Territorial Cohesion: Evaluating the Urban-Rural Linkage Through the Lens of Public Investments



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Abstract The paper deals with the significant issue of urban-rural linkage, concentrating on the less-developed regions of Europe, and in particular the case study of the Calabria Region (southern Italy). Despite the evolution of the urban-rural exchange, inner areas are facing economic, social and environmental problems, resulting in unemployment, depopulation, marginalization, disengagement or degradation of historic and architectural capital. Institutional bodies and policy makers, in particular at the local level, deal with the complexity of the choices that need to be faced, requiring the capacity to implement complex decision-making processes and tools capable of integrating the use of territorial resources, culture accessibility and social integration. Investigating the issues emerging from the academic literature and policy documents of the past 20 years, the paper presents the preliminary research step on the interpretation of the urban-rural dynamics through the lens of the 2007-2013 public investments made in this region. The preliminary results in terms of expenditure efficiency, private co-investments and geographical distribution highlight the need for an economic evaluation approach to support local authorities in addressing the challenge of the EU Territorial Agenda 2020.

Keywords Territorial cohesion \cdot European funding \cdot Public investment Inner areas \cdot Urban-rural linkage

The paper is the result of the joint work of the two authors. Scientific responsibility is attributable equally to Calabr \dot{o} and Cassalia.

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1 Introduction

The economic and territorial development of urban and rural areas have been traditionally considered separately, both in the academic and policy field. Differences in economic, cultural and spatial sectors can give rise to divergent interests and are not conducive to a culture of cooperation and greater integration. This dichotomy in research and policies can hinder taking an integrated approach to regional economic development, resulting in a lack of awareness of the urban-rural relationships and non-cooperation between urban and rural stakeholders (Evans 1990). The nature of these interactions and the deepening of relationships may be seen increasingly as a partnership, where a variety of governance systems have evolved to manage the linkage. Little progress has been made in progressing from abstract reflection to the know-how that should orient the action of policy makers, both at the European and local levels. From a territorial point of view, the growth opportunities in the rural areas of Europe are also linked to the ability to find adequate compromises for both in order to facilitate strategic relationships between the urban and rural areas (Zonneveld and Stead 2007).

Focusing on the less developed regions of Europe, and, in particular, the inner areas, territories have been the target in recent years of substantial public investments, but, in some regions, interventions have not yet produced significant social-economic effects (Gagliardi and Percoco 2017). The complexity of the choices that governmental bodies at the national and local levels are facing requires an ability to implement complex decision-making processes. Despite the evolution of the urban-rural relationship over the past three European programming cycles, inner areas—in Italy, for instance—are still facing economic, social and environmental problems, resulting in unemployment, depopulation, marginalization, disengagement, or degradation of historic and architectural capital (MUVAL 2014). This paper presents a preliminary step of a study that seeks to address the issue of the multi-level authorities' role and responsibilities in strengthening the urban-rural cooperation in the context of Europe's territorial cohesion policy. The culture of evaluation—in this sense—is an essential step towards achieving the overriding key objectives of efficiency, transparency and accountability, with the aim of determining both the costs and the benefits of publicly financed projects and to improve the efficiency and effectiveness of that investment (Nesticò and De Mare 2014).

Evaluations, therefore, support the public decision makers facing the need to choose between alternative programs and projects, under the general—and current—conditions of scarce resources (Della Spina et al. 2016; Tajani and Morano 2014). Funding pressures reinforce the need for a better understanding of how local governments can invest in urban-rural cooperation that manages territorial disparities and what the communities get in return. Such cooperation should, according to the European Smart Specialisation Strategy, deal with the local enterprises' linkage

¹According to MUVAL (2014), Inner Areas are areas at some considerable distance from hubs providing essential services, such as education, health and mobility.

to research and development networks for balancing the rough edges in competitiveness (Bisello et al. 2017; Madureira et al. 2015; McCann and Ortega-Argilés 2014). In order to deal with this relevant issue, the paper's second section investigates the concepts and principles of the urban-rural linkage, according to the academic literature and European policy documents, leading to productive reflection on the challenges of territorial cohesion. In the third section, the contribution evaluates the urban-rural balance/imbalance through the allocation of European structural funds (2007–2013) in the southern Italian case study. In conclusion, this preliminary study's results offer a contribution to the efficiency assessment with reference to expenditure efficiency, private stakeholders' involvement and geographical distribution of public investments. It highlight the need for an economic evaluation approach to support local authorities in addressing the challenge of the EU Territorial Agenda 2020.

2 From Urban-Rural Competition to Territorial Cohesion Strategies

Over the past 20 years, various strategic EU documents have highlighted the rural-urban dimension. Unlike documents previously produced since 1995, the European Union is moving towards an explicit statement on territorial development issues. It is recognized that the role of the territory—particularly in urban-rural relationships—is crucial in pursuing the Union's objectives of competitiveness, cohesion, environmental balance, well-being and democracy (Camagni 2008).

This leads to a new concept of a territorial-cohesion dimension, in which the EU's cohesion policy places strong emphasis on the current legislative framework. There is growing understanding of the importance of balanced, sustainable and integrated territorial development, taking into account functional links in and between territories, especially rural and urban areas (Nilsson et al. 2014).

The definition of urban and rural areas is extremely challenging, especially looking at the linkages between and among them. The OECD rural-urban classification delivers a useful point of reference, marking a distinction among Predominantly Urban (PU), Intermediate (IN) and Predominantly Rural (PR) areas (OECD 1994). In Italy, the SNAI classification based on the municipalities' distance from the centers of essential services (health, education and mobility) sorts the Italian municipalities in six categories: Hub, Inter-municipal, Outlying, Intermediate, Peripheral and Ultra-peripheral.² Regarding the concept of "linkage", there seems to be a general lack of clarity about the nature of rural-urban interactions and relationships, commensurate with the territorial scale through which the issue is considered (Bengs and Schmidt-Thomé 2006). While the physical and

²SNAI stands for *Strategia per le Aree Interne/Inner Areas Strategy—Cohesion Policy* 2014–2020.

functional boundaries of urban and rural areas are becoming ever fuzzier, the inter-dependencies are becoming more complex and dynamic. According to Torre and Traversac (2011), a process of creation and emergence of new rural territories is taking place, differing from traditional agro-food territories, and counting on local identities and collective social values. A critical study on the relationship between rural-urban linkages and territorial cohesion was carried out by Smith and Courtney (2009), drawing an interesting framework about the connections among governance, rural-urban linkages and social/territorial cohesion. Likewise, a comprehensive study carried out by OECD (2013) provides an analysis of urban-rural partnerships and highlights how these can favor sustainable processes of socio-economic development, proposing a conceptual framework for the understanding of the nature and implications of growing urban-rural relationships and focusing on the demographic and economic dynamics.

Documenting the onset of a European policies' perspective, the Lisbon Treaty (2009) identified territorial cohesion as an objective of the European Union, as well as economic and social cohesion, recognizing the highly diversified nature of the various regions that compose it. In addition, the treaty also has strengthened the role of regional and local actors in European territorial policy, granting them the status of real partners. These concepts and principles can further be found in the guidelines of the European Commission on regional policy for 2014–2020, which has led to the adoption of "EU Territorial Agenda 2020: Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions" (2011). The Territorial Agenda 2020. building on the ESDP, identifies cohesion policy as a 'key framework' through which the EU can address territorial development challenges and help unleash territorial potential at local, regional, national and transnational levels. The Territorial Agenda 2020 also recommends that cities should 'look beyond their administrative borders and focus on functional regions, including their peri-urban neighborhoods. At the national level, the recent Italian "National Strategy for Inner Areas" has the overall objective of promoting local development by activating underutilized territorial capital through carefully selected development projects (Urso 2016).

The issues to be addressed at the local level deal with the fragile sociodemographic dimension, the neglect of historic towns, and natural and humaninduced risks as a consequence of insufficient maintenance, just to cite few matters already detected in 1995 by Edoardo Mollica, treating the problem of neglected inner areas in southern Italy (Mollica 1996). The challenge of smart and sustainable territorial development is today more linked than ever with the sub-national governments' capacity in manage rural-urban interactions effectively (Evans et al. 2005). The following section seeks to address this issue, analyzing the allocation of the 2007–2013 European structural funds in a case-study area.

³Territorial Agenda of EU 2020: Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions, EU 2011 Hu.

3 Evaluating the Urban-Rural Linkage Through the Allocation of European Structural Funds

The lack of transparency on how public money is spent is one of the main reasons for the slow progress in implementing development policies and in understanding whether investment projects actually respond to local demands (Druel et al. 2016; MUVAL 2012). This is a particularly hot topic in Italy at present given the low absorption rate of EU Structural Funds,⁴ and the debate all over Europe continues on the extent to which, after decades of subsidies, the European Regional Policy is effective.

Far from finding an answer to the question, the paper aims to contribute to the debate on the urban-rural relationship, through the analysis of the allocation of the 2007–2013 European structural funds in the case-study area of the City of Reggio Calabria, Italy (urban area) and its deep connection with the so-called Area Grecanica (rural area). With reference to the regional public expenditure for urban and rural areas, this contribution proposes an analytical and interpretive approach that could be easily exported to other public planning processes, in order to support local policy makers in defining systemic territorial strategies. In addition, the study aims to:

- Assess the urban-rural case study area, in order to determine if the allocation of European funding influences the mitigation of territorial disparities at the local scale.
- Evaluate the efficiency of case-study investments, identifying roles and responsibilities of the multi-level authorities.
- Identify the potential approach and strategic tools able to address the 2014–2020 local-scale, territorial-cohesion programming.

The study starts from the assumption that the ERDF needs to produce territorial co-operation, through supporting links between urban and rural areas, and produce sustainable urban development through the strengthening of urban-rural links and tackling common urban-rural issues (CEC 2006: Article 6). In this regional-programming framework, the analytical assessment of the implementation of the investment policy with regard to the territorial dimension of the ERDF funds is certainly of paramount importance for the 2014–2020 public investment. The 2014–2020 ESIF are designed to support the development of participative, integrated and sustainable strategies to tackle the high concentration of economic, environmental and social problems affecting urban and rural areas. These strategies

⁴European structural and investment funds (hereafter 'structural funds' or ESIF) support economic development across EU member states and their constituent regions, with the aim of reducing economic and social inequalities between the EU's regions and nations. ESIF are divided into: European Regional Development Fund (ERDF), European Social Fund (ESF), Cohesion Fund (CF), the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund.

are supposed to promote sustainable integrated development through activities such as: strengthening economic growth, the rehabilitation of the physical environment, brownfield redevelopment, the preservation and development of natural and cultural heritage, the promotion of entrepreneurship, local employment and community development and the provision of services to the population, taking into account changing demographic structures.

The paper examines the results of the 2007–2013 ESIF, with reference to public expenditures for urban and rural areas, proposing an analytical and interpretive approach that could support local authorities in the 2014–2020 decision-making processes. Local capacity building and incentives for effectiveness of sub-national levels of government are crucial issues for improving the quality and coherence of public policy (OECD 2015). In addition, the "horizontal" dimension involving a wider range of stakeholders are strongly boosted by ERDF to improve the effectiveness of local public-service delivery and implementation of development strategies. In this context, the culture of evaluation has the role of supporting the public decision maker facing the need to choose between alternative programs and projects, in the general—and current—condition of scarce resources (Saaty 2008; Della Spina 2017).

This paper presents the first step of the evaluation research, which will lead to the territorial impact appraisal with the purpose of verifying the contribution of 2007-2014 ESIF to the regional development of the case-study area. The assessment carried out not only deepens the scope of the evaluation culture as an element of the Cohesion Regional Policy, providing quality elements for reflection on results, but also enables highlighting the integration with mainstream debate on smart specialization strategies, the results of capitalization processes, and valorization of territorial vocations. Specifically, a framework has been developed through which the 2007-2014 European public investments can be measured and linked to the various urban and rural spheres (viewed in the light of the objectives of unitary programming), both in terms of thematic relevance and process building. The preliminary case-study research has been developed through the following steps: (1) Case-study area identification and context definition; (2) Classification of municipalities in the area; (3) Challenges and opportunities of the area; (4) Framework of European funding in the region; and (5) Expenditure analysis per categories.

Data for the study have been gathered via the "OpenCoesione" database, the Italy's national web portal on the implementation of investments planned in the 2007–2013 programming cycle by Regions and National Administrations via cohesion policy resources.⁵ The data analyzed refer to the ESIF and include both the European Regional Development Fund (ERDF) and the European Social Fund (ESF). The Operative Programmes included in the dataset analysis are: ONP—Operative National Programme; OIP—Operative Interregional Programme; NIP—National Implementary Programme; NAPC—National Action Plan for

⁵www.opencoesione.gov.it [02/05/2017].

Cohesion; ORP—Regional Operative Programme; CR-APC—Calabria Region Action Plan for Cohesion; and RIP—Regional Implementary Programme.

3.1 The Context of the Case-Study Area

According to the theoretical background previously cited, the paper confronts the urban-rural issue analyzed in an emblematic case study: the case of the Metropolitan City of Reggio Calabria and its deep connection with the so-called Area Grecanica, the latter selected as the pilot project for the implementation of the Inner Areas Strategy in the Calabria Region. The case-study area is part of the Metropolitan City of Reggio Calabria, formally formed on 29 December of 2016, made up of 97 municipalities, with an area of 3210.37 km² and 550.967 inhabitants (ISTAT 2011), 34% of the total regional population. The Municipality of Reggio Calabria is one of the oldest cities in Europe: The old *Rhegion* was, after Cuma, the oldest Greek colony founded in southern Italy (Zappalà 2011). It is the first municipality of the region in terms of population and the second one in area. The so-called Area Grecanica extends over about 880 km², extending from the lower Ionian Sea to the Aspromonte. In regard to the administrative borders of the Area Grecanica, the research considers the boundaries drawn by the Strategia per le Aree Interne—Politica di Coesione 2014–2020 (2015), which identifies the following 15 municipalities: Bagaladi, Bova, Bruzzano Zeffirio, Cardeto, Ferruzzano, Montebello Ionico, Palizzi, Roccaforte del Greco, Roghudi, San Lorenzo, Staiti, Melito Porto Salvo, Condofuri, Bova Marina and Brancaleone. Nevertheless, in order to investigate the relationship between the urban-rural areas, and according to historic boundaries of the Area Grecanica, the study includes the municipality of Motta San Giovanni within the boundaries of the Area Grecanica. For centuries. this area has assumed the role of a true cultural island (Isola Ellenofona) for a number of reasons, including the historical instability of the connections and a particularly impervious hinterland. Boya, Condofuri, Gallicianò, Roccaforte del Greco and Roghudi are the municipalities with the most evident traces of Greek culture (Mollica 1996).

3.1.1 Classification of Municipalities According to the Degree of Remoteness

A large part of the Calabrian region (about 80% of the total of the municipalities and of the region) consists of inner areas, according to the SNAI classification based on the distance from the centers of essential services (health, education and

⁶Regione Calabria (2015), La strategia per le aree interne, Politica di Coesione 2014–2020.

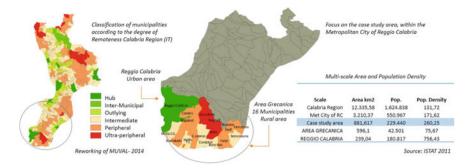


Fig. 1 Focus on the case-study area

mobility).⁷ These areas, accounting for about 53% of the regional population, are central to the supply of eco-systemic goods and services (water, air, natural environments) to the capital, in terms of landscape and complex ecological systems, for the local agro-food chain and for the production of energy from renewable sources. Inner Areas are fundamental to the protection of cultural identity and the physical integrity of the territory. They also have an important historical, architectural, cultural and identity heritage and are, by their very nature, history and structure, produce social cohesion and a sense of community.

A substantial part of these territories has undergone, over the decades, a gradual process of marginalization characterized by: loss of population, reduction of the provision of collective services, declines in employment and land use, hydrogeological disruption, degradation and abandonment of the historic villages. According to Barca (MUVAL 2014), Fig. 1 identifies the 17 municipalities that are the object of study, within the limits of the specified degree of remoteness. For research purposes, the City of Reggio Calabria, classified as a "hub", will be also classified as the "urban area", while the 16 municipalities falling within the Area Grecanica, mostly classified as peripheral, will be classified as a "rural area". It is noteworthy that, in terms of urban-rural comparisons, the Area Grecanica population density as a whole—all 16 municipalities—is one-tenth of the unified Reggio Calabria municipality.

3.1.2 Challenges and Opportunities in the Area

An important issue with regards to urban-rural linkages is the significant disparities in the socio-economic characteristics of urban and rural communities, which undermine the general well-being of the society as a whole, such as differential access to core services and employment opportunities (OECD 2013). This occurs in

⁷SNAI stands for *Strategia per le Aree Interne/Inner Areas Strategy—Cohesion Policy* 2014–2020.

the Area Grecanica, as well, where in particular the problem of transport and accessibility emerges: there is a mean time of travel of about 50 min from the nearest municipality to the "hub" of Reggio Calabria. Parallel roads penetrate the 'sea mounts' and intersect the coastal route (comprising the railway system) connecting Reggio Calabria with other Ionian cities. Among the areas' key liabilities, one can stress the depopulation of the inner towns, the absence of innovation technology—in particular in the agricultural sector—and the lack of economic activity. Nevertheless, the Area Grecanica retains a strong "Greek" identity, and it benefits from the presence of several towns of historical, natural and cultural value and an environmental and climatic uniqueness that creates optimal conditions for the production of bergamot (Cassalia 2014).

3.2 Evaluating Public Investments in the Case-Study Area

3.2.1 Framework of European Funding in the Case-Study Area

The Calabria Regional Operational Programme for 2007–2013 comes under the Convergence Objective, and around 58% of the program funds have been earmarked for investments directly linked to sustainable growth and jobs in line with the Lisbon and Gothenburg agendas. The general objective of the programme is to foster sustainable economic development with the goal of converging with the average development levels of the EU. This should be achieved by mobilizing the potential of the region by means of boosting its competitiveness, making the territory more attractive, and diversifying and modernizing the productive structure. Accordingly, eleven main priorities have been identified by the 2007–2013 Calabrian ROP⁸:

- Development of the digital agenda
- Environment and risk prevention
- Protection and enhancement of environmental, cultural heritage and tourism
- Energy efficiency
- · Social inclusion
- Education and training
- Promoting sustainable and quality employment
- Administrative (PA) capacity
- Promoting research innovation
- Urban and rural development
- Health
- Developing the sustainable mobility network

⁸Regione Calabria (2015) Programma Operativo Regionale 2014–2020. In particular, the "Urban and rural development" priority aims at promoting competitiveness, innovation, attractiveness and quality of life in both cities and rural areas.

Calculating details of the allocation of public funding in the case-study area, the OpenCoesione dataset (last monitored 2 May 2017) reported that, during the 2007–2013 EU Programme Cycle, of the €10 billion invested by public funding in the development of the Calabria region, 68% of the funds were effectively spent by the beneficiary. The term "public investments" in the context of this research means the contribution of European, national and regional funding. The Metropolitan City of Reggio Calabria, a quarter of the region in terms of area and a third in terms of population, has benefited by only 17% of the resources (€1,700,000,000), of which almost half (€813,446,000) had been invested in the case-study area. In addition, it should be emphasized that, in the *urban area* (the municipality of Reggio Calabria), one-third of the case-study area, benefited from 87% of the public investments (€709,741,500), while the *rural area* (Area Grecanica) benefited by €103,705,000 in terms of public investments.

3.2.2 Spending Analysis Per Categories

In great detail, Table 1 and Fig. 2 show the investments made in the 2007–13 programming cycle in the case-study area per "categories" (broadly corresponding to the operative program's priorities listed in Sect. 3.2.1). Looking at the case study as a whole, 23% of the public funding was invested in "environment and risk prevention", followed in decreasing percentage by "development of the digital agenda" and "the sustainable mobility network" (13%). The categories "social inclusion" and "health" received 1% of the total budget. As concerns the private stakeholders' involvement, most of the private co-investments have been placed in research and innovation (€11,798,245) and culture and tourism (€8,586,772).

In particular, the analysis refers to the following three points:

- The available funding for the urban and rural areas
 - Two main points deserve to be stressed, according to the overview on rural-urban dimension. It is quite curious that no public funding was expended in the Area Grecanica (rural area) for public services and mobility, which is, according to Sect. 3.1.2, the major weakness of the area. Secondly, the Area Grecanica was more successful in spending the budget (67.4% compared to the 57.7% of the urban area), in particular in the fields of "environment and risks" and "energy". As result, it can be noted that expenditures are made in a highly efficient manner if the resident population and its density are low, and belong to a disadvantaged area. The exception is made in the fields of "culture and tourism" and "investment for growth and jobs". Apart from that, the category "urban and rural development" seems like an overlooked opportunity, because the urban and rural area together did not exceed 40% of investment made.
- Public investments per capita

 This graph in Fig. 2 highlights the differences in public funding received by urban and rural areas when population distribution is taken into account, that is, when funding is measured on a per-capita basis. Even if the global balance

Table 1 Public and private investments in the case-study area

| 2007–2013 investments in the ca | he case-study area | | | | | |
|---------------------------------|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|
| Categories | Urban area | | Rural area | | Case study area | |
| | Public investm. (€) | Private investm. (€) | Public investm. (€) | Private investm. (€) | Public investm. (€) | Private investm. (€) |
| Digital agenda | 106,140,232.50 | 935,280.39 | 506,514.76 | 1 | 106,646,747.26 | 935,280.39 |
| Environment and risk | 136,610,402.52 | 1,337,336.34 | 51,034,122.61 | I | 187,644,525.13 | 1,337,336.34 |
| Culture and tourism | 58,608,449.32 | 6,083,489.33 | 21,598,166.61 | 2,503,283.02 | 80,206,615.93 | 8,586,772.35 |
| Energy | 19,908,596.82 | 414,93226 | 2,865,266.24 | 18,484.55 | 22,773,863.06 | 433,416.81 |
| Social Inclusion | 8,063,569.10 | 12,500.00 | 2,854,129.12 | ı | 10,917,698.26 | 12,500.00 |
| Education | 88,229,790.39 | 279,605.70 | 14,204,623.71 | 971.56 | 102,434,414.10 | 280,577.26 |
| Investm. for growth and jobs | 45,065,983.89 | 2,816,848.85 | 1,976,073.59 | 30,334.19 | 47,042,057.48 | 2,847,183.04 |
| PA capacity | 9,098,966.86 | 1 | 19,793.00 | | 9,118,759.86 | 1 |
| Research and innovation | 56,800,619.07 | 11,685,134.82 | 1,149,034.66 | 113,110.42 | 57,949,653.73 | 11,798,245.24 |
| Urban and rural development | 65,727,436.44 | 1 | 5,258,211.74 | 1 | 70,985,648.18 | 1 |
| Health | 8,962,066.83 | | 2,238,629.62 | ı | 11,200,696.45 | |
| Public services and mobility | 106,525,349.12 | ı | I | ı | 106,525,349.12 | I |
| TOTAL | 709,741,462.90 | 23,565,127.69 | 103,704,565.66 | 2,666,183.74 | 813,446,028.56 | 26,231,311.43 |

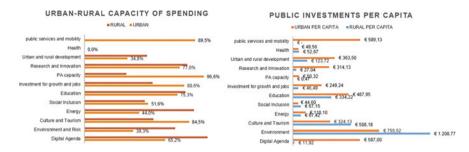


Fig. 2 Public investments per capita and capacity of spending in the case-study area

weighs on the side of urban areas (€3925 per capita versus €2440 per rural inhabitants), measuring funding allocations on a per-capita basis emphasizes that the inhabitants of Area Grecanica benefitted the most by public financing in environmental risk prevention, culture and tourism and social inclusion. The citizens of the City of Reggio Calabria, on the contrary, benefitted the most in categories such as public services and mobility, research and innovation, and investment for growth and jobs.

Private investments in the case-study area
 In general terms, the contribution of private investments to the European program in fostering the sustainable economic development of the case-study area is very low (3% out of the total public budget invested). Table 1 tabulates the total private investment in the city of Reggio Calabria €23,565,127 versus €2,666,183 in the rural area. In terms of percentage of the public investment per area, the private contribution appears well-proportioned.

4 Pursuing Local-Scale Territorial Cohesion: Concluding Remarks

The analysis of the distribution of 2007–2013 EU structural and investment funds in the case-study area identifies the first step of the research into the urban-rural dynamics related to the territorial networking needs. In this regional programming framework, the analytical assessment of the implementation of the investment policy with regard to the territorial dimension of the ERDF funds is certainly of paramount importance for the 2014–2020 public investment. Granted that the paper reports only on the preliminary stage of a research project aiming at evaluating the territorial impacts of the public investments in the case-study area, the contribution provides evidence supporting the following results:

Mitigation of territorial disparities—far from a "smart-region" vision
 The allocation of European funding doesn't seem to influence the mitigation of territorial disparities at the local scale, according to the two main territorial

needs: "public services and mobility" and "investments for growth and jobs". Indeed, the rural area didn't benefit from public investments referred to the first category, and the efficiency of the public expenditure in the second category reached 50% of the budget planned. Moreover, the category "research and innovation", a strategic asset in terms of boosting territorial competitiveness, making the area more attractive and diversifying the productive structure, comprised 7% (€57,949,653) of the entire public budget and 2% (€1,149,034) of what had been allocated for the rural area. Recent studies point out that infrastructure investment alone has little impact on local growth unless it is associated with human capital and innovation (OECD 2009). In these terms, marked inequalities in the flows of public investment across the case-study municipalities arise, highlighting how far the road to a "smart region" is still to be traversed.

- Multi-level authorities—necessity of cross-sector and multi-level coordination In order for EC policy to have the intended effects, it is necessary that programmed expenditure is fully absorbed and programs are implemented efficiently. Achievement of regional potential requires close collaboration among actors and capacity building at all levels. European and national government could better contribute towards the transparency, public understanding and democratic accountability of EU public finances, in order to support better and wider private co-financing and involvement in the regional economic development process (Druel et al. 2016). The case-study analysis shows a low level of 3% of private investments out of the total public budget invested in the area. Furthermore, even if difficult in practice, cross-sector and multi-level co-ordination are necessary. Risks of capture and corruption are particularly high in such a context, for instance in local governments with insufficient capacity to monitor investment. It's worth noting that the Calabria Region has been included in the "less developed regions—Objective 1" European Programming Cycle 2000–2006, and it still included under the "Convergence Objective" 2014-20 European Programming cycle. Effective leadership, especially at the sub-national level, is crucial for regional development. Regional and local authorities are important active stakeholders in the process. The effectiveness of policies depends on the active support of regional and local authorities, which are responsible for local development planning. In that sense, horizontal coordination across local governments is essential to increase transparency and efficiency through economies of scale, to encourage investment, and to enhance synergies among policies of urban-rural cooperation.
- Territorial cohesion implementation—the role of decision support tools
 Current governance arrangements are not always optimal to fully exploit synergies through urban-rural linkages. One of the most important obstacles constitutes a general lack of a supportive basis for planning and decisions, as well as the significant deficiency of socioeconomic profile data, including baseline figures, dynamics and trends. The Italian "OpenCoesione", web portal on the implementation of 2007–2013 investments programmed by regions and national

administrations via cohesion policy resources, is moving forward in this direction. Nevertheless, the lack of data and data analysis, at local scale, represents an obstacle in managing rural-urban interactions effectively. A system of performance indicators to promote mutual learning by sharing diagnosis and targets could provide incentives for effectiveness. In this context, an economic evaluation approach would supports local authorities in identifying and assessing the actual or potential economic impact of the public investments on the territory, highlighting the importance of the geographic distribution of consequences and effects and considering the urban-rural interdependency (Fusco Girard and Nijkamp 2009; Caffyn and Dahlström 2005). The Territorial System identifiable in the case-study area is an intervention area suitable for the field testing of new approaches to planning and governance aimed at the achievement of the European Territorial Agenda objectives, even through the implementation of multi-fund instruments. In this sense, the new Cohesion Policy Regulation 2014–2020 presents specific tools in the attempt to overcome the problem: Integrated Territorial Investment (ITI) and Community-Led Local Development (CLLD). They represent step changes in the ability of local stakeholders to combine funding streams and plan well-targeted local initiatives. In conclusion, further studies are needed to implement an economic evaluation model suitable for the presented case study, able to produce significant results on the public investment impacts on local economies and communities, to support local authorities in turning territorial potential into drivers of economic, environmental and social development.

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