

# Small towns and valorization projects. Criteria and indicators for economic evaluation

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*keyword:* small towns, valorization, economic evaluation, multi-criteria analysis

## Abstract

*The valorization of small towns is an increasingly current topic because of the significant value for the sustainable development of the territories. Places of departure, small towns represent the melting pot of common feeling, regional and national identities, tangible and intangible heritages. But if it is now imperative to intervene also in order to stop the migratory phenomenon that affects them, it is useful to imple-*

*ment logical schemes and analysis procedures aimed at a rigorous selection of investment options. Thus, the paper proposes an innovative model for the economic evaluation of projects aimed at the valorization of small municipalities. In particular, the study investigates criteria, sub-criteria and indicators to be implemented according to the Analytical Hierarchy Process approach.*

## 1. INTRODUCTION

In response to the marginalization and de-anthropization phenomena that increasingly affect small towns, recovery and valorization strategies must be traced with the aim of avoiding the loss of a wide heritage, custodian of historical, cultural and identity memories. However, intervening in these places is not easy. *In primis* for the complexity of the problem, whose solution requires multiple skills, ranging from architecture to recovery, from urban planning to economics, from sociology to anthropology, etc. (Coletta, 2010). *In secundis*, for the obligation to prefigure interventions respectful of the contexts and compliant with the real local needs (Berizzi, Rocchelli, 2019).

The current thinking means the valorization of small towns as an opportunity to face the crisis of the contemporary city, promoting the sustainable development of the territories in the social, economic, environmental and cultural areas. In this sense, the work investigates the topic of small towns enhancement with the aim of establishing criteria, sub-criteria and evaluation indica-

tors useful for the characterization of a multi-criteria model in order to select effective investment strategies.

In the following, the meaning of the small town is given at first. Hence it is inferred the role that valorization initiatives must play for small municipalities. With the aim, therefore, of defining a hierarchical analysis model based on specific criteria, sub-criteria and analysis indicators. The conclusions of the study highlight the important implications of economic policy and outline prospects for future research.

## 2. A SMALL TOWN DEFINITION

Giving a rigorous meaning to the small town is difficult. In Aa. Vv., 1980 it even reads that “the extraordinary variety of situations present in the Italian territory exempts us from attempting any precise definition [...]; on the contrary, it must be immediately clear that it is only for convenience that we refer to a terminology that has been in use for long time, above all in the urban planners language [...]”.

Nonetheless, the literature different definitions can have

two main interpretations: the first considers quantitative parameters, such as the number of the resident population; the second takes into account qualitative aspects, such as social, political, anthropological, historical, cultural.

In order to trace a semantic path of the 'small town' term it is necessary to start from the Venice Charter of 1964. Art. 1 introduces a new idea of 'monument', intended no longer as an isolated architectural artefact, but as an "urban or landscape environment which is the testimony of a particular civilization, of a significant evolution or of a historical event (this notion is applied not only to great works, but also to modest works that, over time, have acquired a cultural meaning)". In this way, the typical realities of the territory, characterized by historical-cultural value, which can be found "in the spontaneous and vernacular expressions of our smaller towns", are also considered monuments (Venice Charter, 1964).

A few years later, in 1971, Alberto Predieri circumscribed the term small town to urban nuclei "inserted in rapidly developing cities or even stationary ones, originally headquarters of important political-cultural functions and economically carried out within the areas of which they constitute nodal points, nowadays decayed, but of great historical-artistic-environmental value and of possible cultural and tourist interest" (Coletta, 2010).

In the same period Roberto Di Stefano speaks of 'small urbanized centers', alluding to all urban realities characterized by a limited number of inhabitants (Di Stefano, 1979). This definition is shared by Giuseppe Ronchi, who indicates as 'small settlements' the "agglomerations of demographic weight of up to a few thousand inhabitants, often (located) in growing depopulation areas, mainly rural or mountain" (Rocchi, 1985).

Thus, we begin to have a simplified definition, linked to demographic data. In this regard, in 1975, M.A. Chastel relates the small town concept to a limit of residents between 2,000 and 20,000.

The adoption of maximum population thresholds for the definition of small municipalities is also a prerogative of some Italian regional laws, including n. 11/1997 of Marche and n. 37/1999 of Veneto. The result of this legislative process is the recent law n. 158/2017, "Measures for the support and valorization of small municipalities, as well as the arrangements for the redevelopment and recovery of the same municipalities' historic centers". The goal is the social, economic, cultural and environmental development of small towns, made possible thanks to the allocation of European funds. These are intended for municipalities with fewer than 5,000 inhabitants.

Beyond a quantitative notion, it is interesting to highlight the close relationship between the concept of small town and that one of landscape. This relationship is clearly evident in the European Landscape Convention (2000), in which the built heritage is defined as 'landscape' if harmoniously inserted in the territory on which

it depends. A harmony that refers both to the aesthetics of the built-nature relationship, and to the balance between cultural, social, economic and historical components. On the other hand, the character of the landscape derives from the action of natural and/or human factors and their interrelationships.

It is therefore possible to interpret small towns as a "landscape in the landscape"; like the action of man who spontaneously modified the territory using local materials and resources, adapting himself to soil conditions, climate and morphological structures. Places where intangible assets, localism, specificities and shared values are kept.

From this arises the awareness of not being able to trace the definition of small town to a numerical data only.

### 3. THE VALORIZATION OF SMALL TOWNS

The globalization favors the development of a new society, characterized by a different lifestyle from the past, based on the rapid circulation of information, goods and people. This leads to the rapid growth of cities and the consequent emptying of small towns, considered unsuitable for the rhythms of 'modern living'. The lack of infrastructure, the general distance from the main job supply poles and the insufficiency of services contribute to increasing the marginalization phenomenon and the cultural, social and economic isolation.

On the other hand, in the last decade, in response to the crisis of metropolitan areas, the attention has shifted to small towns, considered key nodes for the reorganization of the territory. The potential is many. Just think that around 92% of local specialties are concentrated here and that the tangible and intangible heritage handed down is the beating heart of the national identity. Moreover, the cultural heritage, and among these the small towns, are "a "deposit of values" which contributes to the recognition process of a common feeling, of a specificity/diversity which means difference compared to other realities" (Fusco Girard, Nijkamp, 2000).

Therefore, protecting and valorizing are fundamental actions for a possible rebirth of the small towns (Fiore, 2017). In particular, valorizing means:

- recover the material and immaterial potential;
- re-propose productive vocations;
- inserting local values into a positive circuit of knowledge and promotion.

*The future is in the countryside.* It is with this slogan that Rem Koolhaas declares his trust in rural areas and small towns (Berizzi, Rocchelli, 2019). Trust based on the awareness that the sustainable growth of countries depends heavily on the valorization of these realities. Returning to small towns involves, in fact, the improvement of lifestyles, the reduction of land consumption, the demographic decongestion of big cities, the strengthening of agricultural areas and the recovery of local activities.

It also allows to rebuild social, community and identity links.

These issues are completely consistent with the most recent principles of sustainable development, which regulate the growth of communities based not only on economic factors but also on social, environmental and cultural aspects. In particular, “the culture regulates the relationship between the three poles, individual, society, environment and, therefore, allows or not the activation of a co-evolutionary process between them” (Steiner, 1993).

#### 4. VALORIZATION PROJECTS FOR SMALL TOWNS. CRITERIA FOR AN ECONOMIC VALUATION MODEL

In light of the above, it is important to have methodologies and operational tools able of assessing the concrete capacity of investment projects to enhance small municipalities. If the need to rely on multi-criteria models is clear, the need to define criteria, sub-criteria and corresponding indicators on which to base the analysis algorithms is equally evident (Nesticò, Moffa, 2018). By virtue of the rigor of the calculation procedures and the simple adaptability to different real situations, these algorithms are believed to have the same Analytical Hierarchy Process (AHP) structure (Nesticò, Morano, Sica, 2018).

The first step for the characterization of the study protocol is the clarification of the evaluation criteria. These, on the basis of the sustainable development founding principles, must meet the multiple social, economic, environmental and cultural needs. For the considered case, that is for small towns projects, the cultural criteria specializes in the historical-architectural one.

The first level criteria can find detail in several sub-criteria, whose determination requires preliminary to recognize the typical ‘invariants’ of small towns, or their recurring characters. Thus, the second step refers to the wide literature on small towns, useful for inferring as ‘invariants’:

- presence of local traditions and identities;
- lack of services;
- typical production activities;
- distance from major cities;
- lack of adequate infrastructure;
- environmental quality;
- insertion in a natural context;
- limited and compact extension of the built fabric;
- ‘human scale’ built dimension;
- quality of the built heritage;
- typological-constructive characteristics typical of the place.

These ‘invariants’, represented in Fig. 1, conform the foundations useful for establishing the sub-criteria in

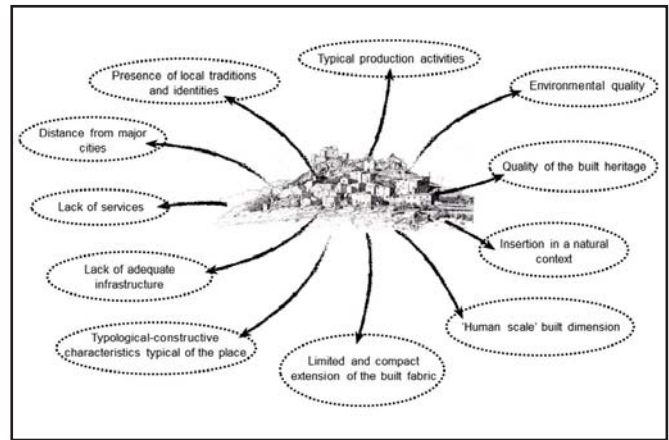


Figure 1 - Small towns invariants.

order to evaluate strategies aimed at relaunching small towns.

Depending on the recognized ‘invariants’, the following sub-criteria are explained for each of the four evaluation criteria.

- Social criteria:
  - local traditions and identities;
  - secondary urbanization works;
  - social assistance services.
- Economic criteria:
  - productive vocations;
  - primary urbanization works.
- Environmental criteria:
  - Territory:
    - flora and fauna;
    - environmental quality.
  - Urban core:
    - volumetric structure;
    - green areas.
  - Building:
    - bioclimatic quality.
- Historical-architectural criteria:
  - Territory:
    - integration with the environment.
  - Urban core:
    - visual image;
    - dialogue between the urban fabric and its context;
    - full/empty relationship and green spaces system.
  - Building:
    - formal relationship between the building and the formal characteristics of the urban core;
    - typological-distributive and typological-formal characters.

Fig. 2 schematizes the goal, the criteria and the sub-criteria of evaluation in a hierarchical form. Both for the environmental and historical-architectural criteria, the analysis is conducted on three distinct layers: territory, urban core, building. In this way, it is possible to investigate the relationships that exist between the three different systems.

Goal Small towns valorization			
Social criteria	Economic criteria	Environmental criteria	Historical-architectural criteria
<ul style="list-style-type: none"> <li>- Local traditions and identities</li> <li>- Secondary urbanization works (kindergartens, schools, health facilities, neighbourhood markets, municipal delegations, churches and religious buildings, sports facilities)</li> <li>- Social assistance services (services for the elderly, for disabled people, for immigrants)</li> </ul>	<ul style="list-style-type: none"> <li>- Productive vocations (agriculture, crafts, industry, commerce, tourism)</li> <li>- Primary urbanization works (roads serving the settlements, conduits suitable for collecting and discharging waste water, parking lots, electricity network, teleph. network, gas network, public lighting, water network)</li> </ul>	<p style="text-align: center;"><i>Territory</i></p> <ul style="list-style-type: none"> <li>- Flora and fauna</li> <li>- Environmental quality (water, air, soil)</li> </ul> <p style="text-align: center;"><i>Urban core</i></p> <ul style="list-style-type: none"> <li>- Volumetric structure</li> <li>- Green areas</li> </ul> <p style="text-align: center;"><i>Building</i></p> <ul style="list-style-type: none"> <li>- Bioclimatic quality</li> </ul>	<p style="text-align: center;"><i>Territory</i></p> <ul style="list-style-type: none"> <li>- Integration with the environment</li> </ul> <p style="text-align: center;"><i>Urban core</i></p> <ul style="list-style-type: none"> <li>- Visual image</li> <li>- Dialogue between the urban fabric and its context</li> <li>- Full/empty relationship and green spaces system</li> </ul> <p style="text-align: center;"><i>Building</i></p> <ul style="list-style-type: none"> <li>- Formal relationship building-urban core</li> <li>- Typological-distributive and typological-formal characters</li> </ul>

Figure 2 - Goal, criteria and sub-criteria for the valorization of small towns.

## 5. INPUT FOR THE EVALUATION INDICATORS DEFINITION

In light of the previous paragraph results, the definition approach of the evaluation indicators corresponding to each sub-criteria is introduced. These are the indicators (quantitative or qualitative) able to estimate the ability of the project to pursue the goal that the sub-criteria expresses (Nesticò, Somma, 2019).

The reference literature analysis allows the selection of 15 indicators panels which are related to issues directly attributable to those of the small towns, in particular: urban

sustainability; sustainable urban mobility; valorization of historical-cultural heritage; territorial cohesion; rural development; landscape.

The 15 panels compose a dataset of 470 evaluation indexes, collected in Tab. 1 (for summary, the table does not show all the indicators, to whose detail the bibliography cited refers).

The wide articulation of the dataset is evident, which requires a rational analysis, selection and reorganization, useful for specializing the indexes on the investment strategies topic for the valorization of small towns. This is a reason for future research activities.

Table 1 - Selected studies

1. - Mega V., Pedersen J. (1998), <i>Urban Sustainability Indicators</i> (n. 16 indicators)	
Global Climate Indicator (GCI) Air Quality Indicator (AQI) Acidification Indicator (AI) Ecosystem Toxification Indicator (ETI) Urban Mobility Indicator (UMI) or Clean Transport Indicator Waste Management Indicator (WMI) Energy Consumption Indicator (ECI) Water Consumption Indicator (WCI)	Nuisance Indicator (NI) Social Justice Indicator (SJI) Housing Quality Indicator (HQI) Urban Safety Indicator (USI) Economic Urban Sustainability Indicator (ESI) Green, Public Space and Heritage Indicator (GPI) Citizen Participation Indicator (CPI) Unique Sustainability Indicator (USI)
2. - European Commission (2008), <i>European Green Capital Award (EGCA)</i> (n. 12 indicators)	
Local contribution to global climate change Transport Green urban areas Noise Waste production and management Nature and biodiversity	Air Water consumption Waste water treatment Eco-innovation and sustainable employment Environmental management of the local authority Energy performance

Segue Table 1 - Selected studies



Segue Table 1 - Selected studies

3. - Mameli F., Marletto G. (2009). <i>A selection of indicators for monitoring sustainable urban mobility policies</i> (n. 14 indicators)	
Public and private services accessible via telephone and computer (Objective: Alternatives to mobility) Congestion (Objective: Easy mobility) Walkability index (Objective: Easy mobility) Cycling index (Objective: Easy mobility) Quantity/quality of public transport services (Objective: Easy mobility) No. of motorized vehicles per km <sup>2</sup> (Objective: Availability of public space) Kilometres of vehicle travel density (Vehicles*distances travelled per km <sup>2</sup> ) (Objective: Availability of public space) Percentage of population exposed to transport noise levels exceeding the national standards (Objective: Silence)	Transport emissions: PM10, COVNM, NOX, CO (Objective: Clean air) Death and injuries from transports (Objective: Safety) CO <sub>2</sub> emissions from transports (Objective: Reduce greenhouse gas emissions) Land occupied by the transport infrastructures (Objective: Reduce land consumption) Waste generated by transport activities (Objective: Reduce transport waste) Annual average mobility expenditure from households, companies and public authorities (Objective: Mobility costs reduction)
4. - Vallega A. (2009), <i>Indicatori per il paesaggio</i> (n. 37 indicators)	
Loss of species diversity (Area: Biological quality) Species richness (Area: Biological quality) Endangered species (Area: Biological quality) Protected species (Area: Biological quality) Ecologically protected areas (Area: Biological quality) Transparency of the air at the ground level (Area: Environmental quality and landscape) [...]	[...] Landscape learning in primary school (Area: The landscape in teaching and information) Communication efficiency (Area: The landscape in social communication) Landscape's role in the hard media communication (Area: The landscape in social communication) Landscape's position in the Internet system (Area: The landscape in social communication)
5. - European Environment Agency (EEA) (2010), <i>EEA Urban Metabolism Framework</i> (n. 15 indicators)	
Per capita CO <sub>2</sub> emissions from energy consumption (Topic: Urban Flows) Energy efficiency of transport (Topic: Urban Flows) Efficiency of residential energy use (Topic: Urban Flows) Efficiency of urban water use (Topic: Urban Flows) Waste intensity (Topic: Urban Flows) Recycling (Topic: Urban Flows) Urban land take (Topic: Urban Flows)	Green space access (Topic: Urban Quality) NO <sub>2</sub> concentrations (Topic: Urban Quality) PM <sub>2</sub> concentrations (Topic: Urban Quality) Unemployment rate (Topic: Urban Quality) Land use efficiency (Topic: Urban Patterns) Public transport network length (Topic: Urban Patterns) Registered cars (Topic: Urban Drivers) GDP per capita (Topic: Urban Drivers)
6. - United Nations Economic Commission for Europe (UNECE) (2011), <i>Transport for sustainable development in the ECE region</i> (n. 17 indicators)	
Infrastructure density (Area: Access) Infrastructure quality (Area: Access) International transport (Area: Access) Burden of border crossing (Area: Access) Household spending on transport (Area: Affordability) The price of transport (Area: Affordability) Public investment on transport (Area: Affordability) Private investment in transport (Area: Affordability) Road fatalities (Area: Safety)	Seat-belt use, impaired driving and speeding (Area: Safety) Active level crossings (Area: Safety) Terror threats (Area: Security) Criminal activities (Area: Security) Energy consumption in transport (Area: Environment) Emission of greenhouse gases and local pollutants (Area: Environment) Local pollutants from transport (Area: Environment) Noise from transport (Area: Environment)
7. - Volpiano M. (2011), <i>Indicators for the Assessment of Historic Landscape Features</i> (n. 12 indicators)	
Infrastructure density (Area: Access) Infrastructure quality (Area: Access) International transport (Area: Access) Burden of border crossing (Area: Access) Household spending on transport (Area: Affordability) The price of transport (Area: Affordability) Public investment on transport (Area: Affordability) Private investment in transport (Area: Affordability) Road fatalities (Area: Safety)	Seat-belt use, impaired driving and speeding (Area: Safety) Active level crossings (Area: Safety) Terror threats (Area: Security) Criminal activities (Area: Security) Energy consumption in transport (Area: Environment) Emission of greenhouse gases and local pollutants (Area: Environment) Local pollutants from transport (Area: Environment) Noise from transport (Area: Environment)

Segue Table 1 - Selected studies

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7. - Volpiano M. (2011), <i>Indicators for the Assessment of Historic Landscape Features</i> (n. 12 indicators)	
Exceptionality of the historical-cultural characteristics of the landscape (Action: Characterization)	tory in relation to historical situation (Action: Transformation)
Fragility of the historical-cultural characteristics of the landscape (Action: Characterization)	State of preservation of built heritage with reference to characterizing elements (Action: Transformation)
Significance/typicality of the historical-cultural characteristics of the landscape (Action: Characterization)	Preservation of relation systems between assets (Action: Transformation)
Preservation of the assets (Action: Transformation)	Promotion of actions for further knowledge of historical-cultural heritage (Action: Enhancement)
Protected areas and elements (Action: Transformation)	Economic enhancement of historical-cultural heritage networking (Action: Enhancement)
Elements protected by local planning instruments/elements protected by regional planning (Action: Transformation)	Use of historical-cultural heritage (Action: Enhancement)
Presence/Absence of categories of significant assets on territory	
8. - Confederazione Svizzera - Ufficio Federale dell'Ambiente UFAM (2012), <i>Ufficio Federale dell'Ambiente UFAM - Paesaggio: Indicatori</i> (n. 11 indicators)	
Landscape perceived beauty (Topic: Landscape)	Light emissions (Topic: Landscape, biodiversity)
Summer pastures (Topic: Landscape)	Landscape fragmentation (Topic: Landscape, biodiversity)
Perceived quality of the landscape around the own home (Topic: Landscape)	Soil waterproofing (Topic: Landscape, biodiversity)
Forest areas extensively exploited (Topic: Landscape)	Agricultural areas (Topic: Landscape, biodiversity)
Buildings area outside the building zones (Topic: Landscape)	Variety of agricultural land use (Topic: Landscape, biodiversity)
Settlement dispersion (Topic: Landscape, biodiversity)	
9. - European Commission, Directorate-General for Agriculture and Rural Development (2013), <i>Rural Development in the European Union - Statistical and Economic Information, Report 2013</i> (n. 59 indicators)	
Designation of rural areas (Section: Importance of rural areas)	[...]
Importance of rural areas (Section: Importance of rural areas)	Development of services sector (Section: Diversification and quality of life in rural areas)
Population density (Section: Socio-economic situation of rural areas)	Net migration (Section: Diversification and quality of life in rural areas)
Age structure (Section: Socio-economic situation of rural areas)	Educational attainment (Section: Diversification and quality of life in rural areas)
Economic development (Section: Socio-economic situation of rural areas)	Life-long learning in rural areas (Section: Diversification and quality of life in rural areas)
Structure of the economy (Section: Socio-economic situation of rural areas)	Development of Local Action Groups (Section: Leader)
[...]	
10. - European Spatial Planning Observation Network (ESPON) (2013), <i>KITCASP - Key Indicators for Territorial Cohesion and Spatial Planning</i> (n. 20 indicators)	
GDP per capita/ GVA per capita (Theme: Economic Competitiveness and Resilience)	[...]
Employment rate of population aged 20-64 (Theme: Economic Competitiveness and Resilience)	Greenhouse gas emissions (Theme: Environmental Resource Management)
Total R & D expenditure as % of GDP (Theme: Economic Competitiveness and Resilience)	Population at risk of flooding (living in flood-prone areas (Theme: Environmental Resource Management)
Balance of external trade (Theme: Economic Competitiveness and Resilience)	Number and status of protected European habitats and species (Theme: Environmental Resource Management)
[...]	Water quality status (Theme: Environmental Resource Management)
11. - Phillips R. G., Stein J. M. (2013), <i>An Indicator Framework for Linking Historic Preservation and Community Economic Development</i> (n. 29 indicators)	
Historic fabric (Aim: Gauging)	[...]
Districts, structures, landmarks (Aim: Gauging)	Housing affordability and percent affordable historic houses (Aim: Interfacing)
Rehabilitation/certified tax credits (Aim: Gauging)	Business use and types Community draw factors, Community use Factor (Aim: Interfacing)
Assessed property value trends (Aim: Gauging)	Heritage/cultural interactions and skills (Aim: Interfacing)
Historic district/property reinvestment (Aim: Gauging)	
[...]	

Segue Table 1 - Selected studies

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12. - Valtenbergs V., González A., Piziks R. (2013), <i>Selecting indicators for sustainable development of small towns: the case of Valmiera municipality</i> (n. 73 indicators)	
Distribution of businesses and employed by industries (Criteria: Economic)	[...]
Percentage of added value from turnovers of entrepreneurs (Criteria: Economic)	The number of informative seminars and training courses (about environment) (Criteria: Environmental)
Foreign Direct Investments (capital/earnings) (Criteria: Economic)	The number of civic initiatives about environment protection (Criteria: Environmental)
The number of tourists (Criteria: Economic)	Number of schools with environmental education programs (Criteria: Environmental)
[...]	
13. - European Environment Agency (EEA) (2014), <i>Digest of EEA Indicators 2014 - Core Set of Indicators (CSI)</i> (n. 42 indicators)	
Emissions of main air pollutants (Topic: Air pollution)	[...]
Exceedance of air quality limit values in urban areas (Topic: Air pollution)	Total primary energy intensity (Topic: Energy efficiency)
Exposure of ecosystems to acidification, eutrophication and ozone (Topic: Air pollution)	Decoupling of resource use from environmental pressures (Topic: Decoupling of environmental pressures)
Passenger and freight transport demand (Topic: Transport)	Decoupling of resource use from environmental impacts (Topic: Decoupling of environmental impacts)
[...]	
14. - UN-Habitat - United Nations Human Settlements Programme (2016), <i>MEASUREMENT OF CITY PROSPERITY - Methodology and Metadata</i> (n. 39 indicators)	
City Product per capita (Sub-dimension: Economic Strenght)	[...]
Old Age Dependency Ratio (Sub-dimension: Economic Strenght)	Subnational Debt (Sub-dimension: Municipal Financing and Institutional Capacity)
Mean Household Income (Sub-dimension: Economic Strenght)	Local Expenditure Efficiency (Sub-dimension: Municipal Financing and Institutional Capacity)
Economic Density (Sub-dimension: Economic Strenght)	Land Use Efficiency (Sub-dimension: Governance of Urbanization)
Economic Specialization (Sub-dimension: Economic Strenght)	
[...]	
15. - Bosch P., Jongeneel S., Rovers V., Neumann H-M., Airaksinen M., Huovila A. (2017), <i>CITYkeys list of city indicators</i> (n. 74 indicators)	
Access to basic health care services (Area: Health)	[...]
Encouraging a healthy lifestyle (Area: Health)	Voter participation (Area: Community involvement)
Traffic accidents (Area: Safety)	Smart city policy (Area: Multi-level governance)
Crime rate (Area: Safety)	Expenditures by the municipality for a transition towards a smart city (Area: Multi-level governance)
Cybersecurity (Area: Safety)	Multilevel government (Area: Multi-level governance)
[...]	

## 6. CONCLUSIONS

Small towns are a widespread historical and cultural heritage. Unlike the historical cores of the cities, they often maintain the relationship with the environment and the landscape in which they are inserted unchanged. Places of tradition, they preserve the identity consciousness of the countries as “product and image of a community culture” (Francini et al., 2012).

Thus, protecting and valorizing these realities is of primary importance today. But the complexity of the marginalization dynamics that engage them requires organic interventions, careful not to the only artifact, but to the totality of the social, economic, environmental and cultural components of the reference territory. Hence the need to prepare project analysis tools for the valorization of small towns, able of reconciling the multiple criteria

that arise from respect for the sustainable development principles.

The ongoing work aims to provide elements for the characterization of a multi-criteria assessment model, organized according to the Analytical Hierarchy Process structure.

According to the macro social, economic, environmental and cultural topics, corresponding sub-criteria are defined, rationally related to the small towns recurring characters, the so-called ‘invariants’.

Then one or more evaluation indicators are associated with each sub-criteria, so as to have a dataset made up of 470 indexes selected from 15 sector studies.

Research developments will concern the dataset specialization to the analysis of investment projects for the valorization of small towns.

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The present work is to be attributed in equal parts to the three authors.

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# Centri minori e progetti di valorizzazione. Criteri e indicatori per la valutazione economica

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parole chiave: centri minori, valorizzazione,  
valutazione economica, analisi multicriteri

## Abstract

La valorizzazione dei centri minori è tema sempre più attuale in ragione della valenza significativa per lo sviluppo sostenibile dei territori. Luoghi della partenza, i piccoli centri rappresentano il crogiolo del comune sentire, delle identità regionali e nazionali, dei patrimoni materiali ed immateriali. Ma se è oramai indifferibile intervenire anche al fine di arrestare il fenomeno migratorio che li investe, è utile implementare schemi logici

e procedure di analisi volti ad una rigorosa selezione delle opzioni d'investimento. Così, il lavoro propone un innovativo modello per la valutazione economica di progetti finalizzati alla valorizzazione dei piccoli comuni. In particolare, lo studio indaga criteri, sotto-criteri ed indicatori da implementare secondo l'approccio dell'Analytic Hierarchy Process.

## 1. INTRODUZIONE

In risposta ai fenomeni di marginalizzazione e di de-antropizzazione che sempre più riguardano i centri minori, occorre tracciare strategie di recupero e di valorizzazione con l'obiettivo di scongiurare la perdita di un vasto patrimonio, custode di memorie storiche, culturali ed identitarie. Tuttavia, intervenire in questi luoghi non è semplice. *In primis* per la complessità del problema, la cui soluzione necessita di competenze plurime, che vanno dall'architettura al recupero, dall'urbanistica all'economia, dalla sociologia all'antropologia, ecc. (Coletta, 2010). *In secundis*, per l'obbligo di prefigurare interventi rispettosi dei contesti e conformi alle reali necessità locali (Berizzi, Rocchelli, 2019).

Il pensiero corrente intende la valorizzazione dei piccoli centri come occasione per far fronte alla crisi della città contemporanea, favorendo lo sviluppo sostenibile dei ter-

ritori nei diversi ambiti sociale, economico, ambientale, culturale. In tal senso, il lavoro indaga il tema della valorizzazione dei centri minori con lo scopo di stabilire criteri, sotto-criteri ed indicatori di valutazione utili alla caratterizzazione di un modello multicriteriale per la selezione di efficaci strategie di investimento.

Nel seguito, dapprima è reso il significato di centro minore. Da qui si desume il ruolo che iniziative di valorizzazione devono avere per i piccoli comuni. Con il fine quindi di definire un modello di analisi gerarchica fondato su specifici criteri, sotto-criteri e indicatori di analisi. Le conclusioni dello studio rilevano le importanti implicazioni di Politica economica e delineano prospettive di ricerca futura.

## 2. UNA DEFINIZIONE DI CENTRO MINORE

Attribuire un significato rigoroso al centro minore è ope-

[  
razione difficile. In Aa. Vv., 1980 si legge addirittura che “la straordinaria varietà di situazioni presenti nel territorio italiano ci esime dal tentare una qualsiasi precisa definizione [...]; anzi deve apparire subito chiaro che è solo per comodità che ci si riferisce [...] a una terminologia da tempo in uso soprattutto nel linguaggio degli urbanisti [...]”.

Nondimeno, le diverse definizioni presenti in letteratura possono avere due principali chiavi di lettura: la prima considera parametri quantitativi, come il numero della popolazione residente; la seconda tiene conto di aspetti qualitativi, di ordine sociale, politico, antropologico, storico, culturale.

Nell’ottica di tracciare un percorso semantico del termine ‘centro minore’ è necessario partire dalla Carta di Venezia del 1964. L’art. 1 introduce una nuova idea di ‘monumento’, inteso non più come un manufatto architettonico isolato, bensì come un “ambiente urbano o paesistico che costituisce la testimonianza di una civiltà particolare, di un’evoluzione significativa o di un avvenimento storico (questa nozione si applica non solo alle grandi opere, ma anche alle opere modeste che, con il tempo, abbiano acquistato un significato culturale)”. In tal modo, sono considerati monumenti anche le realtà tipiche del territorio, caratterizzate da valenza storico-culturale, riscontrabili “nelle espressioni spontanee e vernacolari dei nostri centri minori” (Carta di Venezia, 1964).

Qualche anno dopo, nel 1971, Alberto Predieri circoscrive il termine centro minore ai nuclei urbani “inseriti in città in rapido sviluppo o anche stazionarie, originariamente sedi di importanti funzioni politico-culturali ed economicamente svolte nell’ambito di aree di cui costituiscono punti nodali, oggi decaduti, ma di grande valore storico-artistico-ambientale e di possibile interesse turistico culturale” (Coletta, 2010).

Nello stesso periodo Roberto Di Stefano parla di ‘piccoli centri urbanizzati’, alludendo a tutte le realtà urbane connotate da un numero ristretto di abitanti (Di Stefano, 1979). Tale definizione è condivisa da Giuseppe Ronchi, il quale indica come ‘piccoli insediamenti’ gli “agglomerati di peso demografico fino a poche migliaia di abitanti, spesso (collocati) in zone a crescente spopolamento, prevalentemente rurali o montane” (Rocchi, 1985).

Si inizia, così, a prospettare una definizione semplificata, legata a dati di natura demografica. In proposito, nel 1975, M.A. Chastel relaziona il concetto di centro minore ad un limite di residenti compreso tra i 2.000 ed i 20.000.

L’adozione di soglie massime della popolazione per la definizione dei piccoli comuni è anche prerogativa di alcune leggi regionali italiane, tra cui la n. 11/1997 delle Marche e la n. 37/1999 del Veneto. Risultato di questo iter legislativo è la recente legge n. 158/2017, “Misure per il sostegno e la valorizzazione dei piccoli comuni, nonché le disposizioni per la riqualificazione e il recupero dei centri storici dei medesimi comuni”. Il fine ultimo è lo sviluppo sociale, economico, culturale ed ambientale dei piccoli centri, reso possibile grazie allo stanziamento di fondi europei.

Questi sono destinati ai comuni con un numero di abitanti inferiore a 5.000.

Al di là di una nozione quantitativa, è interessante evidenziare la stretta relazione che intercorre tra il concetto di centro minore e quello di paesaggio. Tale rapporto è ben evidente nella Convenzione Europea del Paesaggio (2000), in cui il patrimonio costruito è definito ‘paesistico’ se inserito armoniosamente nel territorio dal quale dipende. Un’armonia che rimanda sia all’estetica del rapporto costruito-natura, sia all’equilibrio tra componenti culturali, sociali, economiche e storiche. D’altra parte il carattere del paesaggio deriva dall’azione di fattori naturali e/o umani e dalle loro interrelazioni.

È possibile, quindi, interpretare i centri minori come un ‘paesaggio nel paesaggio’; come l’azione dell’uomo che, spontaneamente, ha modificato il territorio utilizzando i materiali e le risorse locali, adeguandosi agli andamenti del suolo, al clima ed agli assetti morfologici. Luoghi in cui sono conservati i beni immateriali, il localismo, le specificità ed i valori condivisi.

Ne scaturisce la consapevolezza di non poter ricondurre la definizione di centro minore al solo dato numerico.

### 3. LA VALORIZZAZIONE DEI PICCOLI COMUNI

La globalizzazione favorisce lo sviluppo di una nuova società, contraddistinta da uno stile di vita differente rispetto al passato, basato sulla circolazione rapida delle informazioni, delle merci e delle persone. Ciò porta alla veloce crescita delle città e al conseguente svuotamento dei piccoli centri, ritenuti inadatti ai ritmi del ‘vivere moderno’. La carenza di infrastrutture, la generale distanza dai principali poli di offerta lavorativa e l’insufficienza dei servizi contribuiscono ad accrescere i fenomeni di marginalizzazione e di isolamento culturale, sociale ed economico.

Di contro, nell’ultimo decennio, in risposta alla crisi delle aree metropolitane, l’attenzione si sta spostando sui centri minori, considerati nodi chiave per la riorganizzazione del territorio. Le potenzialità sono numerose. Basti pensare che qui si concentra circa il 92% delle tipicità locali e che il patrimonio materiale e immateriale tramandato è il cuore pulsante dell’identità nazionale. Del resto i beni culturali, e tra questi i centri minori, sono un “deposito di valori” che contribuisce al processo di riconoscimento di un comune sentire, di una specificità/diversità che significa differenza rispetto ad altre realtà” (Fusco Girard, Nijkamp, 2000).

Dunque, tutelare e valorizzare sono azioni fondamentali per una possibile rinascita dei centri minori (Fiore, 2017). In particolare, valorizzare significa:

- recuperare le potenzialità materiali ed immateriali;
- riproporre le vocazioni produttive;
- inserire i valori locali in un circuito positivo di conoscenza e di promozione.

*The future is in the countryside.* È con questo slogan che

Rem Koolhaas dichiara la sua fiducia nei confronti delle aree rurali e dei centri minori (Berizzi, Rocchelli, 2019). Fiducia fondata sulla consapevolezza che la crescita sostenibile dei Paesi dipenda fortemente dalla valorizzazione di queste realtà. Ritornare ai piccoli centri comporta, infatti, il miglioramento degli stili di vita, la riduzione del consumo di suolo, il decongestionamento demografico delle grandi città, il potenziamento delle aree agricole ed il recupero delle attività locali. Consente, inoltre, di ricostruire legami sociali, comunitari e di identità.

Si tratta di questioni del tutto coerenti con i più recenti principi dello sviluppo sostenibile, che regolano la crescita delle comunità sulla base di fattori non solo economici ma anche sociali, ambientali e culturali. In particolare, “la cultura regola il rapporto tra i tre poli individuo, società, ambiente e, quindi, consente o meno l’attivazione di un processo co-evolutivo tra gli stessi” (Steiner, 1993).

#### 4. PROGETTI DI VALORIZZAZIONE DEI CENTRI MINORI. CRITERI PER UN MODELLO DI VALUTAZIONE ECONOMICA

Alla luce di quanto esposto, è importante disporre di metodologie e di strumenti operativi in grado di valutare la concreta capacità dei progetti d’investimento di valorizzare i centri minori. Se è chiara l’esigenza di basarsi su modelli multicriteri, per effetto è altrettanto evidente la necessità di definire criteri, sotto-criteri e corrispondenti indicatori sui quali fondare gli algoritmi di analisi (Nesticò, Moffa, 2018). In virtù del rigore delle procedure di calcolo e per la semplice adattabilità alle differenti situazioni reali, tali algoritmi si ritiene possano avere la struttura propria dell’Analytic Hierarchy Process (AHP) (Nesticò, Morano, Sica, 2018).

Primo *step* per la caratterizzazione del protocollo di studio consiste nella esplicitazione dei criteri di valutazione. Questi, sulla scorta dei principi fondativi dello sviluppo sostenibile, devono rispondere alle plurime esigenze sociali, economiche, ambientali e culturali. Per il caso in esame, cioè per progetti su centri minori, il criterio culturale si specializza in quello storico-architettonico.

I criteri di primo livello possono trovare dettaglio in più sotto-criteri, la cui determinazione richiede preliminarmente di riconoscere le ‘invarianti’ tipiche dei piccoli centri, ovvero i loro caratteri ricorrenti. Così, secondo *step* di approfondimento rimanda all’ampia letteratura in materia di centri minori, utile per desumere quali ‘invarianti’:

- presenza di tradizioni e identità locali;
- carenza di servizi;
- attività produttive tipiche;
- distanza dalle città maggiori;
- carenza di infrastrutture adeguate;
- qualità ambientale;
- inserimento in un contesto naturale;

- limitata e compatta estensione del tessuto costruito;
- dimensione del costruito a scala umana;
- qualità del patrimonio costruito;
- caratteri tipologico-costruttivi tipici del luogo.

Tali ‘invarianti’, rappresentate in Fig. 1, conformano i fondamenti utili per stabilire i sotto-criteri per la valutazione di strategie volte al rilancio dei piccoli centri.

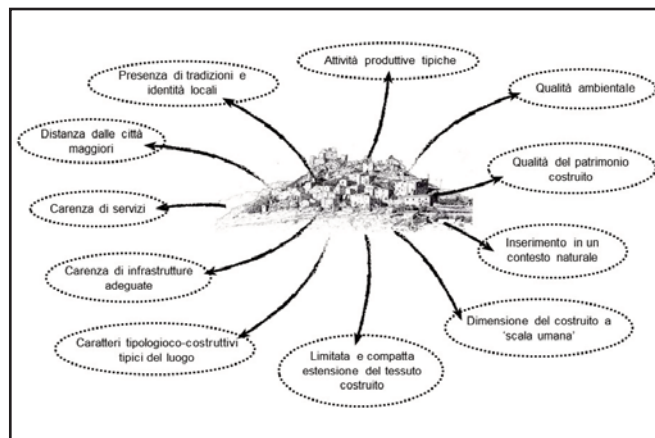


Figura 1 - Invarianti dei centri minori.

In funzione delle ‘invarianti’ riconosciute, per ciascuno dei quattro criteri di valutazione sono esplicitati i seguenti sotto-criteri.

- Criterio sociale:
  - tradizioni ed identità locali;
  - opere di urbanizzazione secondaria;
  - servizi socio-assistenziali.
- Criterio economico:
  - vocazioni produttive;
  - opere di urbanizzazione primaria.
- Criterio ambientale:
  - Territorio:
    - flora e fauna;
    - qualità ambientale.
  - Nucleo urbano:
    - conformazione volumetrica;
    - aree verdi.
  - Edificio:
    - qualità bioclimatica.
- Criterio storico-architettonico:
  - Territorio:
    - integrazione con l’ambiente.
  - Nucleo urbano:
    - immagine visiva;
    - dialogo tra il tessuto urbano ed il suo contesto;
    - rapporto pieni/vuoti e sistema degli spazi verdi.
  - Edificio:
    - relazione formale tra l’edificio e le caratteristiche formali del nucleo urbano;
    - caratteri tipologico-distributivi e tipologico-formali.

Obiettivo Valorizzazione dei centri minori			
Criterio sociale	Criterio economico	Criterio ambientale	Criterio storico-architettonico
<ul style="list-style-type: none"> <li>- Tradizioni ed identità locali</li> <li>- Opere di urbanizzazione secondaria (asili, scuole, strutture sanitarie, mercati di quartiere, delegazioni comunali, chiese ed edifici religiosi, impianti sportivi)</li> <li>- Servizi socio-assistenziali (servizi per gli anziani, per i disabili, per gli immigrati)</li> </ul>	<ul style="list-style-type: none"> <li>- Vocazioni produttive (agricoltura, artigianato, industria, commercio, turismo)</li> <li>- Opere di urbanizzazione primaria (strade a servizio degli insediamenti, condotti idonei alla raccolta ed allo scarico delle acque nere, parcheggi, rete elettrica, rete telefonica, rete del gas, illuminazione pubblica, rete idrica)</li> </ul>	<p style="text-align: center;"><i>Territorio</i></p> <ul style="list-style-type: none"> <li>- Flora e fauna</li> <li>- Qualità ambientale (acqua, aria, suolo)</li> </ul> <p style="text-align: center;"><i>Nucleo urbano</i></p> <ul style="list-style-type: none"> <li>- Conformazione volumetrica</li> <li>- Aree verdi</li> </ul> <p style="text-align: center;"><i>Edificio</i></p> <ul style="list-style-type: none"> <li>- Qualità bioclimatica</li> </ul>	<p style="text-align: center;"><i>Territorio</i></p> <ul style="list-style-type: none"> <li>- Integrazione con l'ambiente</li> </ul> <p style="text-align: center;"><i>Nucleo urbano</i></p> <ul style="list-style-type: none"> <li>- Immagine visiva</li> <li>- Dialogo tra tessuto urbano e contesto</li> <li>- Rapporto pieni/vuoti e sistema spazi verdi</li> </ul> <p style="text-align: center;"><i>Edificio</i></p> <ul style="list-style-type: none"> <li>- Relazione formale edificio-nucleo urbano</li> <li>- Caratteri tipologico-distributivi e tipologico-formali</li> </ul>

Figura 2 - Obiettivo, criteri e sotto-criteri per la valorizzazione dei centri minori.

La Fig. 2 schematizza in forma gerarchica l'obiettivo, i criteri e i sotto-criteri di valutazione. Sia per il criterio ambientale sia per quello storico-architettonico, l'analisi è condotta su tre distinti layer: territorio, nucleo urbano, edificio. In tal modo, è possibile investigare i rapporti che sussistono tra i tre diversi sistemi.

## 5. INPUT PER LA DEFINIZIONE DEGLI INDICATORI DI VALUTAZIONE

Alla luce dei risultati al precedente paragrafo, si introduce l'approccio per la definizione degli indicatori di valutazione corrispondenti a ciascun sotto-criterio. Si tratta degli indici (quantitativi o qualitativi) in grado di stimare la capacità del progetto di perseguire l'obiettivo che il sotto-criterio esprime (Nesticò, Somma, 2019).

L'analisi della letteratura di riferimento consente la selezione di 15 *panel* di indicatori che attengono a tematiche direttamente riconducibili a quelle proprie dei centri minori, segnatamente: sostenibilità urbana; mobilità urbana sostenibile; valorizzazione del patrimonio storico-culturale; coesione territoriale; sviluppo rurale; paesaggio.

I 15 *panel* compongono un *dataset* di 470 indici di valutazione, collazionati in Tab. 1 (per sintesi di esposizione, la tabella non riporta la totalità degli indicatori, al cui dettaglio rimanda la bibliografia citata).

Appare evidente l'ampia articolazione del *dataset*, che impone una razionale analisi, selezione e riorganizzazione, utile a specializzare gli indici al tema delle strategie d'investimento per la valorizzazione dei centri minori. Il che costituisce motivo di futuro approfondimento dell'attività di ricerca.

Tabella 1 - Studi selezionati

1. - Mega V., Pedersen J. (1998), <i>Urban Sustainability Indicators</i> (n. 16 indicatori)	
Global Climate Indicator (GCI) Air Quality Indicator (AQI) Acidification Indicator (AI) Ecosystem Toxification Indicator (ETI) Urban Mobility Indicator (UMI) or Clean Transport Indicator Waste Management Indicator (WMI) Energy Consumption Indicator (ECI) Water Consumption Indicator (WCI)	Nuisance Indicator (NI) Social Justice Indicator (SJI) Housing Quality Indicator (HQI) Urban Safety Indicator (USI) Economic Urban Sustainability Indicator (ESI) Green, Public Space and Heritage Indicator (GPI) Citizen Participation Indicator (CPI) Unique Sustainability Indicator (USI)
2. - European Commission (2008), <i>European Green Capital Award (EGCA)</i> (n. 12 indicatori)	
Local contribution to global climate change Transport Green urban areas Noise Waste production and management Nature and biodiversity	Air Water consumption Waste water treatment Eco-innovation and sustainable employment Environmental management of the local authority Energy performance

Segue Tabella 1 - Studi selezionati



Segue Tabella 1 - Studi selezionati

3. - Mameli F., Marletto G. (2009). <i>A selection of indicators for monitoring sustainable urban mobility policies</i> (n. 14 indicatori)	
Public and private services accessible via telephone and computer (Objective: Alternatives to mobility) Congestion (Objective: Easy mobility) Walkability index (Objective: Easy mobility) Cycling index (Objective: Easy mobility) Quantity/quality of public transport services (Objective: Easy mobility) No. of motorized vehicles per km <sup>2</sup> (Objective: Availability of public space) Kilometres of vehicle travel density (Vehicles*distances travelled per km <sup>2</sup> ) (Objective: Availability of public space) Percentage of population exposed to transport noise levels exceeding the national standards (Objective: Silence)	Transport emissions: PM <sub>10</sub> , COVNM, NOX, CO (Objective: Clean air) Death and injuries from transports (Objective: Safety) CO <sub>2</sub> emissions from transports (Objective: Reduce greenhouse gas emissions) Land occupied by the transport infrastructures (Objective: Reduce land consumption) Waste generated by transport activities (Objective: Reduce transport waste) Annual average mobility expenditure from households, companies and public authorities (Objective: Mobility costs reduction)
4. - Vallega A. (2009), <i>Indicatori per il paesaggio</i> (n. 37 indicatori)	
Loss of species diversity (Area: Biological quality) Species richness (Area: Biological quality) Endangered species (Area: Biological quality) Protected species (Area: Biological quality) Ecologically protected areas (Area: Biological quality) Transparency of the air at the ground level (Area: Environmental quality and landscape) [...]	[...] Landscape learning in primary school (Area: The landscape in teaching and information) Communication efficiency (Area: The landscape in social communication) Landscape's role in the hard media communication (Area: The landscape in social communication) Landscape's position in the Internet system (Area: The landscape in social communication)
5. - European Environment Agency (EEA) (2010), <i>EEA Urban Metabolism Framework</i> (n. 15 indicatori)	
Per capita CO <sub>2</sub> emissions from energy consumption (Topic: Urban Flows) Energy efficiency of transport (Topic: Urban Flows) Efficiency of residential energy use (Topic: Urban Flows) Efficiency of urban water use (Topic: Urban Flows) Waste intensity (Topic: Urban Flows) Recycling (Topic: Urban Flows) Urban land take (Topic: Urban Flows)	Green space access (Topic: Urban Quality) NO <sub>2</sub> concentrations (Topic: Urban Quality) PM <sub>2</sub> concentrations (Topic: Urban Quality) Unemployment rate (Topic: Urban Quality) Land use efficiency (Topic: Urban Patterns) Public transport network length (Topic: Urban Patterns) Registered cars (Topic: Urban Drivers) GDP per capita (Topic: Urban Drivers)
6. - United Nations Economic Commission for Europe (UNECE) (2011), <i>Transport for sustainable development in the ECE region</i> (n. 17 indicatori)	
Infrastructure density (Area: Access) Infrastructure quality (Area: Access) International transport (Area: Access) Burden of border crossing (Area: Access) Household spending on transport (Area: Affordability) The price of transport (Area: Affordability) Public investment on transport (Area: Affordability) Private investment in transport (Area: Affordability) Road fatalities (Area: Safety)	Seat-belt use, impaired driving and speeding (Area: Safety) Active level crossings (Area: Safety) Terror threats (Area: Security) Criminal activities (Area: Security) Energy consumption in transport (Area: Environment) Emission of greenhouse gases and local pollutants (Area: Environment) Local pollutants from transport (Area: Environment) Noise from transport (Area: Environment)
7. - Volpiano M. (2011), <i>Indicators for the Assessment of Historic Landscape Features</i> (n. 12 indicatori)	
Infrastructure density (Area: Access) Infrastructure quality (Area: Access) International transport (Area: Access) Burden of border crossing (Area: Access) Household spending on transport (Area: Affordability) The price of transport (Area: Affordability) Public investment on transport (Area: Affordability) Private investment in transport (Area: Affordability) Road fatalities (Area: Safety)	Seat-belt use, impaired driving and speeding (Area: Safety) Active level crossings (Area: Safety) Terror threats (Area: Security) Criminal activities (Area: Security) Energy consumption in transport (Area: Environment) Emission of greenhouse gases and local pollutants (Area: Environment) Local pollutants from transport (Area: Environment) Noise from transport (Area: Environment)

Segue Tabella 1 - Studi selezionati

Segue Tabella 1 - Studi selezionati

7. - Volpiano M. (2011), <i>Indicators for the Assessment of Historic Landscape Features</i> (n. 12 indicatori)	
Exceptionality of the historical-cultural characteristics of the landscape (Action: Characterization)	tory in relation to historical situation (Action: Transformation)
Fragility of the historical-cultural characteristics of the landscape (Action: Characterization)	State of preservation of built heritage with reference to characterizing elements (Action: Transformation)
Significance/typicality of the historical-cultural characteristics of the landscape (Action: Characterization)	Preservation of relation systems between assets (Action: Transformation)
Preservation of the assets (Action: Transformation)	Promotion of actions for further knowledge of historical-cultural heritage (Action: Enhancement)
Protected areas and elements (Action: Transformation)	Economic enhancement of historical-cultural heritage networking (Action: Enhancement)
Elements protected by local planning instruments/elements protected by regional planning (Action: Transformation)	Use of historical-cultural heritage (Action: Enhancement)
Presence/Absence of categories of significant assets on territory	
8. - Confederazione Svizzera - Ufficio Federale dell'Ambiente UFAM (2012), <i>Ufficio Federale dell'Ambiente UFAM - Paesaggio: Indicatori</i> (n. 11 indicatori)	
Landscape perceived beauty (Topic: Landscape)	Light emissions (Topic: Landscape, biodiversity)
Summer pastures (Topic: Landscape)	Landscape fragmentation (Topic: Landscape, biodiversity)
Perceived quality of the landscape around the own home (Topic: Landscape)	Soil waterproofing (Topic: Landscape, biodiversity)
Forest areas extensively exploited (Topic: Landscape)	Agricultural areas (Topic: Landscape, biodiversity)
Buildings area outside the building zones (Topic: Landscape)	Variety of agricultural land use (Topic: Landscape, biodiversity)
Settlement dispersion (Topic: Landscape, biodiversity)	
9. - European Commission, Directorate-General for Agriculture and Rural Development (2013), <i>Rural Development in the European Union - Statistical and Economic Information, Report 2013</i> (n. 59 indicatori)	
Designation of rural areas (Section: Importance of rural areas)	[...]
Importance of rural areas (Section: Importance of rural areas)	Development of services sector (Section: Diversification and quality of life in rural areas)
Population density (Section: Socio-economic situation of rural areas)	Net migration (Section: Diversification and quality of life in rural areas)
Age structure (Section: Socio-economic situation of rural areas)	Educational attainment (Section: Diversification and quality of life in rural areas)
Economic development (Section: Socio-economic situation of rural areas)	Life-long learning in rural areas (Section: Diversification and quality of life in rural areas)
Structure of the economy (Section: Socio-economic situation of rural areas)	Development of Local Action Groups (Section: Leader)
[...]	
10. - European Spatial Planning Observation Network (ESPON) (2013), <i>KITCASP - Key Indicators for Territorial Cohesion and Spatial Planning</i> (n. 20 indicatori)	
GDP per capita/ GVA per capita (Theme: Economic Competitiveness and Resilience)	[...]
Employment rate of population aged 20-64 (Theme: Economic Competitiveness and Resilience)	Greenhouse gas emissions (Theme: Environmental Resource Management)
Total R & D expenditure as % of GDP (Theme: Economic Competitiveness and Resilience)	Population at risk of flooding (living in flood-prone areas (Theme: Environmental Resource Management)
Balance of external trade (Theme: Economic Competitiveness and Resilience)	Number and status of protected European habitats and species (Theme: Environmental Resource Management)
[...]	Water quality status (Theme: Environmental Resource Management)
11. - Phillips R. G., Stein J. M. (2013), <i>An Indicator Framework for Linking Historic Preservation and Community Economic Development</i> (n. 29 indicatori)	
Historic fabric (Aim: Gauging)	[...]
Districts, structures, landmarks (Aim: Gauging)	Housing affordability and percent affordable historic houses (Aim: Interfacing)
Rehabilitation/certified tax credits (Aim: Gauging)	Business use and types Community draw factors, Community use Factor (Aim: Interfacing)
Assessed property value trends (Aim: Gauging)	Heritage/cultural interactions and skills (Aim: Interfacing)
Historic district/property reinvestment (Aim: Gauging)	
[...]	

Segue Tabella 1 - Studi selezionati

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12. - Valtenbergs V., González A., Piziks R. (2013), <i>Selecting indicators for sustainable development of small towns: the case of Valmiera municipality</i> (n. 73 indicatori)	
Distribution of businesses and employed by industries (Criteria: Economic)	[...]
Percentage of added value from turnovers of entrepreneurs (Criteria: Economic)	The number of informative seminars and training courses (about environment) (Criteria: Environmental)
Foreign Direct Investments (capital/earnings) (Criteria: Economic)	The number of civic initiatives about environment protection (Criteria: Environmental)
The number of tourists (Criteria: Economic)	Number of schools with environmental education programs (Criteria: Environmental)
[...]	
13. - European Environment Agency (EEA) (2014), <i>Digest of EEA Indicators 2014 - Core Set of Indicators (CSI)</i> (n. 42 indicatori)	
Emissions of main air pollutants (Topic: Air pollution)	[...]
Exceedance of air quality limit values in urban areas (Topic: Air pollution)	Total primary energy intensity (Topic: Energy efficiency)
Exposure of ecosystems to acidification, eutrophication and ozone (Topic: Air pollution)	Decoupling of resource use from environmental pressures (Topic: Decoupling of environmental pressures)
Passenger and freight transport demand (Topic: Transport)	Decoupling of resource use from environmental impacts (Topic: Decoupling of environmental impacts)
[...]	
14. - UN-Habitat - United Nations Human Settlements Programme (2016), <i>MEASUREMENT OF CITY PROSPERITY - Methodology and Metadata</i> (n. 39 indicatori)	
City Product per capita (Sub-dimension: Economic Strenght)	[...]
Old Age Dependency Ratio (Sub-dimension: Economic Strenght)	Subnational Debt (Sub-dimension: Municipal Financing and Institutional Capacity)
Mean Household Income (Sub-dimension: Economic Strenght)	Local Expenditure Efficiency (Sub-dimension: Municipal Financing and Institutional Capacity)
Economic Density (Sub-dimension: Economic Strenght)	Land Use Efficiency (Sub-dimension: Governance of Urbanization)
Economic Specialization (Sub-dimension: Economic Strenght)	
[...]	
15. - Bosch P., Jongeneel S., Rovers V., Neumann H-M., Airaksinen M., Huovila A. (2017), <i>CITYkeys list of city indicators</i> (n. 74 indicatori)	
Access to basic health care services (Area: Health)	[...]
Encouraging a healthy lifestyle (Area: Health)	Voter participation (Area: Community involvement)
Traffic accidents (Area: Safety)	Smart city policy (Area: Multi-level governance)
Crime rate (Area: Safety)	Expenditures by the municipality for a transition towards a smart city (Area: Multi-level governance)
Cybersecurity (Area: Safety)	Multilevel government (Area: Multi-level governance)
[...]	

## 6. CONCLUSIONI

I centri minori costituiscono patrimonio storico-culturale diffuso. Diversamente dai nuclei storici delle città, essi sovente conservano inalterato il rapporto con l'ambiente ed il paesaggio nei quali si inseriscono. Luoghi della tradizione, preservano la coscienza identitaria dei Paesi in quanto "prodotto e immagine della cultura di una comunità" (Francini et al., 2012).

Così, tutelare e valorizzare queste realtà è oggi di primaria importanza. Ma la complessità delle dinamiche di marginalizzazione che li impegnano richiede interventi organici, attenti non al singolo manufatto, ma alla totalità delle componenti sociali, economiche, ambientali e culturali del territorio di riferimento. Da qui l'esigenza di predisporre strumenti di analisi dei progetti per la valorizzazione dei piccoli centri, in grado di contemperare i plurimi

criteri che scaturiscono dal rispetto dei principi dello sviluppo sostenibile.

Il lavoro *in itinere* intende fornire elementi per la caratterizzazione di un modello di valutazione multicriteriale, organizzato secondo la struttura propria dell'Analytic Hierarchy Process.

In funzione dei macro ambiti sociale, economico, ambientale e culturale, sono definiti corrispondenti sotto-criteri, razionalmente correlati ai caratteri ricorrenti dei centri minori, le cosiddette 'invarianti'.

A ciascun sotto-criterio si associa poi uno o più indicatori di valutazione, così da avere un *dataset* composto da ben 470 indici selezionati a partire da 15 studi di settore.

Sviluppi della ricerca riguarderanno la specializzazione del *dataset* all'analisi di progetti d'investimento per la valorizzazione dei centri minori.

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Il presente lavoro è da attribuire in parti uguali ai tre autori.

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