by a large number of junctions, as it occurs in the described case study.

The investigated winery had never been object of an ONA analysis and this study is certainly improvable under many respects. Since this methodology is innovative in the field of the agricultural economics studies, further research is certainly needed, both of methodological and applied nature.