



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

ORGANIZATION AND STRUCTURE OF THE CHAIN IN INTEGRATED PROJECTS FOR THE FOOD CHAIN IN THE REGION OF BASILICATA: THE EFFECTS ON THE NEW RURAL DYNAMICS¹

JEL classification: Q10, Q18

Francesco Contò *, Piermichele La Sala **, Mariantonietta Fiore ***

Abstract. *The introduction of the Integrated Projects for the Food Chain (IPFs) requires the development of models capable of interpreting the dynamics of vertical and horizontal coordination between agents and the definition of the issues that most affect the ability of professionals to provide value added to goods and products to acquire in exchange a competitive advantage. With reference to the Basilicata region, the production structure of the region and the recent development of the Integrated Projects for the Food Chain, this research has developed a new model of territorial organization of rural development.*

To connect a new food chain model that combines theories of productivity, typical of contract economics, with those of social welfare and environmental economics can be crucial: multifunctionality could assume the key role related to the needs of income and efficiency of companies in various stages of the classic food chain, in a context in which planning and consultation are major determinants of local and regional development.

Keywords: *Food Chain, Rural Development, Integrated Project for the Food Chain (IPFs)*

1. Territorial organisation of local development: an introduction

The crucial goal of the Committee on Agriculture and Rural Development of the European Parliament (2010a and 2010b) is to seek a better functioning of the food chain for the adoption of any tools that can improve its operation in order to offer farmers a more equitable level of income, while maintaining affordable prices for consumers. The quality and identity of territorial production, pooled with the need to develop regional and interregional networks, are the main factor of integration and competitive advantage (Contò, 2005, 2010; Gellynck and Kuhne,

* Full Professor, University of Foggia, Department of Economic, Largo Papa Giovanni Paolo II, 71100, Foggia, Italy, e-mail f.conto@unifg.it

** Assistant Researcher, University of Foggia, Department of Economic, Largo Papa Giovanni Paolo II, 71100, Foggia, Italy, e-mail: pmlasala@yahoo.it

*** Assistant Researcher, University of Foggia, Department of Economic, Largo Papa Giovanni Paolo II, 71100, Foggia, Italy, e-mail: m.fiore@mail.unifg.it

¹ Revised Extract of paper presented at International EAAE-SYAL 'Spatial Dynamics in Agri-food Systems: Implications for Sustainability and Consumer Welfare', Parma, 27-30/10/2010.

2010) and of rural enhancement (Antonelli, 2010). Thus, the sectoral analysis appears as a kind of micro detail of inputs and outputs (Saccomandi, 1991) carried out upstream and downstream between integrated and specialized firms (Arena *et al.*, 1985). The concept of supply chain becomes a useful reference for the analysis of complex issues related to the production, processing and marketing of products with a view to understanding and analysing the relationships, especially vertical, among segments of production (Contò, 2003); for Malassis (1979) the food system can be considered as a set of interdependent activities, which aim to produce goods that may have different destinations: final consumption, intermediate consumption, or both. The chain² is the route followed by a food product to arrive from the initial stage of production to final use, and the total interactions among all agents involved in this process (Saccomandi, 1986; Pilati, 2004). Starting from these assumptions, the supply chain analysis allows identification of internal and external trading relations undertaken by other branches of agricultural production; the analysis of the supply chain becomes relevant when analyzing the phenomenon of vertical integration (De Muro, 1992), as when connecting two production processes when the output becomes the first input of the second, a development that generates added value. The chain is a system offered on the market that competes with other forms of organization of trade. In this perspective, the centrality of the consumer and fulfilment of expectations are important elements in the behavior of individual companies: this concept is the basis of models of competitive advantage of the value chain (Porter, 1985). The value chain allows us to consider the enterprise as a system, generating activities of value, meaning the price that the consumer is willing to pay for the product which meets their needs. Even in the short supply chain (direct selling, zero kilometer, farmer's markets, etc.), the creation of the final value for the consumer is the result of the connections between the value chain of the farmer and consumer. The use of the concepts of value chain system and the Porter value system permits us to view the industry as an "extended enterprise", with its value chain on the inside confluence of value chains of individual firms (Antonelli, 2010; Parolini, 1996) that refer to a context defined by a network of more connections between economic actors (firms, households, public, various organizations) and final buyers whose co-presence generates a total value which should be read as taking the perspective of the consumer (Contò *et al.*, 2009).

The case of Basilicata Region

The principle of territorial actions dictated by the European Union to the Regions for the execution of Rural Development Programs 2007/2013 met, in Basilicata, a programmatic fragmentation generated in recent years and with reference only to the agri-food sector (rural) of 4 districts and 8 Local Action Groups (LAG).

The District of Vulture and the Agro-Food Quality District of Metapontino were inaugurated in 2003 and 2004 and have, since 2006, adopted their own development program concerning the characteristics of businesses, agricultural food production and area of expertise with special reference to issues of supply chain development, promotion, training and logistics. In these districts, however, the absence is obvious, of an ability to structure and implement the program guidelines identified, and to allow, for example, through the establishment of centres for community services, the provision of a wide range of services to companies in order to determine an improvement in competitiveness, as well as appropriate policies for local marketing. This

² The distinction between industry and product supply chains or chain in the strict sense is meaningful (Arena *et al.* 1985): the first refers only to the final product, while the second refers to the output of goods, made up of both intermediate goods and final goods. This distinction is important when we proceed to the choice of methodology for analysis of feed and food chain.

was generated by the limitations in the regional law (LR 1/2001). In 2010, the Rural District of Materana Hills and Mountains and the Local Production System of the Pollino - Lagonegrese were recognised, and in a few months they also will be required to submit district development programmes to Basilicata Region. Therefore with regard to the primary sector, Basilicata's territory is organized in local production systems, each according to its own logic of districts for productive activities as regards the agricultural sector; only the north-west of the region remains out of this development model. In 2010, following the call for the submission of Local Development Plans regarding the Leader Axis Regional Rural Development Plans (RDP) from 2007 to 2013, the Region of Basilicata provisionally approved, for the current programming period, eight Local Action Groups (seven of which were already operating in the previous period) whose actions involve almost the entire Region, except for a few towns:

- Metapontino e Basso Sinni (CO.SV.E.L.);
- Medio Basento (Le Macine);
- Bradanica (Bradanica);
- Marmo Melandro (CSR Area Marmo Melandro);
- Alto Basento e Camastra (Basento Camastra)
- Vulture Alto Bradano (Sviluppo Vulture Alto Bradano);
- Alto e Medio Agri, Alto Sauro (Akiris);
- Lagonegrese, Alto Sinni, Pollino e Sarmiento (La Cittadella del Sapere).

Again in 2010, these actors of rural development added new corporate holders with many development programs relying on Axis I and III of the RDP regional partnerships represented by the chain. The regional call for the submission of Integrated Supply Chain Projects³, published in December 2009, was drawn up with the aim of using the Integrated Supply Chain Design, for all regional action supporting the production of fruit and vegetables, cereals, livestock (meat and milk), wine and olive oil, defining for each of these sectors a number of specific objectives. The IPFs constitute coordinated and systematic operations relating to several measures of the RDP and can be activated through a process of negotiation, in which the various participants in a particular food supply chain take part through the submission of a joint application (Integrated Project Sector) submitted by one proponent. The Basilicata region considers that these projects will follow those relating to networks and proximity of protected areas: thus, the entire region will be fully involved in the development of the sector, although the latter are characterized by the presence of different Leader and different programming strategies. In conformity with the new development perspectives in the agricultural field, the role of the local productive systems is very important for local development and investment policies (Frascarelli and Sotte, 2010). The districts and the local productive systems are newcomers to the new programmatic model of the EU's development policy, because they have a flywheel role in its application; as a matter of fact, this policy is based on territorial-related actions. For instance the RDP, which is a strong point in the 2007-2013 planning system, is based on a strategic, integrated and territorial approach, and on the main role of the local partners in promoting development strategies. Thus, the EU's rules about rural development and Common Market Organizations (COM) apply for consultation and partnering strategy, involving the stakeholders in all the planning and implementation

³ In particular, the call aims, through an approach of overall design with aggregation and cooperation between the various participants in the chain, from production to marketing, to encourage the concentration of supply, increase the added value and competitiveness, promote typical products, increase the bargaining power of employers.

phases of those programs. The technical tools are divided into territorial promotion tools (LAG), linking with the territory and the III and IV RDP's Axes, and the economic-productive ones for firm development (the District), involving local firms and the RDP Axes I and II (food chain programs, factory investments, innovation transfer for local firm impact – and common service development, i.e. creation of the Service Centre for the same local factories – territorial impact). The interaction between these technical tools of operative support (LAG agreement pact - District) allows enterprises and territory to share development ideas and projects. In line with the new EU programming, the District, serving as the territorial organization of development, is able to identify strategies for action that can foster the effective integration of territorial RDP EAFRD with the policies promoted by the OP ERDF and the ESF OP: Research and Innovation System and the Information Society can be included under the ERDF or training for businesses in the district to rely on the ESF.

2. Relations between business and integration of supply chain

It is essential to base the analysis of supply chain relationships between enterprises of the same chain in a given local production system. To this end, network analysis is useful to verify and evaluate whether and how companies are able to take advantage of favorable external conditions for their production systems to develop the value chain and create value for the same. The role of relationships and factors such as trust and informal (and formal) relationships may well be crucial in the process of creating value and competitive advantage for the sector as a whole and for the individual companies involved. The network economy offers the advantage of better performance to small and medium size firms. From this point of view, the potential relationship is essential for the development of industry, enabling customers to improve the performance of companies that can benefit from competitive conditions in which actions are integrated in a vertical supply chain system together with horizontal actions of the Integrated Planning. Network analysis has thus enabled a qualitative analysis of the relationship between the companies. It was possible to highlight the characteristics of the relations (content, density, strength, confidence) and the flow of resources exchanged. The methodology used was applied through investigations on companies that took part in focus groups organized by the Basilicata Region in collaboration with INEA - Basilicata to discuss the underlying strategies of the Integrated Projects with operators and to take note of their needs. In the light of this analysis, the relationships between the actors in the chain can be classified into two types: market relationships and those of cooperation. These were in turn divided into formal and informal. The former are often governed by instruments such as contracts where, for example, the withdrawal of one partner entails the necessity of concluding a new contract for the parties concerned in order to continue the cooperation, or based on statutes or multilateral agreements that can only be amended with the approval of a majority of the partners concerned. The transition from one type of collaboration to another is often found to be gradual. Reports on the market relationships indicated a low potential. The number of informal relationships were more numerous, revealing a greater potential. Informal co-operation is the most important index for evaluating the potential relationships in a sector or group of companies. These relationships are solely based on trust and reciprocity. They involved exchange of the following resources (in order of frequency): know-how, information, equipment, labor, encouragement and contacts. The analysis of resource flows has shown that the trade concerned, above all, two stages: production and marketing.

The exchange of information, experience and know-how brings clear benefits for firms by raising production standards. With regard to marketing, however, there was little opening and little interest in sharing know-how. As noted above, the advantage of production at the regional level depends not only on relations between companies in the sector, but also on being in the world of research, education, politics and public administration. These actors have an important role in the economic development of sectors, both for the resources made available, either because they can act as intermediaries between the firms themselves, or because they can give rise to competitiveness for our economy. The competitive ability of a territorial system is, in fact, dependent on policies of territorial marketing, innovation, training and quality of resources, as well as the collective strategies of negotiated planning and strategic planning. Both local companies and institutions play an important role in supporting regional competitiveness through innovation strategies, organizational restructuring and internationalization to improve the external conditions necessary to network and compete at global level. To this end, it becomes essential for the development and strategic planning of programme activities which, based on specific territories, are able to overcome its limitations in the context of the global market. This is the meaning of a system, the creation of value that goes beyond the normal rules of economic theory and economic policy, where actions may play a role (Contò *et al.*, 2011). Agricultural food production, according to its ability to build a system, conveys messages, lifestyles, social patterns and economic implications, represents an important source of competitive advantage for the region and vice versa. These actions represent added cultural and economic implications for the production itself, for the territory and for the entire local production system. The whole is capable of generating an output system that institutionalizes - through internal relationships and relationships between companies and external environment - the product, and creates a positive collective reputation and social utility. These aspects create a new concept of value creation in the supply chain environment; starting from the quality of production and the degree of coordination of local actors, the models theorized allow tools to generate economic growth over territorial and sectoral level. These concepts can help to overcome some weaknesses detected in the food chain of Lucania, affecting in particular, the relationships between actors in the chain, such as:

1. the lack of vertical integration of the sector;
2. the critical relationship between the stage of agricultural production and processing with reference to existing contractual arrangements due to the difficulty of using negotiated formalized agreements;
3. information asymmetries that penalize the agricultural phase, only partially overcome by the expansion of processing centers;
4. the slowness and difficulty in quality management systems through the implementation of traceability/tracing, due to financial difficulties and management difficulties in convincing the membership.

It is obvious that the integration of the supply chain must act in a tangible way to improve these weaknesses by creating, through the instrument of integrated projects for the sector, new relationships: in short, an organization different from those in the sector, leading to an approach to the market in a different and more proactive way. Its synergistic application of the measures of the RDP 2007 - 2013 included in the IPFs contribute substantially to the improvement of relationships between the parties adhering. Following this route, it is essential to refer to the establishment of partnerships as envisaged by the IPF sector through the Temporary Association of Purpose and activation of the contracts for the supply chain. In this way, the vertical integration

of supply chain is through contract between the actors of the production phase with those of the stage of processing and marketing: the first reduces the risk of the market due to price variability, the latter gains safety of supply of raw material in terms of its quantity, quality and consistency of delivery deadlines. Such coordination can make an effective improvement in the quality of production through greater connection between the demands of industry and the upstream productive sector. But the bond is also critical for the quality of production delivered in partnership in line with the provisions in the contracts of the obligation to transfer and discipline production, processing and marketing. For those involved in the different phases, this system of relationships can be a guarantee of income for primary producers, improved technologies and processes for the sustainability of the sector, embodying certain levels of the market but also an increase in the know-how and awareness of human capital (Contò and Lopez, 2008).

3. Multi-functionality as a crucial driver

We propose a possible schematic representation of competitiveness in agriculture, therefore, based on four groups of factors: 1) structural features and business, representing the physical, economic, specific characteristics of farms and farmers; 2) the economic and institutional environment, driven by the policy and sector regulations 3) the conditions of production factors (labor and funds), widening the geographical location of infrastructure and equipment; 4) the relationships with the market for the supply of inputs upstream and downstream, related to the sale of farm produce. If the territory has to become a factor of competitiveness, it needs to take into account a number of factors difficult to quantify and recognize that in many cases there is not even a market value (eg. landscape). This complex analysis, however, ignores the role of highly specific local material resources, intellectual, environmental, social and institutional, that are the result of social and collective actions with strong local roots. A new paradigm of agricultural policy therefore emerges, marking the transition from a productivist vision, which was pinned on the mechanisms of stabilization of markets and production incentives, with an orientation in which the support is to encourage functional behavior of producers to meet the expectations that society feeds to the primary sector. Thus the multifunctionality of agriculture, promoted the conservation of the landscape, brought vitality and a balanced development of rural areas. We can define multifunctionality as the production of public and private goods to help to diversify farm incomes in the sign of socially and ecologically sustainable development (farm, agriculture, education and therapeutic production of local products, tradition and quality linked to the territory). According to this interpretation, multifunctionality is gradually becoming a real business strategy through which to diversify the profile of production and expand opportunities for income. The current concept of competitiveness in agriculture should therefore be more analytical than that traditionally used and take into account all the factors of competitiveness, including those linked to multifunctionality. Agriculture, which, as well as producing safe and quality food, is engaged in environmental protection, conservation of resources and rural landscapes and in socio-economic development of rural areas through employment generation, is defined as multifunctional agriculture (European Commission, 2001) and enterprises, in implementing their activities meet these goals, then, can be regarded as multifunctional agriculture. Agricultural multifunctionality in the enterprise can become the hub of the three goals of economic, environmental and social development. The IPF must become, in fact, the means by which to act according to a logical system to create more added value than the sum of the benefits produced by the implementation

of individual measures and, for the party that promotes the public project, should contribute to sustainable development of land and employment. These objectives underpin the policy choices that land, synthetically, can refer to both pillars of the CAP, apply to all types of business with the difference that the economic enterprises or what might become such must combine these objectives with those of efficiency that every company must pursue in order to compete. The common framework for both types of enterprise thus becomes multifunctional agriculture involving factors such as sustainable agriculture, territorial balance, local socio-economic development, food security (food safety) landscape conservation, the environment and others. Agriculture, compared to other productive activities, is characterized by the strong presence of joint production of output having the connotation of food and non-food goods, and the utility or disutility, both positive and negative, is charged on the whole community. It is clear that the purpose of improving the competitiveness of the farm, the first type of goods and services, those targeted at the market, is the factor of interest for firms defined as economic. But the services will be the crucial driver. In fact, it is by virtue of its relationship of interdependence with the land and the environment that multifunctional agriculture can contribute to socio-economic and sustainable development of rural areas by promoting employment and multiple jobs, stopping the process of depopulation and environmental degradation, using the opportunities of modernization of products with typical quality traits. Multi-functionality has to be seen, therefore, as an economic opportunity for farms.

4. Conclusions

Forms of vertical coordination are an important strategic lever to cope with changes in a scenario of increasing competition. The 'must' to develop long term relationships assumes, ultimately, particular emphasis in the agro-food sector. This is even more true in a totally rural environment such as that of Basilicata, a region strongly linked with the territory and with local actors in the agro-food sector and where the preferences and eating habits are moving increasingly from simple needs to a request for food increasingly differentiated by quality, safety, information, and more value-added content. With this research it has been possible to determine the development prospects of the food chain in Basilicata. The difference between the chain as modelled by agricultural economic theory and that of the integrated project for the food chain identified virtually by the RDP 2007-2013 in the Basilicata region, whose investments are in an imminent start-up phase, is apparent. In view of this, the results of this survey are even more significant for guiding the choices of economic agents in the process and for considering the traditional heritage in the relationship activated with the socio - economic system in which it is located and the mechanisms that regulate the food chain itself to permit them to add greater value at the production phase. Integrated Projects for the Food Chain, supported by strong agreements and internal rules dictated by various types of contracts between operators active at different stages of the food chain itself, confer, in fact, a value that is often not determined by the ability of real operators do business, but by relationships that significantly affect the process of value creation. Managing and directing these positive relationships, knowing the needs of the food chain, may be, therefore, a crucial source of competitive advantage for traders and for the territories. Functions of synchronization performed by firms operating in later stages of the food chains of a particular product and their relationships within it lead to a growing correspondence between the final product offered, the maximization of utility functions of different entities that

compose chain and consumer preferences, and permits adaptation to the changing environmental context. The pursuit of these objectives will, of course, influence the efficiency of the whole system and, thus, its competitiveness.

REFERENCES

- Antonelli G. (2010), *La prospettiva del valore nell'analisi delle filiere agroalimentari*, paper presented at XVIII Convegno di Studi SIEA, Venezia 3 - 5 giugno 2010.
- Arena R., Rainelli M., Torre A. (1985), Dal concetto all'analisi di filiera: un tentativo di chiarimento teorico, *L'Industria* n. 3.
- Committee on Agriculture and Rural Development of the European Parliament (2010a), *Relation on "Fair Revenues for farmers: better functioning of agro-food chain in Europe"*, J. Bovè, Bruxelles 13/04/2010.
- Committee on Agriculture and Rural Development of the European Parliament (2010b), *Document on "Fair Revenues for farmers: better functioning of agro-food chain in Europe"*, J. Bovè, Bruxelles 25/02/2010.
- Contò F. (2010), *How to promote quality in the food supply chain to the benefice of farmers and consumers in a context of increased competition?*, Hearing Parlamento Europeo, Bruxelles, 4 maggio 2010.
- Contò F., (a cura di) (2003), *La nuova frontiera della politica agricola, della qualità e dell'ambiente. Certificazioni, sicurezza alimentare, tracciabilità, marchi, marketing ed associazionismo: nuove sfide per la filiera olivicola*, Milano, Franco Angeli.
- Contò F., (a cura di) (2005), *Economia e organizzazione delle filiere agroalimentari. La filiera dell'olio di oliva di qualità*, Milano, Franco Angeli.
- Contò F., La Sala P., Papapietro P. (2009), Il ruolo degli enti locali e strumentali nella governance dello sviluppo rurale in relazione all'Health Check: il sistema produttivo locale del Pollino - Lagonegrese, XLVI paper presented at Convegno di Studi SIEA, Piacenza, 16-19 settembre 2009.
- Contò F., La Sala P., Papapietro P. (2011), The wine food chain in Apulia: from theory to practice, *Economia Agro-Alimentare*, vol. 3, pp. 426-499.
- Contò F., Lopez A. (eds.) (2008), *Organizzazione territoriale e sviluppo locale nell'area dell'Alto Tavoliere. Capitale umano e territori intelligenti nell'esperienza del Distretto Agroalimentare del Tavoliere*, Milano, Franco Angeli.
- De Muro P., (1992), Sul concetto di filiera, *La Questiona Agraria*, 46.
- Frascarelli A., Sotte F. (2010), Per una politica dei sistemi agricoli e alimentari dell'UE, *Agriregionieuropa*, 6, 21, June.
- Gellynck X., Kuhne B. (2010), Horizontal and Vertical Networks for Innovation in the Traditional Food Sector, *International Journal on Food System Dynamics*, 2, pp. 123-132.
- Nomisma (2008), *XI Rapporto sull'Agricoltura Italiana*, Milano, Edagricole.
- OECD (2001), *Multifunctionality: Towards an Analytical Framework. Directorate for Food, Agriculture and Fisheries*, OECD, Paris.
- Parolini C. (1996), *Rete del valore e strategie aziendali*, Milano, EGEA.
- Pilati L. (2004), *Marketing agro-alimentare*, Trento, Editrice Uni-service.
- Porter M. (1985), *Competitive Advantage*, New York, Free press.
- Regione Basilicata (2009), *Programma di Sviluppo Rurale 2007-2013*, Regione Basilicata.
- Regione Basilicata (2009), *Programma di Sviluppo Rurale 2007-2013-Approvazione Bando per la presentazione dei Progetti Integrati di Filiera*, D.G.R. Regione Basilicata n. 2200 del 16/12/2009, B.U.R. Regione Basilicata n. 59 del 31/12/2009.
- Regione Basilicata (2009), *Programma di Sviluppo Rurale 2007-2013 - Approvazione Avviso Pubblico Esplorativo Finalizzato all'Attuazione dei Progetti Integrati di Filiera di Prossimità e delle Aree Protette*,

D.G.R. Regione Basilicata n. 2203 del 16/12/2009, B.U.R. Regione Basilicata n. 59 del 31/12/2009.

Saccomandi V. (1991), *Istituzioni di economia del mercato dei prodotti agricoli*, Roma, REDA.

Unioncamere Basilicata (2010), *Annuario Statistico Regionale 2009 Basilicata*, ISTAT – Ufficio Regionale per la Basilicata, Potenza, Unioncamere Basilicata.

GLOSSARY

IPFs = Integrated Projects of Food Chain

LAGs = Local Action Groups

RDP = Rural Development Plan

COM = Common Market Organization

EAFRD = European Agricultural Fund for Rural Development

ERDF = European Regional Development Fund

ESF = European Social Fund

OP = Operational Programme

INEA = Istituto Nazionale di Economia Agraria