

The importance of Indices of Multiple Deprivation for spatial planning and community regeneration. The example of the Welsh Index of Multiple Deprivation and the related Communities First programme for the Italian system.

Andrea Raffaele Neri

MSc Regeneration Studies, School of City and Regional Planning, Cardiff University
andreamneri@gmail.com

ABSTRACT

The massive development of indices of multiple deprivation in the UK has provided new data sets which have helped decision makers in shaping innovative and effective strategies and programmes to tackle local deprivation. Territorial planning is one of the more positively affected sectors, together with community regeneration, where the example of the Welsh Government's programme, "Communities First", set a new standard of innovation in local government practices. Conversely several problems affect the way indices of multiple deprivation are carried out in Italy and the way they are deployed. They are mostly developed at the regional level and their use is only related to the health sector. Planning and local government systems are still unaware of the potential of a national index of multiple deprivation in their fields, so that the current proposal to create an official national index is backed only by health

sector bodies. In this paper the need to create a national, cross-cutting and fully accessible index of multiple deprivation is highlighted by analysing the features of the Italian indices published in recent years and comparing them with those far more structured, developed in the UK.

INTRODUCTION

Deprivation is a wider concept than poverty. The term includes all those aspects which prevent people from having access to the “desirable attributes, possessions and opportunities which are considered no more than the minimum by the society” (Coombes et al., 1995, p.5), such as education, good health and so on.

Since the late 1990s, indices of deprivation have become a fundamental tool to develop spatial plans and deliver regeneration programmes at the neighbourhood scale in many countries. The indicators of deprivation change from country to country because of the different issues and the political influences, and their number tend to increase in time whenever the indices are revised, improving the data set.

The release of official rankings of deprivation makes it easier for planners and politicians to assess which areas are more in need of intervention and for what. The related map of deprived areas is a powerful tool of appraisal for planning at the local scale. It shows the need for intervention in local areas either from a spatial planning perspective or in terms of community regeneration.

One of the most comprehensive and structured examples is the Welsh Index of Multiple Deprivation (Welsh Government, 2011b). Updated and upgraded four times since the first version was released in the year 2000, it has allowed the national government to set a specific programme of intervention, known as Communities First, to address the deprivation which affects the most disadvantaged communities with unprecedented geographical precision. Communities First, with a new approach to regeneration based on the truly joined-up, bottom-up creation of partnerships between the Public, Private and Third Sectors, aimed to encourage the engagement of the communities in the

decision process by tapping the potential of the neighbourhood scale of intervention, with many examples of extremely positive outcomes.

In Italy the attempts to introduce effective regeneration programmes aimed to address deprivation with geographical precision were historically frustrated by the lack of information about the neighbourhood scale. The statistical data sets available were mostly concerned with demographic and economic issues, lacking quality of life indicators. This made the mapping of regeneration areas a matter of questionable and strictly top-down technical or political choice and disconnected from any measure of deprivation. The concept of deprivation itself, in the Italian language, is related with issues of health, and since 1999 a number of indices of multiple deprivation were released, but strictly in connection with that sector. From the planners perspective, this use of the indices of multiple deprivation exclusively for the Health sector should be perceived as one of the most important causes of ineffectiveness in the regeneration programmes, but in Italy the debate on the topic is still in its infancy. Another limiting feature of the Italian indices is that they are mostly created at the regional level, with a tendency of fragmentation of information.

The aim of this paper is to raise the interest of those involved in spatial planning and community regeneration in Italy about the application of indices of multiple deprivation, as fundamental tools for strategic analysis, policy making and planning.

The methodology of this paper is mostly based on the analysis of case-oriented literature through qualitative methods, nonetheless elements of secondary quantitative analysis underlie the research, particularly in the evaluation of the most structured indices examined. The most relevant and updated literature about the case study of Wales was compared with the Italian system and its academic leaders (Testi, Ivaldi, and Busi, 2005; Caranci, and Costa, 2009; etc.) concluding with suggestions for improvements from comparison (LeBlanc, 2004 and Tashakkori and Teddlie, 2009).

INDICES OF MULTIPLE DEPRIVATION: AN OVERVIEW

“Deprivation refers to unmet need, which is caused by a lack of resources of all kinds, not just financial.”

(University of Oxford, 2001, p.4)

Deprivation and poverty is not the same, although the terms have been used often, and wrongly, interchangeably. Poverty is the lack of the financial resources that individuals, families and groups need to satisfy the basic needs of subsistence and social integration (Townsend, 1979) while deprivation is a wider concept, concerning the lack of conditions for individuals, families and groups to obtain happiness. People live in poverty if they can't afford to escape the deprivation (Townsend, 1987, p.125).

The percentage of people with an income below x% of the median of the population is the acknowledged measure of poverty (European Commission, 1996), where the value of the x changes in time and space. On the other hand, deprivation can be analysed with different measures in different perspectives depending on the object of the study (such as the estimates of life expectancy or the prevalence of tobacco use in case of health deprivation; the access to schools and training in case of education and skills deprivation). An index which incorporates different types of deprivation is an index of multiple deprivation where the scores are generated by the weighted combination of the different aspects taken into account. Income, a measure of poverty, is also an indicator of multiple deprivation, but many other aspects must be taken into consideration to obtain a measure of the latter. Thus, new sets of indicators must be added to income.

The choice of the indicators is the centre-piece of the indices and they are drawn up depending on the purpose of collection of information and the nature of the method. Referring to the Council of Europe (2005, p.98) there are three main types of social indicators: quantitative and objective (measurable values, e. g. number of unemployed); qualitative and objective (not measurable but verifiable, e. g. presence or absence of something); qualitative and subjective (e. g. level of satisfaction). The right indicators answer the right questions. Therefore, a measure of multiple deprivation

must take into account those features which highly influence the actual life conditions of the population (e. g. the geographical access to services, a central indicator in sparsely occupied areas, may be secondary in dense towns). The choice of the weights as an expression of the importance of an indicator in generating the overall scores must be carefully pondered. The national indices, covering very different scenarios within the same model, set a compromise level between the weight of the domains which have different importance in different situations (as in the above example of geographical access to services).

Every type of index should always report the source of the data. The most used source is the census, but other sources from specific social and economic groups or different levels of government can be acceptable if reliable.

A famous example of index of multiple deprivation is the Townsend Index of Disadvantage and Deprivation (Townsend, 1987). It was the first one to provide a material measure of multiple deprivation combining four different variables to form the overall score: unemployment, non-car ownership, non-home ownership, household overcrowding. The higher the Townsend Index, the more deprived an area is thought to be. In time the model has been improved, but the mechanism in which the indices are created is roughly the same.

INDICES OF MULTIPLE DEPRIVATION IN THE UK: ENGLAND AND WALES

During the post war years a great number of specific areas of policy indices were released in the UK, particularly concerning education and health. Since the 1960s the creation of cross-cutting measures of deprivation at the local scale became a target for central government, but the means that triggered the actual implementation of the project was the availability of electronic databases for the Census in the 1980s with the enumeration district of the local areas (University of Oxford, 2000b, p.4). New tools to store and process information made possible the development of new indices whose scores were obtained by summing different variables.

The first national Census to provide a Townsend Index at the scale of the electoral wards (the Census Output Areas, name later changed in Lower Super Output Areas) was the UK Census 1991. In the following Censuses of 2001 and 2011 the Index became more sophisticated, following the changing

social patterns of a changing society, for instance with additional information required in the Census about ethnicity. Nevertheless, the new areas were not directly targeting deprivation because of various publications: in 1991 the more specific Index of Local Conditions (Department of Environment, 1991), in 1998 the Index of Local Deprivation (Department of Environment, Transport and Regions, 1998) and in 2000 the very comprehensive Index of Multiple Deprivation 2000 for England (University of Oxford, 2000a) and the Index of Multiple Deprivation for Wales (University of Oxford, 2000b). The first Scottish Index of Multiple Deprivation was published in 2004 and the Northern Ireland Multiple Deprivation Measure one year later. The latest version of the English and Welsh Indices were issued respectively in 2010 and 2011.

The English and Welsh Indices were made up of six domains of deprivation:

- Income.
- Employment.
- Health.
- Education, Skills and Training.
- Housing.
- Geographical Access to Services.

A seventh domain (which did not influence the overall index) of Child Poverty was included in the overall scores. Others were added in time: Crime (Security in Wales) and Living Environment (Physical Environment in Wales), while the English Indices cut the Geographical access to services domain.

Each ward had a score, which allowed the central government, for the first time ever, to have an objective and highly reliable ranking of deprivation of local areas comparable in time. The Summary Reports of the Indices also provided disaggregated data and rankings for each domain. Moreover, regional rankings, thematic maps, Geographical Information Systems and local tables were published, contributing to a widespread interest in the Indices, all available on the web (the Deprivation Map of England is even available on Google Maps), and providing a sound foundation for regeneration activities at different scales.

The indices have had a great relevance in strategic planning at the national scale. Particularly the distribution and prioritization of grants and development funding to local authorities and bodies in different sectors has

been highly influenced by the results of the indices. In spatial planning, it has meant more attention for physical renewal or the provision of services and transport in the most deprived areas. It also represented a great opportunity to focus the efforts for community regeneration. It was the last step in a long process of investment in local development. For many decades councils in the UK have increasingly empowered neighbourhoods, a model which inspired also the European Union which embraced it since 1988 for the Leader programme and the following creation of the Local Action Groups, where the role of ward and youth forums is central (Rogers, 2004, p.24). Thus both England and Wales were ready to set-up ambitious and innovative local regeneration programmes specifically related to the new statistical databases of multiple deprivation, respectively Neighbourhood Renewal Areas and Communities First. The English programme was a lot bigger, in terms of the total amount and concentration of resources, in relation to the Welsh Communities First, but the latter resisted the cuts following the economic recession and it is still a priority in the political agenda of the national government for the next years.

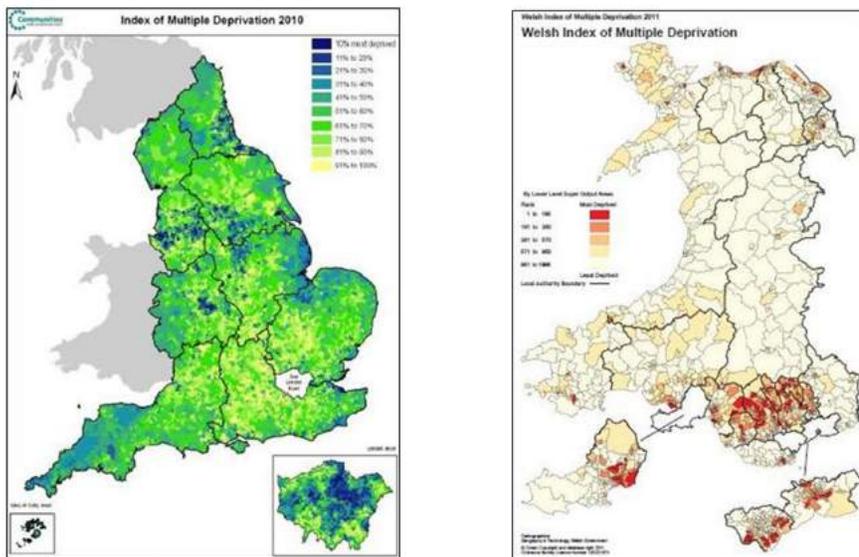


Figure 1 – Distribution of multiple deprivation in England (left) (Communities and Local Government, 2010) and Wales (right) (Welsh Government, 2011b).

TAPPING THE POTENTIAL OF THE INDICES OF MULTIPLE DEPRIVATION FOR REGENERATION PURPOSES: COMMUNITIES FIRST IN WALES.

The Welsh Assembly Government defined regeneration as the process which: “*aims to make sustainable places over time to improve the quality of life of the people who live and work there.*” (Welsh Assembly Government, 2010, p. 21)

Communities First is the long term flagship regeneration programme, established by the Welsh Assembly Government in 2001, to address problems of deprivation and social exclusion in the most deprived wards of the country. It is a remarkable example of a cross-cutting, spatially targeted policy tool whose application is strictly connected with indices of multiple deprivation, since eligibility is based on these scores. Originally only the 100 most deprived Lower Super Output Areas of statistics of the country (as ranked by the first Welsh Index of Multiple Deprivation) were eligible to be included in the programme; over ten years the number almost doubled with the inclusion of new neighbourhoods in the newly updated deprivation rankings of the Welsh Indices of Multiple Deprivation 2005 and 2008 and 10 “communities of interest” selected by the Welsh Assembly Government (Welsh Assembly Government, 2006). Each of the eligible wards has on average less than 3,000 inhabitants.

The typical top-down approach to regeneration, concerned with issues of physical environment improvements, had been formulated with little or no involvement of the people who would be the final consumers of the product, and it substantially failed to trigger lasting community growth, particularly in the most deprived areas (Porter and Shaw, 2009, p. 6; Hackney and Sweet, 1990, p. 149).

In contrast, Communities First has an extremely innovative approach to regeneration, based on joined-up community building. The strategies to undertake the process (Community Action Plans) are community-led and central government action is only concerned with supplying skills and the basic resources to be transferred *in loco*. In fact Communities First often undertook actions of physical transformation of the areas through landmark projects or development strategies.

The Communities First groups are funded with a basic Core Fund and the Outcomes and Trust Funds provide additional resources for the delivery of specific projects, meant to encourage efficiency and innovation. The local groups aim also to bend into the area different streams of funding from other public bodies or the private and third sector. Communities First works as a magnet of tangible and intangible resources to benefit the most deprived areas where the market and the typical public sector funding failed in doing so the last decades (Morgan, K., 2010).

The path which has been undertaken is the response of the Welsh Government to Agenda 21 (UN, 1992, Section 3) in strengthening the role of local and weak groups in sustainable development (Welsh Government, 2011a). Some deprived areas really benefitted from the programme and a number of leading, highly innovative and successful cases have been reported (Welsh Government, 2011c). The local Communities First partnerships could define specific areas of intervention using the Welsh Index of Multiple Deprivation as a road map to direct the efforts where it was most needed. The Index, which has been updated every few years, also provides objective data to evaluate whether the actions put on place brought tangible advantages in the areas or not. In fact, an important debate is taking place about the time required from a radical regeneration tool like this to bring tangible changes in the figures (Public Accounts Committee, 2010 and Hinch and Robson, Joseph Rowntree Foundation, 2010), but the many positive outcomes made the Welsh Government committed to continue and further invest in it after its initial planned end in 2012.

INDICES OF MULTIPLE DEPRIVATION IN ITALY: OVERVIEW AND ACADEMIC RECOGNITION

In the Italian language, the word *deprivazione* (or *privazione*, as suggested by Morbelli, 2002, p.8) has the same meaning of the English *deprivation*, but its usage is substantially different, being focused on issues of medical science or psychology in a narrow concept, for instance regarding the deprivation or privation of sleep or parental care. No direct connection with social needs is attached to the word and deprivation only affects the individual, specifically his health. For this reason, the concept itself of *deprivazione multipla* really is

difficult to be fully understood in Italy. This is because the concept of deprivation narrowly lies on individual and strictly medical issues, so that only medical treatments are remedies to resolve the problem.

In fact in Italy deprivation is not associated with regeneration which still is mostly regarded in planning practice as a matter of physical improvement. The word itself *rigenerazione* is mainly used, in town planning jargon, as synonymous with urban renewal, if not specified as *sociale* to highlight the importance of social aspects, or *ambientale* for environmental improvement. In the Italian language the word lacks of the comprehensive meaning it has in English.

Many academic voices have been raised lately about the need to widen the concept of regeneration and to work to harmonise the activities which have an influence on it. They roughly are those domains which form the indices of multiple deprivation in the UK, another proof of the intimate links between the indices and regeneration practice. An important claim to acknowledge the importance of intangible factors (environmental gain/loss, satisfaction of the communities etc.) came from the academic world (e.g. Della Morte, 2010, p.1) but specific measures to include them into the decision making progress were developed only for feasibility studies (such as *Valutazione di Impatto Ambientale*, Environmental Impact Evaluation, or *Valutazione Ambientale Strategica*, Environmental Strategic Evaluation) and ex post evaluations. The strategic decision processes on the other hand cannot use qualitative indicators to establish comprehensive regeneration programmes because indices and rankings are not provided, making the decisions strictly a matter of political or technical choice. The responsibility for this situation lay with the static approach of academic teachings and the professional planning bodies. As a proof of that, important examples of indices of multiple deprivation already exist in Italy, as explained in detail in the section on *Italian case studies of indices of multiple deprivation*, but they are completely ignored for spatial planning and regeneration purposes.

POTENTIAL OF INDICES OF MULTIPLE DEPRIVATION IN SPATIAL PLANNING IN ITALY

The system of spatial planning in Italy would undoubtedly benefit from the

use of indices of multiple deprivation. The traditional system of spatial planning in Italy has not developed adequate tools to understand the needs of deprived areas and how to meet them effectively. The improvements made in recent years in the participative systems included in the plan making processes cannot overcome a fundamental problem: the absence of official measures of deprivation able to demonstrate, on an objective basis, the importance of effecting certain actions in certain areas rather than others. Although the involvement of local people is vital to develop the plans on solid grounds, it does not provide comparative data on supra-local scale to prioritize the use of the limited resources. For that use it is essential to have an index of multiple deprivation as a strategic analysis tool. Just a few examples: a map of "educational deprivation", which takes into account the presence of illiteracy, the percentage of population holding higher educational qualifications, etc. would help the efficient location of new school facilities; a map of health deprivation would emphasize the need to prefer some areas for the location of new hospitals, sports fields, parks etc. The same applies to any other domain of deprivation included in the indices. A tool such as the index of multiple deprivation that takes into account simultaneously the different indicators is a scan of the local area. It allows the planner to have the pulse of the problems affecting the area on an objective basis in comparison with all other points of reference, usually on a national scale but, as in many Italian cases, even at regional or provincial levels.

The use of indices of multiple deprivation in spatial planning in Italy would be even more beneficial if associated with community regeneration on a regular basis. In fact, its advantages would not be limited to planning, as in the examples cited above, but also to the management of the plans. The example of the Welsh Communities First is illuminating. The index in this case is first used to select the areas on which to intervene by establishing specialist regeneration teams, and then to direct their efforts to those specific points in the area which show greatest difficulties.

A simple example will help to show the usefulness of inserting regeneration projects in deprived areas: the mere creation of a public park for the purpose of improving environmental and social conditions is not enough, it does not entail an automatic success if the people are not taught to care and to fully exploit its potential. To this end it is important that communities, particularly

the most deprived, are guided in an inclusive process of enhancement of their social capital.

Unfortunately, because of the nature of zoning in Italian spatial planning, initiatives comparable with Communities First would not have the strength to develop comprehensive spatial transformations on their own.

ITALIAN CASE STUDIES OF INDICES OF MULTIPLE DEPRIVATION

Two indices of multiple deprivation have been created at the national scale in Italy, both coming from pioneering attempts which scarcely resonated outside a few academic circles and regional bodies. At this point, the implementation of indices of deprivation at the regional level and the proposals to create a national database in Italy come from the regional Health Agencies and the debate is not having any contribution from other areas, such as town planning, housing etc.

The Italian indices of multiple deprivation have two main features: *fragmentation and sectorialism*. *Fragmentation* in this case is the process of regionalization of the development of indices of multiple deprivation followed the increased devolution of powers to that level of government. The positive aspect of fragmentation is that Regions had the opportunity to create their own databases of local information. The most negative aspect is the lack of coordination with other bodies in the choice of the indicators, which makes really difficult, if not impossible, the comparison between national and supranational situations and the harmonization of the data into a national database. Some attempts have been developed to promote the adoption of a national index, but with little success.

Sectorialism is the tendency to create indices of multiple deprivation for very narrow and specific uses. Because the commitment of these studies comes from specific areas of interest, particularly the health sector, they tend to consider multiple domains of deprivation, but with important bias in the choice of the indicators and weights. In fact, this type of indices of multiple deprivation end up as improved versions of the old indices of x (health, food etc.) deprivation. Indices created for specific sectors are commonly less accessible than cross-cutting ones.

The first relevant example of an index of multiple deprivation in Italy is the *Indice di Deprivazione per l'Analisi Geografica delle Diseguaglianze di Mortalità* (Index of Deprivation for the Geographical Analysis of Death Rate Inequality) developed in 1999 (Cadum et al, 1999). For the first time, an index of multiple deprivation was comprehensive, covering all of the more than 8,000 municipalities present in the Italian national 1991 census. Its aim was to analyse the correlation between the SMR (Standardized Mortality Ratios) and local deprivation. Six weighted variables composed the Index:

- Income.
- Unemployment.
- Education.
- Renter occupied housing.
- Presence of indoor bathroom.
- Percentage of single parents with childhood.

The analysis was carried out separately for gender and classes of age (over and under 65). The Index demonstrated a high correlation between deprivation and rate of mortality and the map resulted clearly showed the disadvantaged situation of the Southern regions, islands and Alps, particularly in the class of age under 65 and almost irrespective of difference of gender. The principal shortcoming of the Index is the scale of the unit of deprivation, which is not the census area but the aggregated municipal unit. This made the results of the Index completely meaningless when they concerned the major towns because of the enormous internal disparities the Index could not measure. It also wrongly named the classes of deprivation, defining *ricco* (wealthy) as the opposite of deprived, again forgetting the fact that deprivation does not relate exclusively with income.

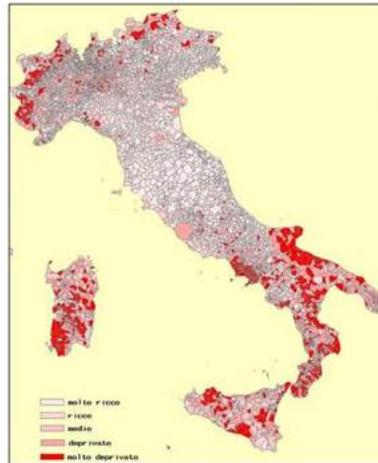


Figure 2 – Map of Multiple Deprivation in Italy from 1991 Census - Municipalities (Cadum et al, 1999).

A new Index of Deprivation was published in 2008 (Caranci et al, 2008; Caranci and Costa, 2009) to improve the 1999 version and update it using as a source the 2001 census data. It is best known as the Caranci Index. Five indicators compose the index: percentage population with poor education, unemployment, occupied dwellings for rent, percentage of single parents with dependent children, population density.

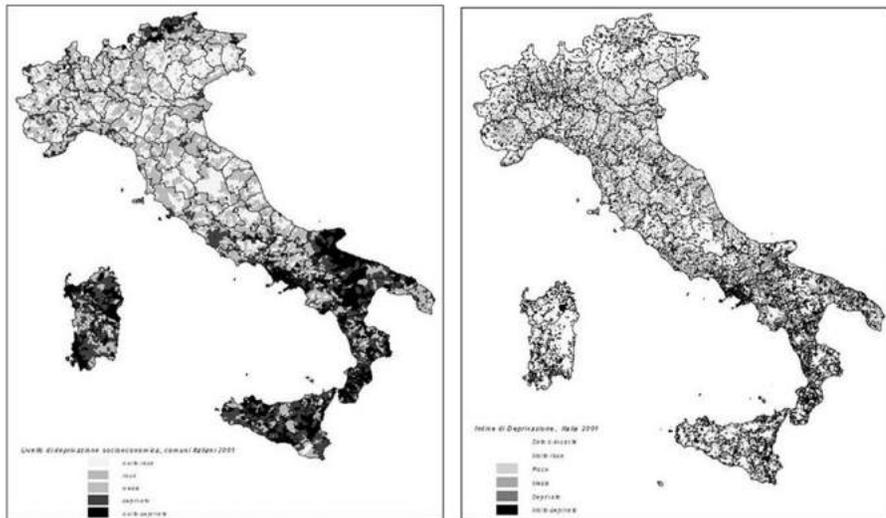


Figure 3 – Maps of Multiple Deprivation in Italy from 2001 Census – Municipalities (left) and Census Units (right) (Caranci et al, 2008, pp.23-24).

The Index used the census divisions instead of the municipal aggregated data as deprivation units to increase the detail of information (varying from an average of 7,000 inhabitants per unit to 170) which would make the data for the main metropolitan areas more meaningful. The authors again intended the index to be ancillary to studies of epidemiology, with no contribution from other areas in the choice of the indicators and weights. This is a controversial point, because this choice may have led to an even increased tendency toward sectorialism in the publication of following indices of multiple deprivation in Italy.

Recently two Regions, Emilia-Romagna and Marche, speaking as representatives of all the Italian Regions, jointly put forward to the Minister of Health the proposal for the implementation of the Caranci Index all over the national territory and earmarking about 10 percent of the *Fondo Sanitario Nazionale* (the National Health Fund) to be distributed using this new reference (Quotidiano Sanità, 2011a). The proposal was firmly rejected by the former Minister of Health Fazio during a Parliamentary hearing because the Index of Deprivation does not incorporate some indicators (various forms of disability) and weights (for classes of age) which would be fundamental for the effective distribution of the resources in the Health sector (Quotidiano Sanità, 2011b). In the near future, the publication of the Census 2011, expected in February 2012, is likely to reopen the debate, given also the change of government and the worsening of the economic scenario.

In the last ten years other indices of multiple deprivation have been developed at the regional and sub-regional levels, the provincial level. It became an incremental process where new indicators were added to the basic Index of Material Deprivation (Townsend, 1987) to form, at first, the IDS - *Indice di Deprivazione Sociale* (Index of Social Deprivation) and, later, the IAS - *Indice di Area Svantaggiata* (Index of Disadvantaged Area). The only indicator added to the Index of Material Deprivation to form the IDS was the percentage of single parent families with dependent children, while the only indicator added to the IDS to form the IAS was the index of aging, with a set of variables drawn from the health and care sector. The indicators and variables used are extremely poor in describing social deprivation and the level of disadvantage of the areas, but still they were

used in two regional indices of deprivation.

Sardinia published in 2006 (Minerba and Vacca, 2006) the clear and comprehensive results of the application of these three Indices, created using census data:

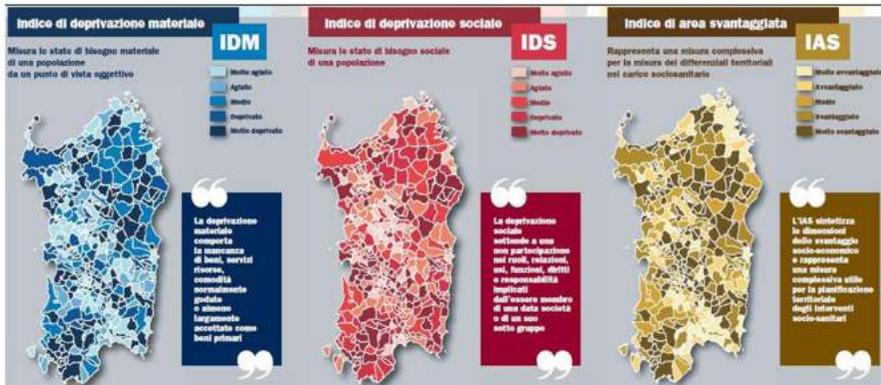


Figure 4 – Indices of deprivation for the analysis of the inequalities between the Municipalities of Sardinia (Minerba and Vacca, 2006, p.1).

The terminology is slightly more appropriate, naming the less deprived class *molto agiato* (very well-off) unlike most of the Italian indices where it is rendered as *ricco* (wealthy), but still needs to be improved. The best solution would probably be to simply use the term *meno deprivato* (less deprived), bearing in mind we are referring to a notion of deprivation relative to the case study to which we benchmark the results and not in absolute terms. The choice to publish three separate indices is motivated by the fact that each of them can be deployed for different uses in different areas. On the other hand it makes the spreading of the knowledge of the Indices more difficult and allows the misunderstanding and exploitation of one Index or the other for political use. The Sardinia case shows how the inclusion or non inclusion of any indicator drastically influences the map of multiple deprivation. The rankings of the three types of deprivation per local area were not published apart for the provincial aggregated results.

Unfortunately, the lack of central guidance makes the regions uncertain about which kind of index to adopt, or with regard of developing their own models. Besides Sardinia, Piemonte, Basilicata and Abruzzo preferred to publish an *Indice di Area Svantaggiata* (Index of Disadvantaged Area)

together with the Caranci Index, considered synonymous to an Index of Material Deprivation.

The case of Abruzzo (Agenzia Sanitaria Regionale Abruzzo, 2011) is particularly structured, because the Index of Deprivation proposed for the national use has been applied with no relevant changes for the regional studies, relating epidemiological analysis and local deprivation, while the Index of Disadvantaged Area was implemented independently to include additional data. In this case was avoided a duplication of efforts and costs, making the most of what was already available. Again, no rankings of local deprivation were published.

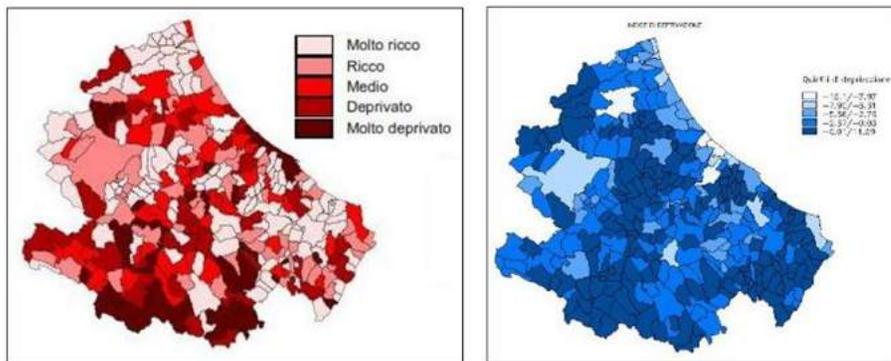


Figure 5 – Abruzzo: Index of Deprivation (left) and Index of Disadvantaged Area (right) (Agenzia Sanitaria Regionale Abruzzo, 2011, p. 6).

This brief overview of Italian examples concludes with two indices proposed in the region of Liguria which reinforced the current trend of considering deprivation mostly as an auxiliary to the mortality/diseases rates analysis.

The first is the Index of Multiple Deprivation for the Province of Savona (Lillini et al, 2005) published by the Mortality Registry of the Liguria Region. The Index was created to verify the correlation between local deprivation and mortality rate. Although the area of interest of the study was the same of the Cadum's Index (Cadum et al, 1999) there is no mention of this or any comparison with its results. Eight variables were chosen within two main indicators (Population and Dwellings). No rankings were released and a number of flaws in the terminology used were the same as already stressed in the above examples. This study might have had relevance for specific purposes, but fragmentation and sectorialism lowered its potential.



Figure 6 – Index of Multiple Deprivation for the Province of Savona (Lillini et al, 2005, p.13).

The second is the Index of Deprivation for the Municipality of Genoa (Testi, Ivaldi and Busi, 2004, Part 2). The authors aimed to set an index of material deprivation (where issues of demographic or ethnic minorities are not taken into account, as the authors specified, p.8) on the model of Townsend (Townsend, 1987) but updating the indicators and changing them in response of features of contemporary Italian society. For instance, indicators like “car ownership” or “social class” were not taken into consideration, for they were deemed outdated. Moreover, the study incorporated the *Indice di Deprivazione per l'Analisi Geografica delle Diseguaglianze di Mortalità* (Cadum et al 1999) we analysed above in the choice of the indicators. The statistical units were the *Unità Urbanistiche*, another name for the census units, 71 areas averaging around 9,500 inhabitants. Four indicators were selected: a) unemployment, b) housing ownership, c) overcrowding, d) education level. Six classes of deprivation were identified and a ranking table of the local areas score against the Index was included, the only case in Italy where only maps of deprivation are commonly published. But the choice of the terminology for the classes was not appropriate and the set of indicators could be improved, but in this case the British example was followed faithfully in the presentation of the results organized in ranking tables.

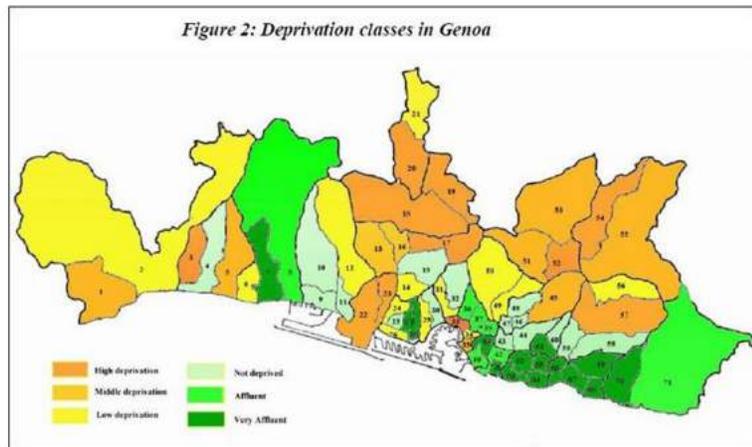


Figure 7 – Index of Deprivation for Genoa, Deprivation Map (Testi, Ivaldi and Busi, 2004,

Besides the publication of these local Indices, the Regione Liguria developed a comprehensive study of the relations between local strategic programmes (Programmi Organici d’Intervento, Contratti di quartiere, 20,000 alloggi) and the property market based on the study above, but it was kept for internal use. This practice was not an isolated initiative, because until a few years ago most of the Mediterranean countries were still quite reluctant to accept the idea of publishing the results in “official rankings” of neighbourhood deprivation fearing the stigmatization of the most disadvantaged areas and causing clamour which would have had political influence. See the illustrative case of the Index of Multiple Deprivation developed by the Generalitat Valenciana, Spain (Cristoforetti and Ghiara, 2006, p.111).

CONCLUSIONS: RECOMMENDATIONS FOR THE ITALIAN INDICES

During the last decades, the UK developed very comprehensive and precise indices of multiple deprivation, one for each nation which compose the country. They are central and essential tools for spatial and strategic planning. Their use has a crucial importance in the management of communities and local government, but it also demonstrated great relevance in different sectors, such as health, community safety and so on. The use of the same indicators for the whole nations and their stability throughout the regularly updated versions

of the Indices provide reliable comparisons in time and space. Finally the awareness of the features of the Indices is spread well over academia and it is matter of debate in most of the local areas. The use of easily accessible public rankings and maps help this process. Spatial planning bodies deployed the tool to efficiently select and prioritize their actions in response of the real needs of the population. A remarkable example of application of an index of multiple deprivation in community regeneration is Communities First, the Welsh Government programme specifically designed to address problems of community deprivation and social exclusion in Wales.

Conversely, in Italy, the process has been sluggish and confused. From the comparison between the UK indices of multiple deprivation and those published in Italy it is possible to highlight a number of important flaws in the way the latter are conceived and presented.

The underlying problem of the narrow meaning of the words deprivation and regeneration in the Italian language adversely influences the quality and scope of the Italian indices. To overcome the problem the first step is to gain a full academic recognition of it. The official documents also should use the terms more carefully, avoiding the mismatching between deprivation and poverty. Moreover, a wider conception of regeneration would make clear the need for indices of multiple deprivation for community building purposes, including, for instance, the activities of local councils, planning bodies and housing associations.

In Italy the lacuna in the availability of qualitative data for *ex ante* operations concerning deprivation has been questionably filled in some regional and sub-regional attempts to create indices of local multiple deprivation. They were important initiatives, but the problem of *fragmentation* makes the achievements less valuable: duplication of data led to waste of time and resources and mismatching in the choice of indicators and terminology makes difficult any harmonization of the outputs. The Caranci Index is the only one ever applied at the national scale giving a measure of neighbourhood multiple deprivation, but it was not backed by the national authorities.

Thus the experimental phase should come to an end giving space to a more mature standardization and stabilization of the indices. The only way to achieve it is to create a national index of multiple deprivation completely

managed by national bodies. The National Institute for Statistics (ISTAT), which already is responsible for the collection of the census data, would arguably be the most appropriate for this task.

To resolve the problem of the *sectorialism* in the Italian indices, the only means is to make more professional bodies and groups (other than those operating in the Health sector) participate in the choice of the indicators and weights. They also have to take the indices into consideration as essential tools for strategic planning.

One of the many results of the publication of indices must clearly be the earmarking of resources for the areas found most in need. The rejected proposal by the Regions to the national government to allocate 10% of the National Health Fund to deprived areas was a good example of that, and a similar approach should be adopted in other sectors like housing, urban design, cultural activities, etc.

Accessibility to the indices must be drastically improved to make them effectively available through specific websites, interactive maps and other relevant technological means. The rationale is to spread awareness, knowledge and debate about them. For this reason official rankings should be published, providing at the same time action plans to help the deprived areas to improve their status, with a long term support from the national government bodies regardless of the political interests.

The findings of this paper underline the fact that to achieve all these points it will be fundamental that key bodies at the national level (politicians first) commit themselves to put a national index of multiple deprivation and comprehensive regeneration programmes in place, following the example of the UK and Welsh governments and many of their professional bodies. Italian regional and local representatives together with spatial planning and regeneration professional bodies, on the other hand, should organize the debate and frame specific programmes to deploy the index in the most effective way, contributing at the same time to show what would be the potential of the tool.

APPENDIX

SOME SUGGESTIONS FOR THE CONSTRUCTION OF AN INDEX OF MULTIPLE DEPRIVATION IN ITALY BASED ON THE BES PROJECT WHICH CAN BE USEFUL FOR PLANNING PURPOSES.

The BES Project (*Benessere Equo e Solidale* Project, Fair and Supportive Well-being Project), started in June 2012, aims to provide measures of well-being (including issues of inequality and sustainability) able to overcome the narrow conception of GDP (*Misure del benessere*, 2012). The public institutions which promoted the initiative are ISTAT and CNEL, the most relevant ones in the fields, respectively, of statistics and economy at the national level. At this stage they provided the framework, the research itself is still being undertaken and some data gathered. It has the form of an index with 12 domains and 134 indicators. The units of statistics are mostly regions, but the framework is really innovative for Italy and applicable as an index of non-deprivation. Finally it is important to highlight the remarkable variety of sources of data. The National Institution for Statistics ISTAT will not be the only source for Ministries and Institutions operating in environmental, economic and social research (not only in the public sector but also NGOs) will provide specific data for the project.

Follows the full list of domains and indicators (for every indicator is clearly expressed the source of the data, the periodicity, the scale of the statistic, the variables used and the rationale for it in the BES website, *Misure del Benessere*, 2012):

1. ENVIRONMENT
 - 1 - Drinking water.
 - 2 - Water quality in coastal areas.
 - 3 - Quality of the air in urban areas.
 - 4 - Urban green areas.
 - 5 - Areas with hydrological problems.
 - 6 - Contaminated sites.
 - 7 - Terrestrial protected areas.
 - 8 - Marine protected areas.
 - 9 - Areas of outstanding natural beauty.
 - 10 - Loss of biodiversity worries.

- 11 - Flows of matter.
- 12 - Energy from renewable sources.
- 13 - Emissions of CO₂ and other climate-altering gases.

2. HEALTH

- 1 - Life expectancy at birth.
- 2 - Life in good health expectancy.
- 3 - Index of physical state.
- 4 - Index of psychological state.
- 5 - Infant mortality rate.
- 6 - Standardized mortality rate for accidents of transport.
- 7 - Standardized mortality rate for cancer.
- 8 - Standardized mortality for dementia and related diseases.
- 9 - Life expectancy without limitations in the everyday activities aged 65.
- 10 - Overweight.
- 11 - Smoke.
- 12 - Alcohol.
- 13 - Sedentary lifestyle.
- 14 - Diet.

3. ECONOMIC WELL-BEING

- 1 - Average disposable income per capita adjusted (comprehensive of in kind services).
- 2 - Index of inequality of disposable income.
- 3 - Index of risk of relative poverty.
- 4 - Average per capita net wealth.
- 5 - Index of financial vulnerability.
- 6 - Index of absolute poverty.
- 7 - Index of severe material deprivation.
- 8 - Index of housing quality.
- 9 - Index of subjective assessment of economic difficulty.
- 10 - Incidence of individuals living in households with no employed.
(Additional indicator proposed: Index of children deprivation).

4. EDUCATION AND TRAINING

- 1 - Participation rate in pre-primary school.
- 2 - Proportion of people aged 25-64 with at least a high school diploma.
- 3 - Proportion of people aged 30-34 who have completed a university degree.

- 4 - Rate of early exit from the system of education and training.
- 5 - Proportion of young people who don't work nor study.
- 6 - People aged 25-64 who participate in education and training activities.
- 7 - Level of literacy of students.
- 8 - Proportion of people with high levels of computer competence.
- 9 - Synthetic indicator of the level of cultural participation.

5. WORK/LIFE

- 1 - Employment rate of people aged 25-64.
- 2 - Work non-participation rate.
- 3 - Percentage of changes in the course of one year from unstable jobs to stable jobs.
- 4 - Percentage of employed in short-term jobs for at least 5 years.
- 5 - Incidence of low-wage employees.
- 6 - Incidence of under-educated employees.
- 7 - Incidence of over-educated employees.
- 8 - Rate of fatal accidents and permanent inability.
- 9 - Relationship between the employment rate for women 25-49 years old with children under school age and women without children.
- 10 - Asymmetry index of family labour.
- 11 - Percentage of population aged 15-64 that does more than 60 hours per week of paid work and / or domestic.
- 12 - Percentage of employees covered by second level collective contracting.
- 13 - Rate of employees working in a company where there is union representation.
- 14 - Perception of insecurity in the employment.
- 15 - Satisfaction for the work done.

6. SOCIAL RELATIONS

- 1 - Social participation.
- 2 - Generalized trust.
- 3 - NGOs per 10,000 residents.
- 4 - Social cooperatives per 10,000 residents.
- 5 - Volunteering activity.
- 6 - Free assistance given.
- 7 - Financing of associations.
- 8 - Satisfaction for the family relations.
- 9 - Satisfaction for the friendship relations.

- 10 - People you can count on.
- 11 - Fun activities for children from 3 to 10 years conducted with parents.

7. SAFETY

- 1 - Homicide rate.
- 2 - Burglary rate.
- 3 - Rate of pickpocketing.
- 4 - Robbery rate.
- 5 - Physical violence rate.
- 6 - Raping rate.
- 7 - Percentage of people aged 14 and over who feel safe walking alone in the dark areas where they live.
- 8 - Percentage of people aged 14 and over who are worried (very or fairly) to experience a sexual assault.
- 9 - Percentage of people aged 14 and over who have been afraid of being subjected to an offense in the last 12 months.
- 10 - Percentage of people aged 14 and over who often see elements of social and environmental degradation in the area where you live.
- 11 - Rate of domestic violence on women.

8. SUBJECTIVE WELL-BEING

- 1 - Percentage of people aged 14 and over who have expressed a satisfaction score for the life of between 8 and 10.
- 2 - Percentage of people aged 14 and over who declares very satisfied with leisure.
- 3 - Percentage of people aged 14 and over who consider their personal situation will improve over the next 5 years.

9. LANDSCAPE AND CULTURAL HERITAGE

- 1 - Relevance of cultural heritage.
- 2 - Current public municipal expenditure per capita used in the management of cultural heritage (museums, libraries and art galleries).
- 3 - Rate of illegal building.
- 4 - Rate of urbanization in protected areas.
- 5 - Erosion of the countryside from urban sprawl.
- 6 - Erosion of the countryside by abandoning.
- 7 - Presence of historical rural landscapes.
- 8 - Assessment the quality of rural development programming (RDP)

regional) in protecting of the landscape.

9 - Density of historic urban parks of significant public interest.

10 - Consistency of the historic urban fabric.

11 - People not satisfied with the quality of the landscape of the place where they live.

12 - Concern about the deterioration of the landscape values.

10. RESEARCH AND INNOVATION

1 - Intensity of research.

2 - Propensity to patent.

3 - Incidence of knowledge workers on employment.

4 - Rate of innovation in the production system.

5 - Rate of innovation in the services/products in the national productive system.

6 - Production specialization in knowledge intensive sectors.

7 - Intensity in the use of internet.

11. QUALITY OF THE SERVICES

1 - Index of accessibility to hospitals providing emergency services.

2 - Beds in nursing homes and hospitals.

3 - Waiting lists.

4 - Percentage of regional population served by natural gas.

5 - Separate collection of municipal waste.

6 - Synthetic index of accessibility to some services (schools, police stations etc).

7 - Density of urban public transport networks.

8 - Index of accessibility of transport networks.

9 - Percentage of charged users of children services.

10 - Percentage of elders in integrated home care service.

11 - Index of the overcrowding of prisons.

12 - Disruptions in the water supply.

13 - Use of landfills.

14 - Disruptions in the electric service.

15 - Time dedicated to mobility.

12. POLITICS AND INSTITUTIONS

1 - Voter turnout.

2 - Civic and political participation.

3 - Trust in the Italian Parliament.

- 4 - Confidence in the justice system.
- 5 - Trust in parties.
- 6 - Trust in local institutions.
- 7 - Trust in other types of institutions.
- 8 - Women and political representation in the Parliament.
- 9 - Women and political representation at the local level.
- 10 - Women in decision-making bodies.
- 11 - Women on board of listed companies.
- 12 - Median age of Italian Members of the Parliament.
- 13 - Length of civil proceedings in ordinary cognition of the first and second degree.

Most of the domains and indicators above strictly relate with spatial planning, for they provide a very comprehensive description of reality (and the perception of it). Nonetheless, in a country where zoning is still formally the main instrument of planning, we believe that the addition of a couple of indicators in the domain 9. LANDSCAPE AND CULTURAL HERITAGE would be helpful to give the pulse of spatial planning problems in Italy. They are:

- Land subject to planning (expressed as *the ratio of planned surface area on the total surface area*).
- Implementation of the planning obligations/standards (expressed as *the ratio of surface area where planning obligations/standards were implemented on the total of the planned surface area*).

We would also suggest to add two more indicators still related with spatial planning.

1 - ENVIRONMENTALLY FRIENDLY MODES OF TRANSPORT (in domain 11. QUALITY OF SERVICES), measuring the level of walkability/cyclability of the areas. It would take the form of an index composed by at least 6 indicators around the two variables of 'quality walking routes' and 'quality cycling routes', both examined in terms of meters on the total road extension, people's perception of the quality and people usage for their mobility and leisure.

2 - INDEX OF URBAN INNOVATION (in domain 10. RESEARCH AND INNOVATION). A descriptive index of the ability of cities to evolve over time in response to the needs of new generations, ensuring development and

connection with the nodes of the national/global economy. The indicators would be economic (of flux, in addition to static ones expressed in domain 3, expressed as the percentage of GDP originating from exchanges with outside areas), landscape (the ability to visually convey a sense of modernity while safeguarding the historical values, expressed as the number of physical interventions quality in the recent x years on the total) and social (perception of the degree of modernity and connectivity of urban areas, expressed as the percentage of people satisfied with the degree of modernity and connectivity of where they live on the total population).

REFERENCES

- AGENZIA SANITARIA REGIONALE ABRUZZO (2011), *L'epidemiologia geografica comunale - territoriale: ambiente, qualità della vita, salute e sanità federale*, available at:
<http://sanitab.regione.abruzzo.it/osservatorio/l'epidemiologia%20territoriale%20d'abruzzo.pdf> (accessed 16 December 2011).
- CADUM, E. et al (1999), "Deprivazione e mortalità: un indice di deprivazione per l'analisi delle disuguaglianze su base geografica", in *Epidemiologia e Prevenzione* n. 23, 175 - 87.
- CARANCI, N. et al (2010), "L'indice di deprivazione italiano a livello di sezione di censimento: definizione, descrizione e associazione con la mortalità", in *Epidemiologia e prevenzione* n.34 (4) 167 - 76.
- CARANCI, N. and COSTA, G. (2009), *Un indice di deprivazione a livello aggregato da utilizzare su scala nazionale: giustificazioni e composizione*, available at:
http://www.francoangeli.it/Riviste/Scheda_rivista.aspx?IDarticolo=35597 (accessed 22 November 2011)
- CARANCI, N. et al (2008), *Verso un Indice di Deprivazione a livello aggregato da utilizzare su scala nazionale: giustificazione e composizione dell'Indice 2001*, Convegno AIE Metodi e Strumenti per la Misura delle Disuguaglianze, Roma 15-16 maggio 2008.
- COMMUNITIES AND LOCAL GOVERNMENT (2011), *The English Indices of Multiple Deprivation 2010: Neighbourhoods statistical release*.
- CONNOLLY, C. and CHISHOLM, M. (1999), "The use of indicators for targeting public expenditure: the Index of Local Deprivation", in *Environment and Planning C: Government and Policy* 17(4) 463 – 482.
- COOMBES et al. (1995), *Towards an Index of Deprivation: A Review of Alternative Approaches*, Part 1, Department of Environment.
- COUNCIL OF EUROPE (2005), *Social cohesion indicators: methodological guide*, Council of Europe.
- CRISTOFORETTI, G. and GHIARA, H. (2006), *Governance, valutazione delle politiche e gestione dei conflitti. Linee guida per la costruzione di un Centro di Valutazione Territoriale e Urban Center di seconda generazione*, Alinea Editrice.

- DELLA MORTE, P. (2010), *Dall'Economia dell'Informazione all'Economia della Conoscenza: Il Ruolo della Partecipazione nei Processi di Rigenerazione Urbana*, available at <http://www.inter-net.it/aisre/minisito/CD2011/pendrive/Paper/DELLAMORTE.pdf> (accessed 9 December 2012).
- DEPARTMENT OF THE ENVIRONMENT (1991), *Index of Local Conditions*.
- DEPARTMENT OF ENVIRONMENT, TRANSPORT AND REGIONS (1998), *Index of Local Deprivation - summary*.
- DEPARTMENT OF ENVIRONMENT, TRANSPORT AND REGIONS (2000), *Indices of Deprivation 2000*.
- EUROPEAN COMMISSION (1996), *First Report on Economic and Social Cohesion*.
- FIGARI, F. (2005), "Multiple Deprivation in Italy: longitudinal evidence and comparison to European countries", in *Società Italiana di Economia Pubblica*.
- GRASSWICK, H. (2011), *Feminist Epistemology and Philosophy of Science: Power in Knowledge*, Springer.
- HACKNEY, R. and SWEET, F. (1990), *The good, the bad and the ugly: cities in crisis*, F. Muller.
- HINCH, S. and ROBSON, B. (2010), *Regenerating Communities First Neighbourhood in Wales*, Joseph Rowntree Foundation.
- HUNGTINGTON, R. (2008), *The Nanny State*, Artnik.
- LEBLANC, D. C. (2004), *Statistics: concept and applications for science*, Jones&Bartlett Learning.
- LILLINI, R. et al (2005), *Costruzione di un indice di deprivazione socio-economica per la provincia di Savona*, Istituto Nazionale di Ricerca sul Cancro; available at: http://www.ambienteinliguria.it/eco3/DTS_GENERALE/20080805/4_stato%20di%20salute%20e%20deprivazione%20in%20provincia%20di%20savona.pdf (accessed 12 December 2011).
- MINERBA, L. and VACCA, D. (2006), *Gli indici di deprivazione per l'analisi delle disuguaglianze tra i comuni della Sardegna*, Istituto Nazionale di Statistica.
- MORBELLI, G. (2002), *Rigenerare la città: obsolescenza e rinnovo dei tessuti urbani in Gran Bretagna, dalle leggi sanitarie all'approccio immobilista: un profilo sinottico*, Alinea Editrice.

- MORGAN, K. (2010), *Communities First: a community-led regeneration strategy?*, lecture handbook, Cardiff University.
- NERI, A. R. (2011), *Linking participation and funding: exploring the contribution of Communities First to the regeneration of the Welsh Valleys. The example of Six Bells and other partnerships in the Ebbw Fach Valley, Blaenau Gwent*, MSc dissertation, Cardiff University 2010-11.
- NOBLE, M. et al (2000), *Welsh Index of Multiple Deprivation 2000*, The National Assembly for Wales.
- OPENSHAW, S., SFORZI, F. and WYMER, C. (1985), *A multivariate classification of individual households census data for Italy*, *papers in Regional Science*, vol. 58 (1) 113 - 25.
- PORTER, L. and SHAW, K. (2009), *Whose Urban Renaissance?: an international comparison of urban regeneration strategies*, Taylor & Francis.
- PUBLIC ACCOUNTS COMMITTEE (2010), *Communities First*, National Assembly for Wales.
- PUTNAM, R. D., LEONARDI, R. and NANETTI, R. (1994), *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton University Press.
- QUOTIDIANO SANITÀ (2011a), *Deprivazione in quota minima: in serata arriva la proposta di Emilia Romagna e Marche*, online 8 Febbraio 2011, available at: http://www.quotidianosanita.it/regioni-e-asl/articolo.php?approfondimento_id=697 (accessed 16 December 2011).
- QUOTIDIANO SANITÀ (2011b), *Riparto Fsn. Fazio: l'indice di deprivazione rischia di premiare l'inappropriatezza*, online 9 Marzo 2011, available at: http://www.quotidianosanita.it/governo-e-parlamento/articolo.php?articolo_id=3177 (accessed 16 December 2011).
- ROGERS, B. (2004), *Reinventing the Town Hall: a handbook*, Institute for Public Policy Research.
- TASHAKKORI, A. and TEDDLIE, C. (2009), *Foundation of mixed methods research: integrating quantitative and qualitative approaches in the social and behavioural sciences*, SAGE.
- TESTI, A., IVALDI, E. and BUSI, A. (2004), *An Index of Geographical Deprivation for Geographical Areas*, available at: <http://www.diem.unige.it/23.pdf> (accessed 28 November 2011)
- TESTI, A., IVALDI, E. and BUSI, A. (2005), *Caratteristiche e potenzialità*

informative degli indici di deprivazione, Tendenze nuove.

TOWNSEND, P. (1987), "Deprivation", in *Journal of Social Policy*, Cambridge University Press.

TOWNSEND, P., PHILLIMORE, P. and BEATTIE, A. (1988), *Health and Deprivation: inequality in the North*, Routeledge.

TOWNSEND, P., (1979), *Poverty in the United Kingdom*, Penguin.

UNITED NATIONS (1992), *Earth Summit, Agenda 21*, the UN programme of action from Rio.

UNIVERSITY OF OXFORD, Department of Social Policy and Social Work (2000a), *Index of Multiple Deprivation 2000*.

UNIVERSITY OF OXFORD, Department of Social Policy and Social Work (2000b), *Index of Multiple Deprivation for Wales: Final Report*.

UNIVERSITY OF OXFORD, Department of Social Policy and Social Work (2001), *Measures of Deprivation in Northern Ireland*.

WELSH ASSEMBLY GOVERNMENT (2006), *Communities First: a 2001 baseline*.

WELSH ASSEMBLY GOVERNMENT (2010), *Framework for Regeneration Areas*.

WELSH GOVERNMENT (2011c), *Making the Difference: Good practice in Communities First*.

WELSH GOVERNMENT (2011a), *One Wales: One Planet*.

WELSH GOVERNMENT (2011b), *Welsh Index of Multiple Deprivation 2011, Summary Report*.

WEB REFERENCES

<http://asr.regione.emilia-romagna.it/>

<http://www.communities-first.org/>

<http://dizionari.hoepli.it/>

<http://ec.europa.eu/agriculture/rur/leaderplus/>

http://ec.europa.eu/regional_policy/

<http://www.eurofound.europa.eu/>

<http://www.istat.it/>

<http://www.misuredelbenessere.it/>

<http://sanitab.regione.abruzzo.it/>

<http://wales.gov.uk/>