Territorial Specialization in Attracting Local Development Funds: An Assessment Procedure Based on Open Data and Open Tools

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Abstract. The Concentration issue by EU Cohesion Policy started new instances in territorial research according with the objective of improving effectiveness of public choices in local development. The paper, after a review of New Cohesion Policy, describes a process of territorial assessment of ROPs oriented to the analysis of territorial specialization in attracting funds. The process is based on Open Data overcoming the dependence from proprietary data formats and software towards interoperability.

Keywords: New Cohesion Policy, Concentration, Specialization, Impact Assessment, Open data, Regional Development, Open-Cohesion.

1 Introduction

The New Cohesion Policy, developed in the context of Europe 2020 agenda, opens to an integrated place-based approach for the improvement of territorial and social cohesion. Smart growth, sustainable growth and inclusive growth for EU 2020 represent overall goals to be achieved under the comprehensive approach defined by Barca [1] as 'place based approach'. As the authors already discussed [2] concerning the issue of territorial impact assessment of regional development policies, the relevant instance comes from knowledge management in regional programming practice. It means data availability, open access to datasets in "near real-time" 1, participation, knowledge sharing, key actors effective involvement in planning process.

The "concentration" issue coming from EU 2020 Cohesion Policy still reflects ambiguity in interpretation [3] and not structured implementation in Regional

We refer to the effectiveness of a 'policy monitoring system' providing data concerning regional programs implementation according to the current status. Today, in the information explosion era it is more useful an on going datasets tuned with the actul implementation status of a program, instead of a final and checked dataset provided years after the closure of a program.

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Programs. From a "thematic concentration" to a "spatial concentration", several attempt are going to be developed in an uncertainty framework.

If a "thematic concentration" reflects more a traditional approach considering a panel of main objectives and goal, it could represents an affective procedure if a proper context analysis identified ex-ante specific needs and priorities coming from local specializations and local communities needs (in other words "place based"). A "spatial-concentration" should produce a map of cohesion programming based on clear and informed decisions expressing the awareness of 'where' to invest in order to maximize the effects of cohesion policies. There is not a ex-ante solution in order to ensure the achievement of regional development results but a balance between a thematic generalization of objectives and a concrete spatial awareness of development precondition should be investigated,

The contribution of 'open data' to the impact assessment of EU Operative Programs appears to be mature in concept but still week in accuracy of available data bases. We used for the research data from the project 'opencoesione' by Italian Ministry for Territorial Cohesion. The Italian Ministry engaged with this unstoppable process of collecting and sharing data for improving citizens commitment on public policies. It developed a web service distributing data on investments policies developed by National and Regional Operative Programs 2007/2013 matching together data from regional and national administrations. The results are analysed in the paragraph number four of the paper with the application of spatial analysis techniques for the evaluation of spatial effects.

In this paper, after a short framework review of New Cohesion Policy issues, we describe a process of territorial impact assessment of Regional Operative Programs investments oriented to the analysis of territorial specialization in attracting funds. The process in completely based on Open Data analysis through Open Tools (software and web services) in order to demonstrate that the integration of such resources overcomes the dependence from proprietary data formats and proprietary software towards interoperability and open information.

2 EU Cohesion and Strategic 'Place' Concentration

EU cohesion policies include different areas of intervention and generally are carried out in order to promote the principle of redistributing opportunities among European regions and territories. It is the largest area of expenditure for European Union and it is possible to affirm that policy analysis tends to overlook the evaluation stage of such complex strategies while a proper assessment practice.

The EU Cohesion Policy is actually interpreted as the main tool in order to achieve the Europe 2020 target addressing a wide range of EU economic, environmental and social objectives. It represents a driven tool toward a new concept of Europe with smart, sustainable and inclusive growth. It currently offers both examples of significant economic and environmental "win-wins" and of "tradeoffs" that fail to offer net added value.

The reform of cohesion approach can be highlighted in two main concept areas including a wide spread of arguments and objectives:

- Investment choices: "where to spend more, where to spend less"
- Investment better via improved Cohesion Policy governance and tools

This complex policy framework is based on the key objective of "achieving greater economic and social cohesion in the European regions". Anyway some critical consequences could be derived from the point of view of convergence process for lagged regions: the imbalance between regional objectives and financial resources; the existence of serious difficulties for complying with earmarking; and the unknown effects of other policies on regional convergence [4].

The principle of concentration is widely stressed within New Cohesion Policy framework.

The concentration of EU efforts is contra-posed to the indiscriminate distribution of funding ('raining models'). This interpretation could intend that investment promoted by Regional Operative Programs (ROPs) should be focused on specific and circumscribed instances generating effective local development processes. We are in the case of redistributing investment effectiveness and positive outcomes on local communities, instead of realizing a well balanced €/citizen rate within a region.

This synthetic and not exhaustive remark allows us to highlight two relevant aspects of concentration principle: the concentration on objectives and the territorial concentration of investments. If the first appears to be not so far from traditional behavior of managing EU cohesion policies, the second level looks more at the 'place based' approach and expresses the importance of selecting territorial specification.

To the procedural concept through which decisions are taken binds, as a consequence, the concept of evaluation as a process closely linked to the project cycle [5]. It is reductive to solve the problems of evaluation by the application of a techniques set related to limited issues.

In the "evaluation cycle" [6] it is possible to identify three types of evaluation each connected to one or another phase of the project cycle.

Connected to the interpretation depending on evaluation approach to local development processes, appeared the thesis of "renationalization" of cohesion policies [7]. This approach reinforced the role of national administration in driving the implementation of ROPs at regional ad local level. While the negotiation of Member States at the top level of Cohesion Policy hierarchy was previously considered the primary role of National Authorities, now the importance is mainly focussed on the implementation phase. This idea fits more with the 'place based' approach in terms of local specific needs interpretation. In following section we describe the use of an open data service provided by Italian Ministry for Territorial Cohesion. The project 'opencoesione' collected and distributed data on Operative Programs implementation in Italy for the programming period 2007/2013.

http://www.opencoesione.gov.it/

3 Open Data for Effective Spatial Evaluation of Cohesion Policies

Today data availability is not the main problem in territorial investigation but new instances emerged in terms of data management, certification and standard exchange protocols [8]. Many people and organizations collect a wide range of different data in order to perform their own tasks.

The Open data, and in particular 'open government data', are an huge resource still largely untapped. The Government role is particularly important in this sense, not only for the quantity and the centrality of the data collected, but also because most of the government data are public by law, and therefore should be made open and available for anyone to use.

According to the Open Knowledge Foundation Italia [9] there are many circumstances in which we can expect that the open data have significant value.

We are interested in the Measuring the impact of public policies as the extraction of new knowledge by combining different sources of data and the identification of regularities that emerge from the analysis of large masses of data represent the core of the application we propose for the evaluation of ROPs impact at local scale.

In Italy there are many initiatives opening of information assets undertaken by public central and local administrations. The portal dati.gov.it, (available since 2011) is a milestone in the process of opening a new era for innovation and transparency in the public administration.

Actually we can affirm that the practice of open data has been extended, but a lot of work and efforts should still be pay in order to get affective services for data integration.

The project Open Cohesion provides an open data service concerning cohesion policies effects with a orientation toward planning processes.

The publication of the data in an accessible format and reusable on their corporate websites shows the willingness of the government to move in a systematic way towards a structure of transparency that encourages the active participation of citizens and the re-use of data. The service pursues the objective of improving Citizen Engagement on investments policies, and offers a data set with specific information concerning project funded by the current programming period 2007-2013 matching implementation data from regional and national administrations entitled of Ops management.

Open-Government and Open-Data represent the two faces of the same coin.

But, to ensure that data are really "open", they has to be provided in an open and non-proprietary format, without particular restrictions of licenses, reusable and integrable, easily searchable on the web through databases, catalogs and search engines, directly accessible via Internet protocols, network-accessible in network quickly, immediately and at any time, and transmitted directly interchangeable between all users on the network. The data must also be supported by metadata and should allow the export in order to use on-line and off-line, integration, manipulation and share.

We consider the classification of data "open" according to stars scoring by Tim Berners-Lee [10]. Concerning territorial pourpose five stars open linked data includes the adoption of OCG standards

Open Coesione appears to be a result of Open Governement Approach and concerning the Tim Berners-Lee we can affirm that it provides only three stars open data with the opportunity to get spatial dimension information through external elaboration. In this direction, previous researches demonstrated the added value of providing open spatial information concerning development programs. We refer to the experience developed by PIT Marmo Platano Melandro (Basilicata – IT) during the EU programming period 2000-2006 with a web gis service for the spatialization of development policies [11].

While in that experience the main effort was in territorial data production we have to affirm that today it is possible to develop accurate spatial analysis concerning the distribution of EU funded investments with public open data. In the next section we describe the adopted methodology.

4 Toward the Elaboration of Investments Spatial Dimension

The innovative element in the assessment approach we proposed depends on the punctual territorialisation of projects and interventions.

This approach changes the perspective of the assessment because it reinforces the selection criteria on the basis of the request for territorial "specialization" in programming New Cohesion Policy.

Our approach is based on open dataset distributed according to interoperable formats, managed by open-sources software and application, with a strong relationship with web-based services.

The issue of territorial impact assessment of development policies is a domain in which different approaches produce different results that often represent solutions for a specific purpose, serving a specific process of socio-economic and territorial planning without a framework methodology validated under a scientific or technical point of view.

The research aims to provide answers to the demand for territorial specializations analysis oriented to the construction of policy choices to be developed within the EU's 2014-2020 operational planning tools. The proposed approach, based on information concerning the implementation of the instruments 2007-2013, develops a interpretation model that allows a progressive monitoring of on-going processes. A territorial monitoring system that allows at a detailed scale punctual information.

The territorial context of the implementation is the Agri Valley. An inland area of the Basilicata Region in which coexists structural problems for the socio-economic development [12].

5 Open Source and Web-Based Tools: An Innovative Procedure

In relation to the structure of the information sources we used, it has been implemented a procedure 'ad hoc' that exclusively refers to open-source tools. In this section we cite the operational steps and tools used (see next figure)

The figure shows the total of 551 projects localized in the study context. The proposed procedure allows to achieve high accuracy in punctual localization of interventions and projects.

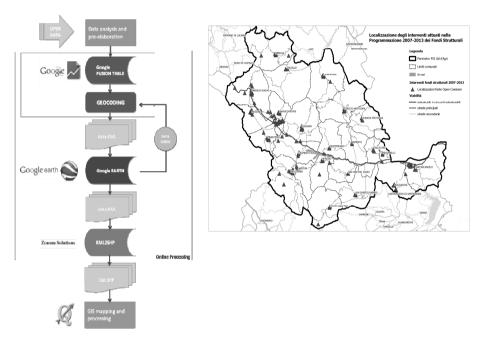


Fig. 1. Territorialisation procedure flow chart [13] and investments point pattern

6 Conclusions and Perspectives

Place based approach will bring to innovations in EU cohesion management. Where outcomes indicators measure the implementation of cohesion operative program [14] other efforts should be addressed to the identification of local specialization. It could generate not a fix picture of a context, places and communities evolve continuously especially as a reaction to the huge changes brought by economic crisis. Main issues connected with the instances of the New Cohesion Policies are: The need of a clear identification of the combined place-specific characteristics in each region; a clear identification of the appropriate territorial context in order to implement effectively "smart specializations". Open data phenomena represent an useful process that

already driven the research from data production to exploitation of the informative value of several data sources available for everybody. But data and data analysis technique cannot bring to useful information. Regional science has the task to produce effective 'places' interpretation in order to support public decision in incoming generation of EU ROPs. We are in the case in which it is relevant to use numerous data sources and indicators assuming a variable rate of approximation in the accuracy of the datasets.

The information management and exchange implies problem in interoperability between sources, procedures and technologies. In the field of Regional development the ontological approach provided alternative interpretation models of the interaction between the context, the program and the beneficiaries [15] [16].

Specialization analysis should be developed through an integrated set of technique oriented to generate descriptive geographies of the EU region at a variable scale.

The perspective regards the application of such processes in the framework of managing Regional Operative Programs and generally development programs in order to involve beneficiaries and citizens in the process. It is possible to affirm that a real time monitoring system of development investments is actually feasible with current open resources.

References

- Barca, F.: An agenda for a reformed cohesion policy: a place-based approach to meeting European union challenges and expectations. Independent Report prepared at the Request of the European Commissioner for Regional Policy, DanutaHübner. European Commission, Brussels (2009)
- Las Casas, G., Scorza, F.: Un approccio "context-based" e "valutazioneintegrata" per ilfuturodellaprogrammazioneoperativaregionale in Europa. In: Bramanti, A., Salone, C. (eds.) Lo Sviluppo Territoriale Nell'economia Della Conoscenza: Teorie, Attoristrategie. Collana Scienze Regionali, p. 41. Franco Angeli, Milano (2009)
- Roberta Capello. Smart Specialisation Strategy and the New EU Cohesion Policy Reform: Introductory Remarks. Scienze Regionali 2014, Fascicolo: 1, pp. 5–13 (2014), doi:10.3280/SCRE2014-001001
- 4. Las Casas, G., Scorza, F.: Un approccio "context-based" e "valutazioneintegrata" per ilfuturodellaprogrammazioneoperativaregionale in Europa. In: Bramanti, A., Salone, C. (eds.) Lo Sviluppo Territoriale Nell'economia Della Conoscenza: Teorie, Attoristrategie. Collana Scienze Regionali, vol. 41. Franco Angeli, Milano (2009)
- 5. Institute for European Environmental Policy (IEEP) (2011) Cohesion Policy and Sustainable Development, Executive Summary Retrived at (Maj 2013), http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/sustainable_development/sd_executive_summary.pdf
- 6. Hoerner, J., Stephenson, P.: Theoretical Perspectives on Approaches to Policy Evaluation in the EU: The Case of Cohesion Policy. Public Administration 90, 699–715 (2012), doi:10.1111/j.1467-9299.2011.02013.x
- 7. Las Casas, G.B.: Processo di piano edesigenze informative. In: Clemente, F. (ed.) Pianificazione del Territorio e Sistema Informativo. Ed. F. Angeli, Milano (1984)
- 8. Lombardo, S. (ed.): La valutazione del processo di piano. Contributiallateoria e al metodo, CollanaScienzeregionali. Franco Angeli, Milano (1995)

- Mancha-Navarro, T., Garrido-Yserte, R.: Regional policy in the European Union: The cohesion-competitiveness dilemma. Regional Sci Policy & Practice 1, 47–66 (2008), doi:10.1111/j.1757-7802.2008.00005.x
- Scorza, F.: Improving EU cohesion policy: The spatial distribution analysis of regional development investments funded by EU structural funds 2007/2013 in italy. In: Murgante, B., Misra, S., Carlini, M., Torre, C.M., Nguyen, H.-Q., Taniar, D., Apduhan, B.O., Gervasi, O. (eds.) ICCSA 2013, Part III. LNCS, vol. 7973, pp. 582–593. Springer, Heidelberg (2013)
- 11. Open Knowledge Foundation Italia, Open data handbook (May 2013), http://opendatahandbook.org/ (retrived)
- 12. Tim Burner Lee (2009), http://www.w3.org/
- Murgante, B., Tilio, L., Lanza, V., Scorza, F.: Using participative GIS and e-tools for involving citizens of MarmoPlatano – Melandro area in European programming activities, special issue on E-Participation in Southern Europe and the Balkans. Journal of Balkans and Near Eastern Studies 13(1), 97–115 (2011) ISSN:1944-8953, doi:10.1080/19448953.2011.550809
- 14. ENI in Basilicata, Local Report. ENI (2012)
- 15. Barca, F., McCann, P.: Methodological note: outcome indicators and targets-towards a performance oriented EU cohesion policy and examples of such indicators are contained in the two complementary notes on outcome indicators for EU2020 entitled meeting climate change and energy objectives and improving the conditions for innovation. Research and Development (2011),
 - http://ec.europa.eu/regional_policy/sources/docgener/evaluation/performance_en.htm(accessed October 1, 2011)
- Scorza, F., Casas, G.B.L., Murgante, B.: That's ReDO: Ontologies and Regional Development Planning. In: Murgante, B., Gervasi, O., Misra, S., Nedjah, N., Rocha, A.M.A.C., Taniar, D., Apduhan, B.O. (eds.) ICCSA 2012, Part II. LNCS, vol. 7334, pp. 640–652. Springer, Heidelberg (2012)
- 17. Las Casas, G., Scorza, F.: Redo: applicazioniontologiche per la valutazionenellaprogrammazioneregionale, Italian. Journal of Regional Science Scienze Regionali 10(2), 133–140 (2011), doi:10.3280/SCRE2011-002007
- Scorza, F., Casas, G.L., Murgante, B.: Overcoming Interoperability Weaknesses in e-Government Processes: Organizing and Sharing Knowledge in Regional Development Programs Using Ontologies. In: Lytras, M.D., Ordonez de Pablos, P., Ziderman, A., Roulstone, A., Maurer, H., Imber, J.B. (eds.) WSKS 2010. CCIS, vol. 112, pp. 243–253. Springer, Heidelberg (2010)