Bio-based and Applied Economics 3(3): 249-269, 2014
DOI: 10.13128/BAE-14681

Full Research Article

Structures and dynamics of transnational cooperation networks: evidence based on Local Action Groups in the Veneto Region, Italy

Elena Pisani*, Laura Burighel

Dipartimento Territorio e Sistemi Agro-forestali (TESAF), Università di Padova, Italy

Abstract. The paper assesses the structures and dynamics of transnational cooperation projects promoted by Local Action Groups (LAGs) in different periods (from LEADER II to LEADER Axis) using Social Network Analysis (SNA) in a specific case study: the Veneto Region in Italy. The classical indexes of SNA have been critically examined, and the paper also presents innovative indexes that can capture the peculiarity of transnational cooperation: disaggregated densities of the network and transnational centrality of the node. These indexes are useful in order to quantify how transnational a network actually is, and to measure the power-information that each actor (LAG) can acquire through its transnational contacts. The methodology can become a tool for Managing Authorities to implement new forms of evaluation of transnational cooperation of LAGs.

Keywords. Rural, transnational cooperation, LEADER, social network analysis, evaluation.

JEL Codes. O22, O18

1. Introduction

Since the 1950s rural areas have been extensively analyzed and evaluated using a sectorial approach that allows the comparison with certain urban standards and, consequently, deprives them of their peculiar characteristics (Bell *et al.*, 2010; Sotte, 2006). In the last 30 years a new narrative has emerged considering each rural territory as a unique environment, with a local combination of social, economic and institutional factors (Saraceno, 2013). The rural space is now conceived as a multifunctional territory and the diversities of rural areas are reckoned as potential economic opportunities, complementary to urban ones (Sivini, 2006; Leon, 2005). The importance of a territorial approach to rural development has been officially recognized by the European Commission (EC 1997, 1996, 1988) and the concept has been applied through the LEADER (*Liaison Entre Actions de Développement de l'Économie Rurale*) initiative, which proposes an 'area-based', 'bottom-up' and 'multi-sectorial' approach (EC No 1698/2005 and EC No 1305/2013). According to its prin-

* Corresponding author: elena.pisani@unipd.it.

ISSN 2280-6180 (print)
ISSN 2280-6172 (online)

ciples, LEADER tries to promote each territory preserving and fostering its specificities and diversities, which are considered as relevant economic opportunities (Saraceno, 2013) but with a new socio-institutional method that distinguishes LEADER from other classical rural development programmes and projects. With this method, local actors should be inserted in a process of territorial regeneration achieved through innovative local governance, structured on a 'new social order' (Papadopoulou *et al.*, 2011). In order to highlight strengths and weaknesses when passing from ambitious theoretical premises to real applications, a critical and systematic evaluation of the financed initiatives are required.

This study contributes to the literature on the evaluation of rural development with specific reference to the EU-funded LEADER projects, proposing a quantitative evaluation approach based on classical and new indexes of Social Network Analysis (SNA) applied to transnational cooperation (TNC) projects promoted and implemented by Local Action Groups (LAGs). The results, referred to the Veneto Region and evidencing the evolution of the networks in different programming periods (LEADER II, LEADER + and LEADER Axis), could be used by the Managing Authority to assess LAG performance and informative efficiency in implementing these initiatives. The application is essentially descriptive and does not attempt to exhaustively explain the dynamics behind the projects' ties; it is a pilot study that could be integrated in future researches by questionnaires and interviews assessing the quality of the initiatives.

The paper opens with a brief theoretical overview of the neo-endogenous rural development approach and then focuses on the main features of the transnational cooperation projects financed by LEADER. Despite the innovative lines, critical elements have appeared in the implementation, mainly related to regulatory and administrative frameworks, setting up of partnerships, project design and effective cooperation during implementation (ENRD, 2014). All these elements evidence the necessity for a detailed monitoring and evaluation process (follow-up phase), with core elements that refer to 'project's outputs in social, economical, and environmental terms; method of implementation and partnership performance; and future prospects or mainstreamed outcomes' (ENRD, 2012: 32). The evaluation method – SNA – is then briefly presented. SNA has already been applied to the investigation of internal network structures and network dynamics of LAGs (Marquardt *et al.*, 2012; Nardone *et al.*, 2010; Franceschetti, 2009), but not yet to a detailed examination of the transnational networks promoted by the LAGs. The proposed methodology, applied to the case study of TNC projects of Veneto LAGs for different LEADER programming periods, applies to specific measures and results. These show a reduction in the size and density of the network that, at first sight, could be interpreted as a worsening performance of TNC projects. In practice, the data attest to a reshaping of the transnational, national and regional compositions, suggesting increased efficiency in the information flows within the network of TNC projects and a better selection of cooperating LAGs. The paper concludes with an overview of the case study results and some suggestions for possible future research, evidencing the applicability of the method to different regional situations.

2. Transnational cooperation in neo-endogenous rural development

The present state of discussion on rurality is the result of an evolution in the approaches to rural development, passing from an 'exogenous' to an 'endogenous'

approach, till reaching the contemporary 'neo-endogenous' approach (Shucksmith, 2009). The first was influenced by Keynesian and neo-liberal economic theories that, even if starting from diverging viewpoints, led to a sectorial top-down approach, and conceived the development of rural areas as a consequence of the development process initiated in urban areas (Lowe, 2006; Lowe *et al.*, 1995). The endogenous perspective enhanced the local human and environmental differences, and balanced the economic, social and environmental factors using a combined locally-based approach (Gkartzois and Scott, 2013), progressively integrated in a new mode of governance to coordinate the actors at different levels. As a consequence, various local actors have to promote local development, within a network composed not only of horizontal but also vertical relations (Shucksmith, 2009). The locally-based approach retained from the previous endogenous perspective the consideration of rural areas as places with unique characteristics and resources that necessitate flexible and specific paths for development (Lysgard and Cruickshank, 2013); it also gives continuity to some elements of the exogenous approach, as it draws attention to connections with extra-local territories (Shucksmith, 2009; Vitale, 2006; Leon, 2005). The post-modern economy is 'informational, global and networked' (Castells, 2011), therefore local and supra-local actors are also interconnected within a complex global network. These connections are developed in a bi-dimensional way (vertical and horizontal) within an economic sector and intersectorially to gain access to new economic opportunities (Murdoch, 2000; Ray, 1998). The rural interconnections can be graphically represented by a 'rural web'; this continuously reshapes its power relations and development opportunities (Esparcia, 2014). Moreover, the capacity to develop relations represents one of the possibilities for rural areas to renew their image and become more attractive and, consequently, stimulate the urban demand for rural products and services, thus increasing their economic performances (Ploeg, 2006; Vitale, 2006).

The increased importance of rural development is acknowledged within the EU Common Agricultural Policy (CAP)[1] (European Commission, 2011; Oostindie *et al.*, 2010). In particular, the LEADER Approach provided an opportunity for the European institutions to implement a neo-endogenous approach that could deal with rural areas from a multidimensional perspective (Shucksmith, 2009; Vitale, 2006; Murdoch, 2000; Storey, 1999). The LEADER Approach considers the diversities of the territories as the starting point for development programmes in such a way that the specific economic, social, environmental and institutional conditions become the basis for a territorial route to integrated economic development (Wellbrock *et al.*, 2013;). Thus, the capacity of any territory to be integrated in the globalized economy only partly relies on sub-national social, cultural and institutional forms of support; it is through the enhancement of a local network in parallel to the supra-local network that multi-level governance is strengthened (Tola, 2010; Depoele and Ebru, 2006).

Local Action Groups, the local public-private partnerships implementing the LEADER Approach, are characterized by the following elements: empowerment and social capital (Casieri *et al.*, 2010; Nardone *et al.*, 2010; Storey, 1999), local governance (Macken-Walsh and Curtin, 2013, Secco *et al.*, 2010; Shucksmith, 2009) and local service provision (Lukesch, 2007; Gaudio and Zumpano, 2006). LAGs promote all these elements by means

[1] The contribution of CAP to market support decreased from 74% in 1992 to 10% in 2009. Contemporarily, the expenditure for Rural Development rose from 8% to 20% and the contribution to direct payments rose from 18% to 70% (EC, 2011).

of cooperation, structured on the network and its dynamics that provide the opportunity to acquire resources and innovate (Esparcia, 2014, Moseley, 2003). As with the 'rural web', the network is formed by relations developed on horizontal and vertical levels and, referring to the horizontal relations, it is possible to distinguish between local horizontal ties, among local partners that form the LAG, and extra-local horizontal ties. Different forms of cooperation can be activated to strengthen these extra-local ties: Article 63 of the Council Regulation No 1698/2005, dealing with cooperation within LEADER, distinguishes between interterritorial and transnational cooperation. The former refers to cooperation of territories within the Member State, the latter to cooperation of territories among Member States and possibly extra-EU countries. LAGs can also implement and facilitate other forms of cooperation related to the other three Axes, but in this study the focus is on transnational cooperation[2].

According to Ray (2006), the transnational perspective on European rural development acknowledges the 'big transformation' of the last 30 years. In fact, transnational cooperation has the potential to intensify knowledge exchange and expand the pooling of expertise of individual and collective actors that are fundamental to obtain new viewpoints in the solution of problems and, consequently, innovation (Dwyer, 2013). Local territories have specific knowledge and information that are part of their competitive advantage (Saraceno, 2013) and transnational cooperation can contribute to knowledge sharing among different European territories (Saxena *et al.*, 2007; Ray, 2001). Moreover, Ray (2001) specifies three rationales that motivate LAGs participation in TNC projects. The first is 'to take advantage of similarity', as the project stems from commonalities, related to natural resources, cultural heritage or services provided. The second is 'to take advantage of complementarity', combining different resources or places for a continuous action, according to a strategic alliance of co-opetition where conflicting and shared interests are combined to create a fruitful relationship (Pasquinelli, 2013; Bengtsson and Kock, 2000). These two rationales are fundamental for a learning process where common and different knowledge is shared and elaborated by the local actors to their reciprocal advantage, enhancing a European added value (Mariussen and Virkkala, 2013). Moreover the flows of innovative knowledge among the network actors are fundamental in order to promote smart development, based on social innovation (ERDN, 2013; Dax *et al.*, 2013). The third rationale is 'to reach critical mass', for example using international contacts to increase the size of local markets and the number of end consumers, thus final beneficiaries (Ray, 2001). TNC projects create the possibility for integration in the European system, keeping pace with international economic structures (ENRD, 2012). LAGs can thus be compared to network organizations with 'repetitive exchanges among semi-autonomous organizations that rely on trust and embedded social relationships to protect transactions and reduce their costs' (Borgatti and Foster, 2003: 995). Transnational and inter-territorial cooperation is a way to enlarge LAGs networks in order to become integrated in the supra-local system, and take advantage of the creation of shared capital for some common actions. Indeed, LAGs have a public-private nature and should try to create economic and social benefits for their territory (Council Regulation (EC) No 1698/2005, Art. 61,

[2] It is not easy to take a census of transnational projects at European level during the LEADER Axis period, since the ENRD projects database is updated voluntarily and could result as incomplete. The EU Rural Review – Leader and Cooperation (2012) presents 209 projects approved and notified to the European Commission.

62; Regulation (EU) No 1305/2013). The network activity is fundamental to produce these impacts, as pointed out by various authors (Aral and Alstyne, 2007; Borgatti and Foster 2003; Burt, 2002; Granovetter, 1973).

Based on the above discussion, it appears necessary to identify some tools that can assess the results not only concerning policy standards but also networks and governance. SNA can be a useful tool for the structural evaluation of this activity, especially if adequately integrated by a qualitative assessment capable of explaining the context and dynamics of the network (Midmore *et al.*, 2010). More specifically, the added value of SNA corresponds to a quantitative assessment of the entire network (i.e. relations, information and knowledge flows), not limiting the analysis to the performance of single LAGs.

3. Methodology

Transnational cooperation projects are an opportunity for LAGs to exchange fruitful information, contextual expertise and local knowledge, thus enhancing the opportunities for innovation and economic benefits. These projects create a social and institutional grid of direct and indirect relations, thus SNA is the most appropriate tool to quantitatively and graphically describe the network structure and the power distribution within it (Hanneman and Riddle, 2005; Borgatti and Foster, 2003). Actors are parts of various and overlapping networks that influence their behaviour and norms, so an analysis of their relations can depict the social and relation dimensions of the economic activity (Wellman, 1988). Different authors have applied SNA to the analysis of LAGs structures and relations, but the focus has mainly been on the network composing the LAGs, while here it is on the network created by the LAGs during TNC projects. Some of the classical SNA indexes have been adopted and these are summarized in Table 1.

In the proposed evaluation approach of TNC projects, it is also important to identify specific indexes able to capture the peculiar features of the transnational cooperation. Analysing the network of TNC projects implemented by the LAGs (that is a regional ego-network[3]), different kinds of nodes have to be considered: transnational, national and regional. These are related according to the squared matrix in Table 2.

In order to assess the peculiarities of TNC project networks , the densities of each type of relation are summarised in Table 3. These decomposed indexes are based on the classical idea of density (ranging between 0 and 1) as a proportion of all ties actually present in the network compared to those that could potentially be (Borgatti and Everett, 1997), but here the formula is applied on specific types of relations. It is now possible to analyze how much the projects invest in the activation of transnational, interterritorial or regional ties according to the potential opportunities they have. These indexes indicate the composition of the network density according to equation (1).

[3] An ego-network is a network composed of a specific actor (ego) and the actors to which ego is connected (alters); all of them are connected by ties (Everett and Borgatti, 2005). In this case study the ego corresponds to a group actor (the Veneto LAGs implementing TNC projects), and the alters are the partners of Veneto LAGs involved in TNC projects (national and transnational LAGs).

Table 1. Some classical Social Network Analysis indexes.

Size (N)	Number of nodes in the network.
Degree (d(n))	Number of relations that involve the specific node.
Density (D_n)	Proportion of all ties that are present in the network compared to those that could be present. It corresponds to: , where tot(n) is the total number of ties present in the network.
Geodesic Distance	Number of ties of the shortest path linking two nodes.
Diameter	The larger geodesic distance of a network.
Component	Maximal subgraph in which a path exists from every node to every other.
Degree Centrality	Normalized number of edges incident upon a node, corresponding to: $\frac{d(n)}{N-1}$
Closeness Centrality	Normalized geodesic distance of a node from all the other nodes in the network.
Betweenness Centrality	Number of geodetic paths that pass through a given node, indicating the role of connector of one actor for the others.
Centralization	Normalized distribution of degree centrality among all the nodes in the network.
Eigenvector Centrality	Weighted degree measure in which the centrality of a node is proportional to the sum of centralities of the nodes it is adjacent to. Intended as a measure of node importance in a network based on its connections.

Source: Borgatti and Everett (1997).

Table 2. Classification of nodes and their relations in a TNC project.

	Regional LAGs	National LAGs	Transnational LAGs
Regional LAGs	*rr*	*rn*	*tr*
National LAGs		*nn*	*tn*
Transnational LAGs			*tt*

Source: own elaboration. Only one-dimensional relations are considered.

$$D_N = \frac{tot(n)}{\frac{N(N-1)}{2}} = \frac{D_{rr} * P_{rr} + D_{nn} * P_{nn} + D_{tt} * P_{tt} + D_{rn} * P_{rn} + D_{rt} * P_{rt} + D_{nt} * P_{nt}}{\frac{N(N-1)}{2}} \quad (1)$$

where $tot(n)$ is the total number of ties present in the network and N is the total of nodes in the network, D_{rr} is the regional density, P_{rr} is the regional ties potential, D_{nn} is the national density, P_{nn} is the national ties potential, D_{tt} is the transnational density, P_{tt} is the transnational ties potential, D_{rn} is the regional-national density, P_{rn} is the regional-national ties potential, D_{nt} is the national-transnational density, P_{nt} is the national transnational ties potential, D_{rt} is the regional-transnational density, P_{rt} is the regional transnational ties potential. To have a clearer idea of the composition of the network ties and to facilitate the comparison over time, the proportion of effective types of ties is also calculated, according to the formula in Table 4. This calculation obtains the percentage of the different types of relations within the network.

Table 3. Density for specific types of relations.

Regional density D_{rr}	Proportion of ties among regional nodes that are present in the network (rr(n)) compared to all the ties that could be present among regional nodes P_{rr} where $P_{rr} = \frac{R(R-1)}{2}$ and R is the number of regional nodes in the network.	$\frac{rr(n)}{P_{rr}}$
National density D_{nn}	Proportion of ties among other national nodes that are present in the network compared to all the ties that could be present among other national nodes P_{nn} Where $P_{nn} = \frac{Na(Na-1)}{2}$ and Na is the number of national nodes in the network.	$\frac{nn(n)}{P_{nn}}$
Transnational density D_{tt}	Proportion of ties among transnational nodes that are present in the network compared to all the ties that could be present among transnational nodes P_{tt} where $P_{tt} = \frac{T(T-1)}{2}$ and T is the number of transnational nodes in the network.	$\frac{tt(n)}{P_{tt}}$
Regional-national density D_{rn}	Proportion of ties among regional nodes and national nodes that are present in the network compared to all the ties that could be present among regional and national nodes P_{rn} where $P_{rn} = R * Na$	$\frac{rn(n)}{P_{rn}}$
National-transnational density D_{nt}	Proportion of ties among national nodes and transnational nodes that are present in the network compared to all the ties that could be present among national and transnational nodes P_{nt} where $P_{nt} = Na * T$	$\frac{nt(n)}{P_{nt}}$
Regional-transnational density D_{rt}	Proportion of ties among regional nodes and transnational nodes that are present in the network compared to all the ties that could be present among regional and transnational nodes P_{rt} where $P_{rt} = R * T$	$\frac{rt(n)}{P_{rt}}$

Source: own elaboration.

Table 4. Proportion of specific types of relations.

Regional/total	Proportion of ties among regional nodes that are present in the network and all the ties present in the network.	$\frac{rr(n)}{tot\ (n)}$
National/total	Proportion of ties among other national nodes that are present in the network and all the ties present in the network.	$\frac{nn(n)}{tot\ (n)}$
Transnational/total	Proportion of ties among transnational nodes that are present in the network and all the ties present in the network.	$\frac{tt(n)}{tot\ (n)}$
Regional–national/total	Proportion of ties among regional and national nodes that are present in the network and all the ties present in the network.	$\frac{rn(n)}{tot\ (n)}$
National-transnational/total	Proportion of ties among national and transnational nodes that are present in the network and all the ties present in the network.	$\frac{nt(n)}{tot\ (n)}$
Regional-transnational/total	Proportion of ties among regional and transnational nodes that are present in the network and all the ties present in the network.	$\frac{rt(n)}{tot\ (n)}$

Source: own elaboration.

The transnational dimension can also be analyzed through transnational centrality (t_c) in relation to the Veneto LAGs, which traces the formula of degree centrality, defined as the normalized number of ties in a node (Borgatti and Everett, 1997), but is based on transnational edges, calculating the total number of transnational relations in the specific node:

$$t_c = \frac{t\,(n)}{N-1} \tag{2}$$

where $t(n)$ is the number of transnational relations in the node and N is the number of nodes in the network.

These indexes can be useful to understand the transnational structure of a network. In particular, through the decomposed indexes of density and the proportion of different types of relations over the effective edges it is possible to measure the composition and transnational component of a network. On the other side transnational centrality helps to understand the relevance given by a node to transnational relations, especially if compared to degree centrality.

4. Empirical application

The SNA and the new indexes presented were applied in a specific case study: the TNC projects implemented by the LAGs of the Veneto Region in different programming periods.

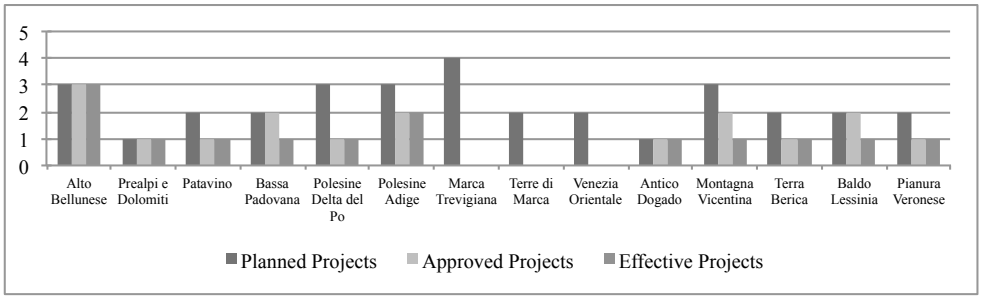
4.1 Case study

In Veneto, Local Action Groups cover 65% of regional municipalities and 38% of the population (Veneto Region, 2010). For the period 2007-2013, Veneto LAGs have implemented the highest number of TNC projects in Italy. Compared to the national level, Veneto is also the region where there is the highest public and private financial contribution to TNC projects implemented during the LEADER Axis period. Despite these positive results, the regional data show discrepancies among planned, approved and effectively implemented projects (see Figure 1), probably due to procedural and administrative difficulties (Veneto Region, 2010). The number of projects implemented passed from 7 in LEADER II to 8 in LEADER + and 7 in LEADER Axis, so it was interesting to analyze the evolution of the network of projects over time.

The following analysis is based on secondary data collected by the Italian Rural Network (RRN) for different programming periods. In particular, the data referred to LEADER II and LEADER + periods have been extracted from the final TNC inventory (Zanetti, 2009; Zumpano, 2001), while the data of the LEADER Axis period represent the state-of-play with regard to implementation of TNC projects (RRN)[4]. To guarantee the consistency and comparison of information no other types of territorial cooperation were considered and the focus is on transnational cooperation of LAGs within LEADER. The collected

[4] Italian Rural Network database: http://89.119.249.9:8080/birt/ProCoopLeader/Index.jsp. Accessed 4 April 2014.

Figure 1. Comparison between planned, approved and effectively implemented TNC projects by LAG in Veneto Region, LEADER Axis programming period.



Source: own elaboration based on projects data from Italian Rural Network at http://89.119.249.9:8080/birt/ProCoopLeader/Index.jsp (accessed 2014), www.gal.veneto.it (accessed 2013), Veneto Region (2010).

data have been processed through the Gephi[5] open source software, which enables the mathematical and graphical elaboration. The results have to be considered with caution because of the changing of LAGs members and territory from LEADER II to LEADER Axis, and the mutating LAGs priorities and political focuses. Besides the assessment of network structure and dynamics, the best and worst LAG performances are evidenced. This could represent a possible limit of the present analysis and a more detailed focus on qualitative issues is required in order to correctly understand the results.

4.2 Analysis of the structure of TNC projects network in Veneto, LEADER II, LEADER + and LEADER Axis programming periods

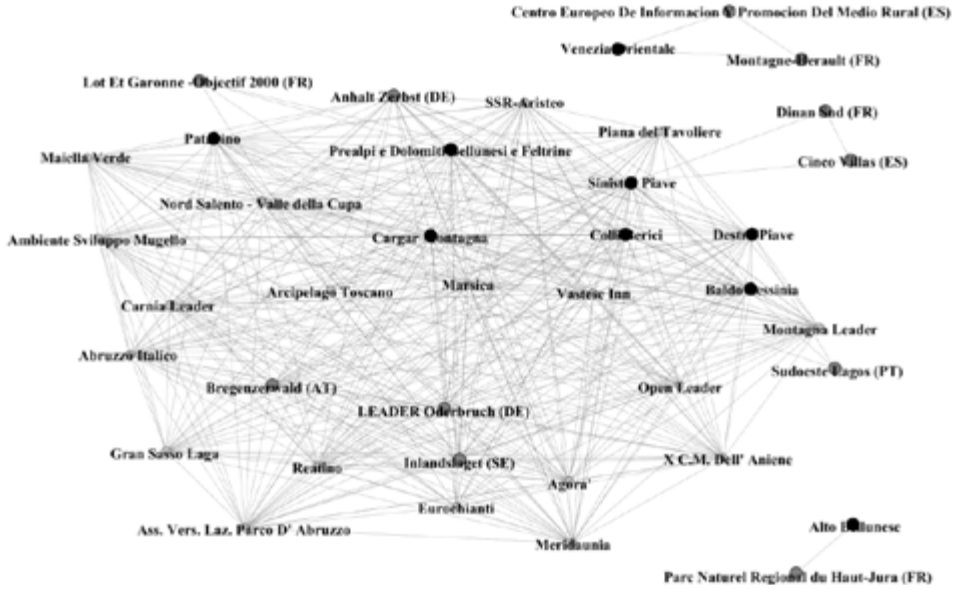
The analysis considers the network of Veneto LAGs involved in TNC projects as a whole, in order to understand the potential and real possibilities for information and knowledge exchange and the power distribution within the network. The network referring to the LEADER II period is presented in Figure 2.

The values of the most interesting SNA indexes are presented in Table 5, with reference to the LEADER II period.

During LEADER II the network is composed of 39 nodes clustered in 3 components. One of these is formed by two nodes, another by three nodes, while the third is composed by the majority of nodes (34), including the other nationals. The network density is 53.3% and is related to the high number of effective relations compared to the theoretical ones. The disaggregated indexes show the highest values for the density of ties among national nodes (83.6%) and among regional and other national nodes (75.4%). The proportion between the various types of relations and the total possible show a prevalence of ties among national and regional-national nodes (32.7%), only 5.3% are among regional nodes.

[5] https://gephi.org/.

Figure 2. Transnational cooperation network of Veneto LAGs, LEADER II.



Source: own elaboration based on projects data from Zumpano (2001). To facilitate the visual representation, the black dots indicate Veneto LAGs, dark grey transnational partners and light grey other Italian partners.

Table 5. Indexes of the transnational cooperation network of Veneto LAGs, LEADER II.

Classical SNA Indexes		**New SNA Indexes of TNC projects**			
SNA Index	Value	SNA Index	Value	SNA Index	%
Size	39	*Regional density*	0.583	*Regional/total*	5.3
Connected Components	3	*National density*	0.836	*National/total*	36.2
Average Degree	20.256	*Transnational density*	0.073	*Transnational/total*	1.0
Centralization	0.009	*Regional-national density*	0.754	*Regional–national/total*	32.7
Density	0.533	*National-transnational density*	0.282	*National-transnational/total*	14.9
		Regional-transnational density	0.394	*Regional-transnational/total*	9.9

Source: own elaboration based on projects data from Zumpano (2001).

Table 6 shows that the LAG with the highest degree centrality is "Sinistra Piave" (0.868)[6], while LAG "Alto Bellunese" has the lowest (0.026). The values of transnational centrality confirm these findings: the LAG "Sinistra Piave" appears to be the most active in

[6] The LAG "Sinistra Piave" is now part of LAG "Alta Marca Trevigiana"

terms of capacity to acquire new information and knowledge from transnational partners (0.211). Also considering the betweenness centrality, the "Sinistra Piave" presents the highest value (90.222), meaning that this node functions as a relevant connector for many other LAGs and it can share information, expertise and knowledge with many other partners.

The network of TNC projects evolves during the LEADER + programming period and it is presented in Figure 3, with the overall values of the network given in Table 7.

During LEADER + the size of the network partially decreases to 32 nodes (from the 39 of the previous programming period), grouped in 4 components (two of these are composed of only two nodes, one is of 8 and one of 20). The density strongly decreases to 19.2% (the value was 53.3% in the previous period). The disaggregated densities also decrease, even if at a much lower level than before. During this period, the majority of relations are among transnational nodes (31.6%) and only 1% of the effective ties are among regional nodes. Thus, it seems that in this period the Veneto LAGs are mostly inserted in a network of transnational projects, mainly implemented by transnational

Table 6. Indexes of the transnational cooperation network of Veneto LAGs, by node, LEADER II.

GAL	Degree	Transnational Degree	Degree Centrality	Closeness Centrality	Betweenness Centrality	Transnational centrality
Alto Bellunese	1	1	0.026	1.000	0.000	0.026
Prealpi e Dolomiti Bellunesi e Feltrine	28	4	0.737	1.152	1.556	0.105
Cargar Montagna	31	6	0.816	1.061	28.222	0.158
Sinistra Piave	33	8	0.868	1.000	90.222	0.211
Destra Piave	31	6	0.816	1.061	28.222	0.158
Baldo Lessinia	28	4	0.737	1.152	1.556	0.105
Colli Berici	28	4	0.737	1.152	1.556	0.105
Patavino	28	4	0.737	1.152	1.556	0.105
Venezia Orientale	2	2	0.053	1.000	0.000	0.053

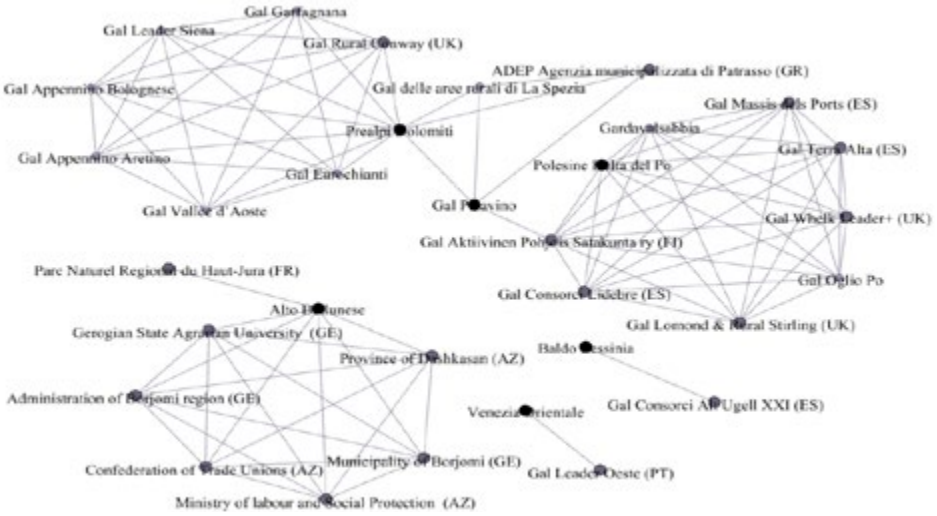
Source: own elaboration based on projects data from Zumpano (2001).

Table 7. Indexes of the transnational cooperation network of Veneto LAGs, LEADER +.

Classical SNA Indexes		New SNA Indexes of TNC projects			
SNA Index	Value	SNA Index	Value	SNA Index	%
Size	32	*Regional density*	0.067	*Regional/total*	1.1
Connected Components	4	*National density*	0.444	*National/total*	16.8
Average Degree	5.938	*Transnational density*	0.221	*Transnational/total*	31.6
Centralization	0.005	*Regional-national density*	0.185	*Regional–national/total*	10.5
Density	0.192	*National-transnational density*	0.124	*National-transnational/total*	20.0
		Regional-transnational density	0.186	*Regional-transnational/total*	20.0

Source: own elaboration based on projects data from Zanetti (2009).

Figure 3. Transnational cooperation network of Veneto LAGs, LEADER +.



Source: own elaboration based on projects data from Zanetti (2009).

nodes and the opportunity for new knowledge exchange and cooperation among regional LAGs is strongly reduced.

The LAG with the highest degree centrality is "Prealpi e Dolomiti" (0.323), but in this case the LAG with highest degree centrality and the highest betweenness centrality does not correspond to the LAG with highest transnational centrality, which is LAG "Alto Bellunese" (0.226). The role of information brokers in the network is played by LAG "Prealpi e Dolomiti" and LAG "Patavino", since their betweenness centrality values are the highest (84 and 90) and they are part of the largest component.

To complete the analysis, the whole network referring to the LEADER Axis period is presented in Figure 4.

As for the other programming periods, a summary of the most significant indexes is presented in Table 9.

During LEADER Axis the size of the network further decreases to 28 nodes, grouped in 3 components, one including 5 actors, another with 11 and the third with 12. However, the density slightly increases (20.4%) with a reshaping of disaggregated densities. The national density again has the highest value (57.4%), while the lowest value refers to transnational density. Considering the proportion of effective types of relations over the effective relations of the network, the regional/total proportion is the highest (22.1%).

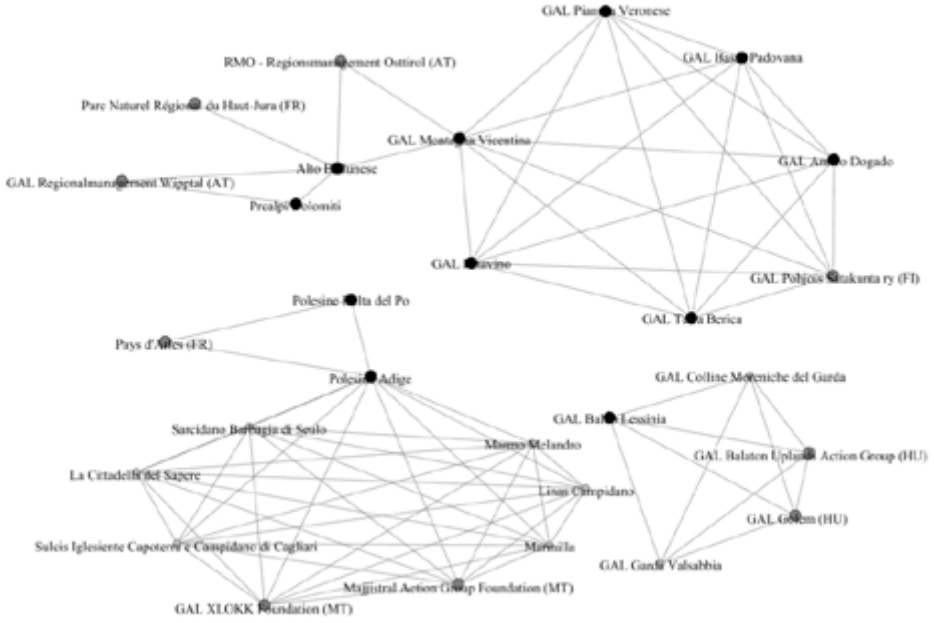
As shown in Table 10, the node with the highest degree centrality is "Polesine Adige" (0.370) and that with the highest betweenness centrality is "Montagna Vicentina" (30). The nodes with the highest transnational centrality are "Alto Bellunese" (0.111) and "Polesine Adige" (0.111). Considering transnational and betweenness centrality together, LAG "Alto Bellunese" represents a key actor and information broker for the whole network, thanks to the international ties from its involvement in three

Table 8. Indexes of the transnational cooperation network of Veneto LAGs, by node, LEADER +.

GAL	Degree	Transnational degree	Degree Centrality	Closeness Centrality	Betweenness Centrality	Transnational Centrality
Alto Bellunese	7	7	0.226	1.000	6	0.226
Baldo Lessinia	1	1	0.032	1.000	0	0.032
Polesine Delta del Po	8	6	0.258	2.474	0	0.194
Prealpi Dolomiti	10	2	0.323	1.895	84	0.065
Gal delle aree rurali di La Spezia	3	1	0.097	2.263	0	0.032
Gal Patavino	4	2	0.129	1.789	90	0.065
Venezia Orientale	1	1	0.032	1.000	0	0.032

Source: own elaboration based on projects data from Zanetti (2009).

Figure 4. Transnational cooperation network of Veneto LAGs, LEADER Axis.



Source: own elaboration based on projects data from Italian Rural Network at http://89.119.249.9:8080/birt/ProCoopLeader/Index.jsp (Accessed 4 April 2014).

different TNC projects and its betweenness power. It also shows a certain evolution and stability in its transnational relations, with an increasing number of projects and partners over time.

Table 9. Indexes of the transnational cooperation network of Veneto LAGs, LEADER Axis.

Classical SNA Indexes		New SNA Indexes of TNC projects			
SNA Index	Value	SNA Index	Value	SNA Index	%
Size	28	Regional density	0.327	Regional/total	23.4
Connected Components	3	*National density*	0.571	*National/total*	20.8
Average Degree	5.5	*Transnational density*	0.056	*Transnational/ total*	2.6
Centralization	0.007	*Regional -national density*	0.091	*Regional–national/ total*	10.4
Density	0.204	*National-transnational density*	0.222	*National-transnational/ total*	20.8
		Regional-transnational density	0.172	*Regional-transnational/ total*	22.1

Source: own elaboration based on projects data from Italian Rural Network at http://89.119.249.9:8080/birt/ProCoopLeader/Index.jsp (Accessed 4 April 2014).

Table 10. Indexes of the transnational cooperation network of Veneto LAGs, by node, LEADER Axis.

LAG	Degree	Transnational degree	Degree Centrality	Closeness Centrality	Betweenness Centrality	Transnational Centrality
Alto Bellunese	5	3	0.185	1.545	26.000	0.111
Prealpi Dolomiti	2	1	0.074	2.364	0.000	0.037
GAL Montagna Vicentina	8	2	0.296	1.273	30.000	0.074
GAL Patavino	6	1	0.222	1.727	0.000	0.037
GAL Bassa Padovana	6	1	0.222	1.727	0.000	0.037
GAL Terra Berica	6	1	0.222	1.727	0.000	0.037
GAL Antico Dogado	6	1	0.222	1.727	0.000	0.037
GAL Pianura Veronese	6	1	0.222	1.727	0.000	0.037
GAL Baldo Lessinia	4	2	0.148	1.000	0.000	0.074
Polesine Delta del Po	2	1	0.074	1.800	0.000	0.037
Polesine Adige	10	3	0.370	1.000	16.000	0.111

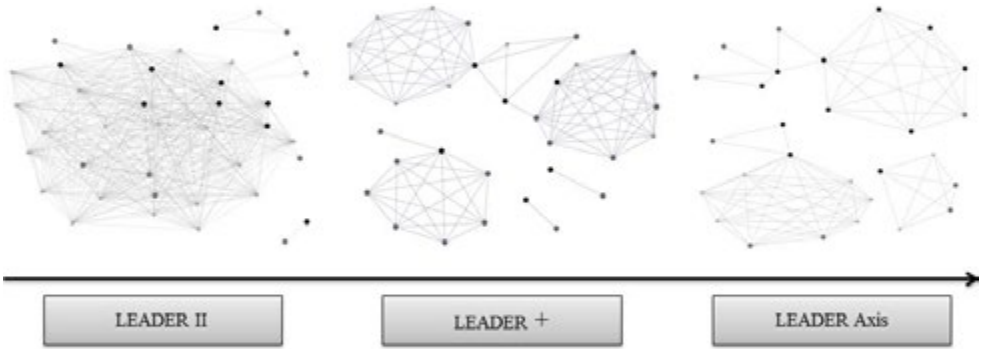
Source: own elaboration based on projects data from Italian Rural Network at http://89.119.249.9:8080/birt/ProCoopLeader/Index.jsp (Accessed 4 April 2014).

4.3 Analysis of the dynamics of TNC projects network in Veneto, LEADER II, LEADER + and LEADER Axis programming periods

The size and density of the networks evolved over time, as shown by the graphs in Figure 5. The network size decreased from 39 during LEADER II, to 32 during LEADER

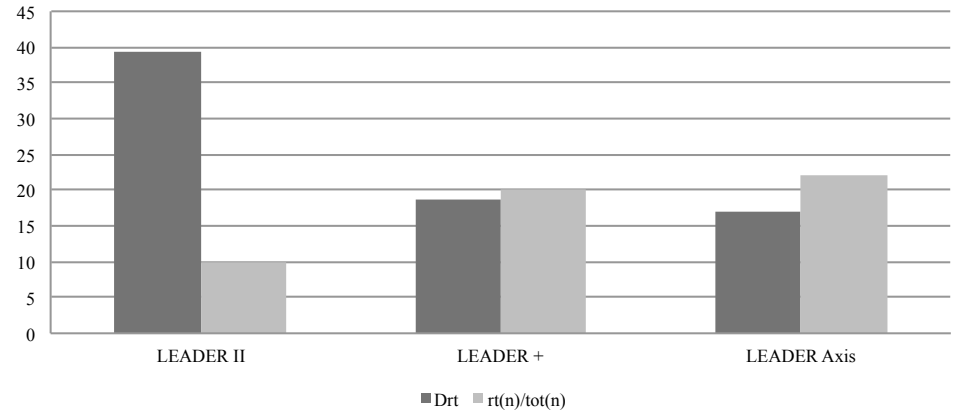
+ to 28 nodes during LEADER Axis. This could signify a progressive decreasing interest in transnational projects, possibly due to bureaucratic limits, but it could also mean that LAGs implement TNC projects only if able to respect the complex administrative procedures established for this type of cooperation and if the project is effectively relevant for them. The network density also decreased with a negative peak during the LEADER + (0.533; 0.192; 0.204). According to Burt's theory of structural holes, a dense network can have limited efficiency, because the cost of connection is not compensated by the value of the information shared, which could be indirectly gained through another tie (Burt, 1992). This would mean that the case studied has a positive trend in relation to the efficiency of the information flow, since the density decreased. This trend is also confirmed

Figure 5. Evolution of TNC LEADER network in Veneto.



Source: own elaboration.

Figure 6. Comparison between the trend of regional-transnational density and trend of the proportion of regional-transnational ties.



Source: own elaboration.

by the regional-transnational density and by the proportion of effective regional-transnational ties. As shown in Figure 6, the density of regional-transnational ties decreased; this means that each Veneto LAG chose to cooperate with differentiated transnational partners. According to Burt, this is an optimization of the access to information and knowledge that will be more diversified and less redundant. Furthermore, the proportion of transnational ties increased, meaning that the investment in transnational relations increased, despite the reduction of their density.

The analysis of the evolution of disaggregated density also shows that most potential relations were implemented within national nodes. At the same time, the trend of regional-regional density is negative, with a strongly negative peak during LEADER + (0.583, 0.067, 0.327). However, this cannot have a clear interpretation, because it can be supposed that other forms of LAGs cooperation are taking place within the regional territory because opportunities are easier compared to transnational projects. Furthermore, the proportion of relations among regional nodes, increased during the different programming periods. The relations among national nodes were prevalent during LEADER II and LEADER Axis periods while during LEADER + most of the relations were among transnational nodes.

The actors more central in terms of transnational ties changed in the different periods. During LEADER II "Sinistra Piave" registers the highest transnational centrality and LAG "Alto Bellunese" has the lowest value. Nevertheless, during LEADER + "Alto Bellunese" shows the highest value for the same index, confirming a positive trend during LEADER Axis. This attests to its positive evolution in terms of number of projects presented and implemented and in partners' continuity, which probably indicates good experience and stability. Even if it is possible to identify a correspondence between the values of degree centrality and those of transnational centrality during LEADER II, the following periods do not show a clear correspondence. Thus, the nodes with more connections within the network do not necessarily implement the highest number of transnational relations.

5. Conclusions

The discussion presented in this paper proposes an innovative approach for the evaluation of transnational projects implemented by Local Action Groups. In order to clarify the importance that these projects can have for LAGs, an initial explanation has been given of the advantages of cooperation: the improvement of competitiveness, the pooling of expertise and know-how, the promotion of innovation by sharing best practices and new ideas, and the enhancement of territorial identity (Esparcia, 2014; Dwyer, 2013; Ray, 2006, 2001; Pasquinelli, 2013). Transnational cooperation projects can increase the opportunities for their partners to take advantage of 'similarity' and 'complementarity', thus of co-opetition (Pasquinelli, 2013; Ray, 2001). During the implementation of these projects, LAGs compose a network that facilitates the sharing of knowledge and information in a form of social learning at both local and extra-local level. These elements are part of the advantages of extra-local relations among territories that, together with vertical and local horizontal relations, guarantee a neo-endogenous approach to rural development as proposed by LEADER. The TNC network has been analysed through Social Network Analysis, in order to have a complete overview of the projects not only in terms of quantitative data, but also considering the direct and indirect relations that they can produce; to visualize

the evolution of the network the analysis also included past programming periods. The proposed SNA indicators are useful to evaluate the structure and performance of transnational cooperation networks and can be used by the Managing Authority at regional level in order to understand the informative efficiency of the financed initiative. The case study presented shows a very dynamic network, which evolved in terms of size and density, and also with respect to the internal composition of the actors and their relations. This is reflected in new possibilities for information flow and for the access to new knowledge. The analysis of the structure and dynamics of the TNC projects network in Veneto suggests a positive evolution of the efficiency of information transmission, since the proportion of transnational partners increased but the regional-transnational density decreased. These elements attest to the importance of the new indexes, which capture critical features that the classical indexes of SNA are not able to assess.

The analysis focused only on the case study of transnational cooperation projects implemented by LAGs within the LEADER measure "cooperation". A deeper analysis could also consider other forms of territorial cooperation implemented by LAGs (such as cross-border, interregional or interterritorial cooperation), because other forms of cooperation could give the same advantages highlighted for TNC in LEADER. Cooperation plays a central role in the creation of a network among rural groups in different territories and nations, but it represents an interesting opportunity for the integration of economic actors operating in more than one territory and economic sector, as in the case of agro-food chains (Mantino, 2014). This suggests that the proposed methodology could also be applied to this field of research, especially given that Article 35 of Regulation 1305/2013 covers this type of cooperation.

The use of SNA indicators for the evaluation of transnational cooperation is a relatively simple system based on secondary data that could be applied in all Italian and European LAGs in order to understand different trends and changes in transnational cooperation in diverse regions and countries. A deeper analysis could be useful, in association with a qualitative study to better interpret the evaluation results, considering different variables of particular interest such as: (i) the LAG context and present and past TNC experience; (ii) identification of the different ways to become involved in TNC projects; (iii) the effectiveness of the tools for partners search; (iv) the usefulness of preparatory and joint actions; (v) the lessons learnt and TNC best practices at European level (vi) identification of the factors facilitating participation in TNC (vii) the perceptions on results achieved and value added of the project. The combination of qualitative and quantitative methods in the evaluation process can more fully express the social and institutional learning dimensions of transnational cooperation in LEADER as suggested by High *et al.* (2007). Furthermore, the investigation could be useful in order to identify the best qualitative and quantitative network characteristics necessary to determine a long-term impact of the cooperation, also considering the central role that this is going to acquire in the 2014-2020 programming period.

Acknowledgments

An earlier version of this paper was presented at the 3rd Conference of the *Associazione Italiana di Economia Agraria e Applicata* (AIEAA), 25-27 June 2014 at Alghero, Italy.

References

Aral, S. and Alstyne, M. van (2007). Network Structure & Information Advantage. In: Proceedings of the Academy of Management Conference, Philadelphia, PA: 1-36.

Bell, M., Lloyd, S. and Vatovec, C. (2010). Activating the Countryside: Rural Power, the Power of the Rural and the Making of Rural Politics. *Sociologia Ruralis* 50(3): 205-224.

Bengtsson, M. and Kock, S. (2000). "Coopetition" in Business Networks—to Cooperate and Compete Simultaneously. *Industrial Marketing Management* 29: 411-426.

Borgatti, S. and Everett, M.G. (1997). Network Analysis of 2-Mode Data. *Social Networks* 19: 243-269.

Borgatti, S. and Foster, P. (2003). The New Paradigm in Organizational Research: a Review and Typology. *Journal of Management* 29(6): 991-1013.

Burt, R.S. (1992). The Social Structure of Competition. In: Nohria, N., Eccles, R.G. (Eds.), Networks and Organizations, Boston: Harvard Business School Press, 57–91.

Casieri, A., Nazzaro, C. and Rosselli, L. (2010). Trust Building and Social Capital as Development Policy Tools in Rural Areas. *New Medit* 1: 24-30.

Castells, M. (2011). The Rise of Network Society. New York: Wiley-Blackwell.

Council Regulation (EC) No 1698/2005 of 20 September 2005 on Support for Rural Development by the European Agricultural Fund for Rural Development (EAFRD). http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:277:0001:0040:EN:PDF. Accessed 27 November 2013.

Dax, T., Strahl W., Kirwan J. and Maye D. (2013). The LEADER Programme 2007 – 2013: Enabling or Disabling Social Innovation and Neo-Endogenous Development? Insights from Austria and Ireland. *European Urban and Regional Studies*, Doi: 10.1177/0969776413490425.

Depoele, L. van and Ebru, E. (2006). Local Development Strategies in the EU. The Case of LEADER in Rural Development. National Seminar on Functioning of Local Selfgovernment Institutions in Punjab and EU countries (16-17 August 2006), Chandigarh (India).

Dwyer, J. (2013). Transformation for Sustainable Agriculture: What Role for the Second Pillar of CAP? *Bio-based and Applied Economics* 2(1): 29-47.

Esparcia, J. (2014). Innovation and Networks in Rural Areas. An Analysis from European Innovative Projects. *Journal of Rural Studies* 34: 1-14.

European Commission (2011). The CAP in Perspective: from Market Intervention to Policy Innovation. Agriculture Policy Perspective Brief n.1 rev. http://ec.europa.eu/agriculture/policy-perspectives/policy-briefs/index_en.htm. Accessed 15 December 2013.

European Commission (1997). Rural Documents. CAP 2000 Working Documents. http://ec.europa.eu/agriculture/publi/pac2000/rd/rd_en.pdf. Accessed 12 December 2013.

European Commission (1996). The Cork Declaration: A Living Countryside. Report of the European Conference on Rural Development, Cork. http://ec.europa.eu/agriculture/rur/cork_en.htm. Accessed 12 December 2013.

European Commission COM(88)501 (1988). The Future of Rural Society. Commission Communication Transmitted to the Council and to the European Parliament. 28 July 1988. Bulletin of the European Communities, Supplement 4/88. http://

ec.europa.eu/agriculture/cap-history/crisis-years-1980s/com88-501_en.pdf. Accessed 12 December 2013.

European Network for Rural Development (2014). Report on 'The State-of-play of the implementation of Rural Development Programme Measure 421 in the EU-27'. http://enrd.ec.europa.eu/enrd-static/app_templates/enrd_assets/pdf/leader-gateway/Measure_421_State_of_play_FINAL_May_2014.pdf. Accessed 26 March 2014.

European Network for Rural Development (2012). Leader Transantional Cooperation Guide. http://enrd.ec.europa.eu/enrd-static/leader/tnc_guide/en/tnc_guide_en.html (last updated 27/11/2012). Accessed 26 March 2014.

European Rural Development Network (2013). Knowledge as a factor of rural development. Warsaw: Institute of Agricultural and Food Economics – National Research Institute.

Everett M. and Borgatti S.P. (2005). Ego Network Betweenness. *Social Networks* 27: 31-38.

Franceschetti, G. (2009). Capitale Sociale e Sviluppo Rurale. Padova: CLEUP.

Gaudio, G. and Zumpano, C. (2006). La Programmazione Negoziata tra Vincoli Istituzionali e Sviluppo Partecipativo. In: Cavazzani, A., Gaudio, G. and Sivini, S. (eds), Politiche, Governance e Innovazione per le Aree Rurali, Napoli: Edizioni Scientifiche Italiane, 231-258.

Gkartzois, M. and Scott, M. (2013). Placing Housing in Rural Development: Exogenous, Endogenous and Neo-Endogenous Approaches. *Sociologia Ruralis* Doi: 10.1111/soru.12030.

Granovetter, M. (1973). The Strength of Weak Ties. *American Journal of Sociology* 78(6): 1360-1380.

Hanemann, R. and Riddle, M. (2005). Introduction to Social Network Analysis. Riverside: University of California.

High C. and Nemes G. (2007). Social Learning in LEADER: Exogenous, Endogenous and Hybrid Evaluation in Rural Development. *Sociologia Ruralis* 47(2): 103-119.

Leon, Y. (2005). Rural Development in Europe: a Research Frontier for Agricultural Economists. *European Review of Agricultural Economics* 32(3): 301-317.

Lysgard, H.K. and Cruickshank, J. (2013). Creating Attractive Places for Whom? A Discourse-Theoretical Approach to Knowledge and Planning. *Environment and Planning* 45: 2868-2883.

Lowe, P. (2006). Concetti e Metodi nelle Politiche Europee di Sviluppo Rurale. In: Cavazzani, A., Gaudio, G. and Sivini, S. (eds.), Politiche, Governance e Innovazione per le Aree Rurali, Napoli: Edizioni Scientifiche Italiane, 259-270.

Lowe, P., Murdoch, J., Ward, N. (1995). Networks in Rural Development: Beyond Exogenous and Endogenous Models. In: van der Ploeg, J.D. and van Dijk, G. (eds), Beyond Modernization, the Impact of Endogenous Rural Development. Assen: Van Gorcum, 87-105.

Lukesch, R. (2007). The LAG Handbook. Brussels: Leader Observatory.

Macken-Walsh, A. and Curtin, C. (2013). Governance in Rural Development: the Case of the Rural Partnership Programme (RPP) in Post-Socialist Lithuania. *Sociologia Ruralis* 31(4): 246-264.

Mantino, F. (2014). Rethinking Rural Development Approaches and their Relations with Agricultural and Agro-food Local Systems, paper at the 3rd AIEEAA conference, 25-27 June 2014, Alghero, Italy.

Mariussen, A. and Virkkala, S. (eds.) (2013). Learning Transnational Learning. Abingdon: Routledge.

Marquardt, D., Möllers, J. and Buchenrieder, G. (2012). Social Networks and Rural Development: LEADER in Romania. *Sociologia Ruralis* 52(4): 398 – 431.

Midmore, P., Partridge, M.D., Olfert, M.R. and Ali, K. (2010). The Evaluation of Rural Development Policy: Macro and Micro Perspectives. *Eurochoices* 9(1): 24-29.

Moseley, M. J. (2003). Local Partnership for Rural Development: the European Experience. Oxon: CABI Publishing.

Murdoch, J. (2000). Networks: a New Paradigm of Rural Development. *Journal of Rural Studies* 16: 407-419.

Nardone, G., Sisto, R. and Lopolito, A. (2010). Social Capital in the LEADER Initiative: a Methodological Approach. *Journal of Rural Studies* 24(4): 63-72.

Oostindie, H., Ploeg, J.D. van der, Broekhuizen, R. van, Ventura, F., Milone, P. (2010). The Central Role of Nested Market in Rural Development in Europe. *Rivista di Economia Agraria* 65(2): 191-224.

Papadopoulou, E., Hasanagas, N. and Harvey, D. (2011). Analysis of Rural Development Policy Networks in Greece: Is LEADER Really Different? *Land Use Policy* 28(4): 663-673.

Pasquinelli, C. (2013). Competition, Cooperation and Co-opetition: Unfolding the Process of Inter-territorial Branding. *Urban Research and Practice* 6(1): 1-18.

Ploeg, J.D. van der (2006). Esiste un Nuovo Paradigma di Sviluppo Surale? In: Cavazzani, A., Gaudio, G. and Sivini, S. (eds.), Politiche, Governance e Innovazione per le Aree Rurali, Napoli: Edizioni Scientifiche Italiane, 259-270.

Ray, C. (2006). Modelli di Dinamiche Interlocali nell'Europa dello Sviluppo Rurale. In: Cavazzani, A., Gaudio, G. and Sivini, S. (eds.), Politiche, Governance e Innovazione per le Aree Rurali, Napoli: Edizioni Scientifiche Italiane, 353-364.

Ray, C. (2001). Transnational Co-operation Between Rural Areas: Elements of a Political Economy of EU Rural Development. *Sociologia Ruralis* 41(3): 279-295.

Ray, C. (1998). Culture, Intellectual Property and Territorial Rural Development. *Sociologia Ruralis* 38(1): 3-20.

Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on Support for Rural Development by the European Agricultural Fund for Rural Development (EAFRD) and Repealing Council Regulation (EC) No 1698/2005. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:347:0487:0548:EN:PDF. Accessed 26 March 2014.

Saraceno, E. (2013). Disparity and Diversity: their Use in EU Rural Policies. *Sociologia Ruralis* 53(3): 331-348.

Saxena, G., Clark, G., Oliver, T. and Ilbery, B. (2007). Conceptualizing Integrated Rural Tourism. *Tourism Geographies* 9(4): 347-370.

Secco, L., De Re, R., Pettenella, D. and Cesaro, L. (2010). La Valutazione della Qualità della Governance Partecipativa in Ambito Rurale. *Agriregionieuropa* 6(23): 61-64.

Sivini, G. (2006). Occorre una Nuova Politica per lo Sviluppo Rurale Locale. In: Cavazzani, A., Gaudio, G. and Sivini, S. (eds.), Politiche, Governance e Innovazione per le Aree Rurali, Napoli: Edizioni Scientifiche Italiane, 81-96.

Sotte, F. (2006). Sviluppo Rurale e Implicazioni di Politica Settoriale e Territoriale, un Approccio Evoluzionistico. In: Cavazzani, A., Gaudio, G. and Sivini, S. (eds.), Polit-

iche, Governance e Innovazione per le Aree Rurali, Napoli: Edizioni Scientifiche Italiane, 61-80.

Shucksmith, M. (2009). Disintegrated Rural Development? Neo-endogenous Rural Development, Planning and Place-Shaping in Diffused Power Contexts. *Sociologia Ruralis* 50(1): 2-14.

Storey, D. (1999). Issues of Integration, Participation and Empowerment in Rural Development: the Case of LEADER in the Republic of Ireland. *Journal of Rural Studies* 15(3): 307-315.

Tola, A. (2010). Strategie, Metodi e Strumenti per lo Sviluppo dei Territori Rurali, Franco Angeli, Milano.

Vitale, A. (2006). Le Politiche Comunitarie di Sviluppo Rurale: Empowerment o Modernizzazione Neoliberista? In: Cavazzani, A., Gaudio, G. and Sivini, S. (eds.), Politiche, governance e innovazione per le aree rurali, Napoli: Edizioni Scientifiche Italiane, 97 - 112.

Wellmann, B. (1988). Structural Analysis: from Method and Metaphor to Theory and Substance. In Wellmann B. and Berkowitz S. D. (eds.), Social Structures: a Network Approach. Cambridge: Cambridge University Press, 19-61.

Wellbrock, W., Roep, D., Mahon, M., Kairyte, E., Nienaber, B., Dominguez-Garcia, M.D., Kriszan, M. and Farrell, M. (2013). Arranging Public Support to Unfold Collaborative Modes of Governance in Rural Areas. *Journal of Rural Studies* 32: 420-429.

Veneto Region (2013). Programma di Sviluppo Rurale per il Veneto 2007-2013. Texts updated through 'Allegato A alla DGR. n. 314 del 12/03/2013'. http://www.regione.veneto.it/web/agricoltura-e-foreste/psr-2007-2013. Accessed 21 November 2013.

Veneto Region (2010). Valutazione in Itinere del Programma di Sviluppo Rurale 2007-2013 della Regione Veneto, Relazione di Valutazione Intermedia. http://www.regione.veneto.it/web/agricoltura-e-foreste/valutazione-psr. Accessed 23 November 2013.

Zumpano, C. (2001). Repertorio Progetti di cooperazione. Roma: Litotipografia Principe.

Zanetti, B. (2009). I Progetti di Cooperazione Transnazionale in LEADER+. INEA in http://dspace.inea.it/handle/inea/752. Accessed 3 December 2013.