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Abstract

The paper takes for granted that urban areas - and hence the built environment - may play a catalytic role for effective environmental policy. This position is based on the fact that most residential, production and transportation activities in the developed world take place in urban areas.

A major part of the city is shaped by its built environment, but in many research projects and policy initiatives the question of sustainable development of the built environment has not yet been given much explicit attention. Issues like urban architecture, land use in the city, urban life styles and urban rejuvenation have of course extensively been investigated, but a solid methodology in which sustainable environment concepts are intrinsically connected with the quality of the built environment has not yet been developed. This applies in particular to the cultural built heritage.

The paper aims to design an operational methodological framework for the assessment and evaluation of alternative urban configurations with a particular view on the socio-economic vitality of urban policy interventions aiming at revitalizing the historical parts of the city on the basis of the concept of environmentally sustainable development. Particular attention will be given to (i) the design and use of an evaluation system for sustainable development of the city and (ii) the use of a multicriteria evaluation methodology for comparing alternative policy options regarding the historical built environment.

The methodology will be illustrated by means of a case study undertaken for the Italian city of Bassano, in which various policy interventions had to be judged against the background of long-run development objectives of the city.
1. Introduction

Management of cultural heritage is an important task of urban planning which aims at improving the conditions for welfare and well being in the city. We may refer here to Lynch who claimed: "So that settlement is a good which enhances the continuity of a culture and the survival of its people, increases a sense of connection in time and space, and permits or spurs individual growth: development, within continuity, via openness and connection" (K. Lynch 1981, p. 117).

Cities are thus not only centres of human activities aiming at economic progress, but house also large collections of remainings from cultural achievements which were the offspring of human efforts in the past centuries. Cultural heritage in the modern city forms a bridge to the urban history, but it is not only or necessarily an intangible issue. It is made up of concrete physical and visible objects all characterized by unique features which both mirror their historical identity and their current socio-economic significance (Konsola 1993).

This double role of urban cultural heritage poses severe questions to urban planning. On the one hand, conservation of urban monuments and arts may be seen as a necessary mission of urban planning, but on the other hand there are strict economic, financial and spatial limitations due to scarcity of resources and land in the city. In reality, it turns out to be difficult - if not impossible - to give absolute priority to either conservation goals in the city or to goals related to economic progress. The need to find a balance between seemingly contrasting goals calls for the development of conflict management methods in urban planning (see Coccossis and Nijkamp 1995).

In our paper we will mainly concentrate on the cultural built heritage (CBH) in the city, such as monuments, historical sites, although most of the arguments do also apply to cultural heritage in general. In the practice of CBH policy usually two issues are to be tackled, viz. (i) how to find a balanced decision between cultural and economic interests and (ii) how to ensure a financially viable strategy for CBH policies in the city? It is clear that the answer to these questions has to be based on both quantitative and qualitative insights into the phenomena at hand. A major point in this context is that CBH is not in the first place a cost factor serving as an impediment in urban planning, but a significant resource for socio-economic development. For example, a historic city centre is not necessarily a burden to local planning authorities, but offers many opportunities for creative urban development policies. Thus, the relationship between cultural value of the city and economic evolution is not by definition a negative one, but may create a 'complex social value' (Fusco Girard and Giordano 1995) with high socio-economic benefits for the city. Clearly, the exploitation of such benefits presupposes new forms of urban management based on creative concepts of strategic public-private arrangements. For example, the management of urban CBH needs proper financing instruments which - while ensuring open access to such common properties - are in agreement with sound market principles for dealing with spatial (positive) externalities incorporated in the maintenance of the urban CBH; user charges, taxation schemes or leverage
subsidies are only a few examples of new schemes for a feasible urban CBH policy.

Such a market-oriented view is once more important, as the quality of the CBH is also affected by environmental externalities, such as atmospheric pollution caused by urban traffic, vibration caused by new construction activities, visual pollution caused by new buildings etc. From a purely economic viewpoint, the costs of such negative externalities would have to be charged to the causes of environmental decay in order to compensate for the damage incurred by the urban CBH. This once more illustrates the need for an effective cooperative agreement between the public sector and private actors involved.

The previous observations all call for the need to implement sustainable urban development (SUD) strategies, in which the conditions imposed by the urban economy, the urban quality of life and the urban CBH are brought into harmony for the well-being of all people involved (see also Camagni et al. 1995). This also means that we have to look into the spatial spread effects of urban policies (e.g., 'green city' development outside the main centres, urban sprawl, suburbanization of industrial activities and so on). On top of it, the access to urban facilities is not equally distributed, as the city is unfortunately often also a pool of high unemployment, social exclusion etc. Thus the scale and capacity of urban socio-economic development depend on the quantity and quality of urban resources (natural and artefacts) as well as on the use and management of such resources. In this context, also tourism, recreation, leisure activities or cultural activities can be very instrumental to an increase in the valorisation of the scarce urban space, as urban attractiveness - supported inter alia by the CBH - may generate a higher demand for urban services which would enhance the goal of a SUD. Thus, urban built quality is a strategic element in supporting the economic, environmental and social aspects of a sound SUD of our modern cities.

In light of the previous introductory remarks, this paper will address the issue of an operational evaluation methodology favouring a SUD on the basis of the pivotal role of the CBH. We will take the Italian city of Bassano as an illustration for the empirical validity of our approach.

2. Conservation Planning as a Research Task

A city is a polycentric common space for urban inhabitants. Given the conflicting needs of citizens, the city is a platform of economic competition and social conflicts, where individual and group interests are playing in turn an intricate role (cf. Leonidou 1993).

In recent years the issue of conservation planning has gained much interest (see e.g. Lichfield 1989). Many countries have pursued conservation policies, as conserving the past offers a basis of reference for the future. Conservation policy has been approached traditionally in an eclectic way focusing on the unique and outstanding. Recent attitudes towards conservation bring forward the issue of protecting more and more aspects of heritage. Selection and assessment become therefore priority concerns. Such changes call for a reorientation of conservation policy. New analytical tools and concepts are thus required which would enrich
and expand the conventional methods utilized.

It ought to be recognized that the management of the CBH is not sufficiently supported by existing scientific disciplines. In the past, many economists have adopted the narrow conventional economic viewpoint that the meaning of a certain good can be derived in a proper way from the revealed preferences of economic agents who express their desires on an artificial market. It is however increasingly recognized that the socio-economic and historical-artistic value of a cultural good is a multidimensional (or compound) indicator which cannot be reduced to one common denominator (such as the measuring rod of money). In fact, we are - from a planning viewpoint - much more interested in the 'complex social value' of cultural resources (Fusco Girard 1987). This implies that the meaning of historical and cultural resources is not in the first place dependent on its absolute quantities, but on its constituent qualitative attributes or features (such as age, uniqueness, historical meaning, visual beauty, physical condition, artistic value, etc.) For instance, cities such as Venice, Florence, Sienna, or Padua would never have received an international reputation without the presence of intangible values inherent in their CBH.

It is evident however, that a compound evaluation of collective goods - and especially public capital goods such as churches, palaces, parks, landscapes, 'cityscapes' etc. - is far from easy and cannot be undertaken by the exclusive consideration of the tourist and recreation sector (see also Kalman 1980, Lichfield 1989). Especially in the Anglo-Saxon literature the expenditures made in visiting recreational destinations, are often used as a proxy value for assessing the financial or economic meanings of natural parks, palaces, museums, etc. A geographically complicating problem here is the fact that such recreational commodities and the various users are distributed unequally over space. This means that recreational expenditures are co-determined by distance frictions, so that the evaluation of recreational opportunities has to take into account the transportation costs inherent in recreational and tourist visits. Consequently, the socio-economic value of such recreational opportunities depends both on their indigenous attractiveness and on their location in geographic space. Therefore, increase of accessibility might then become an instrument in enhancing the socio-economic value of cultural heritage. But the indigenous historico-cultural value of monuments is invariant with respect to geographical location (apart from the scale economies emanating from such a 'socio-cultural complex'), so that we are still left with the problem of a compound evaluation.

A first step in any trade-off analysis - and hence also in the evaluation of the urban CBH - is to develop a coherent and consistent system of measurable indicators describing the impacts of policies or external developments (Nelson 1994). A major problem inherent in impact assessment is the friction between the need for reliable, quantitative information and the usual availability of only qualitative, intangible information which cannot be readily quantified. Impact assessment has to play a role as a communication tool between different interest groups in a complex decision problem, and it is evident that discussions on controversial issues need a maximum of cardinal information in order to reach a higher level of consensus. Although the new logic of 'measuring the
unmeasurable' may be helpful in various cases (see Nijkamp et al. 1986), it is clear that in many situations impact assessments should fulfil the highest level of precision and accuracy. The intriguing contentiousness of decision problems, and the multidimensional and complex data situation of such problems need an orderly approach.

Given the pluriformity and variety among the elements of most social systems, a multidimensional profile approach is often a meaningful analytical method for considering systematically a wide variety of different aspects in such systems. This approach implies that a certain phenomenon in the system at hand is characterized by a vector profile with a set of different (multi-dimensional) components or attributes.

A main problem in a systematic organization of an impact assessment is the question of what and how to measure. Both the omission of relevant information and the supply of redundant information may lead to biased decisions. Thus impact assessment has to be oriented towards the needs of planners, so that in all relevant phases of a policy problem adequate information can be provided. This also means that in most practical situations there will be a need for monitoring and auditing, not only for project or impact management, but also for programme and policy development in the city.

Thus the identification of suitable indicators is a first step in CBH management as part of an SUD policy. Such indicators may be both supply-oriented and demand-oriented. Supply indicators may refer to the presence, size, location, quality and characteristics of the available CBH. Demand indicators are related to the needs and uses by various clients of the urban CBH; these do also refer to access prices, income profiles, demographic structure, etc.

A next category of CBH indicators is concerned with policy measures for CBH management, such as maintenance, restructuring, demolition etc. Clearly, these measures may have an impact at both the supply and demand side of the CBH. This means that there is a need for a proper impact assessment of alternative policy options as well as for a balanced trade-off (evaluation) of the various choice possibilities of CBH management as part of an SUD policy. Because of the great many externalities involved, the economic evaluation of the CBH can normally not be based on market-based prices, and hence alternative methods have to be developed and used. Since in most cases (i) information is often only available partly in a cardinal, partly in qualitative way, and (ii) the translation of incommensurate and intangible elements into a financial measuring rod is extremely problematic, it seems practical to resort to multicriteria evaluation methods. This will be discussed in the next section.

3. Multicriteria Evaluation of CBH Alternatives

In the conventional economic evaluation of CBH an attempt is usually made to use the measuring rod of money for evaluating all direct and indirect effects on the basis of, inter alia, the notion of consumer surplus (incorporating also the so-called travel cost method). This consumer surplus represents the financial sacrifices (in terms of distance and time) a visitor is willing to make
(the so-called willingness to pay) minus the actual costs of a visit. Usual research methods used to assess this willingness-to-pay are inter alia by means of survey techniques and interviews. A major problem in this case is the specification of a demand function, because of heterogeneity among individual users, the importance of remaining (omitted) explanatory variables, synergetic effects caused by other recreation users (congestion, for example), the evaluation of the time (or time preference), and the intangible nature of a historic-cultural heritage. Such a heritage encompasses a wide variety of (mainly public) capital goods embodying (part of) the history of a country, region, or city. Besides its historical, artistic or scientific value, as well as its potential future value. Consequently, cultural heritage may be conceived of as a resource with a high economic potential (Ashworth and Voogd, 1986). The importance of this resource is reflected in the average annual growth rate of approximately 5% in tourism and recreation in the past twenty-five years in many countries. The historic cities of Europe (London, Paris, Rome, Copenhagen, Amsterdam, Athens, etc.) house collections of cultural and historical artifacts of an intrinsic and important international dimension.

One important objective which is often neglected in cost-benefit measurements is that of income distribution. Distribution and redistribution are in general very important in the social evaluation of projects or plans, as most expenditures, taxes and other government action will normally have different influences on different groups or regions in a national economy. The efficiency-equity dilemma is of paramount importance here. Unfortunately, it is almost impossible to translate (re)distributive impacts into the measuring rod of money, so as to make these compatible with the usual cost and benefit measurements. In conventional evaluation practice, the judgement of equity aspects is therefore often seen as a political responsibility to be left to a democratically elected policy agency. Nevertheless, this makes the results of any cost and benefit assessment debatable, since equity aspects may also have second-order efficiency effects.

In many cases however, there are alternative social welfare criteria, which also play an important role in a plan or project evaluation. Here we will consider a situation where multiple objectives may be distinguished, each playing a certain role in the judgement of the performance of a plan or project. A simultaneous consideration of multiple objectives implies that we have to replace the market prices by artificial prices, based on the policy-maker's judgement. Because a (public) investment project may be multidimensional, e.g., since it may cause very different effects, it might be impossible to find all the conversion factors necessary to compare those effects.

In many practical situations a traditional cost-benefit assessment is hampered by severe limitations, originating from two sources:
- the existence of multiple objectives which lead to mutually irreconcilable welfare criteria; then there is no single 'measuring rod';
- the existence of social costs which - due to marked imperfections - cannot be translated into monetary units.
An alternative and increasingly popular approach to CBH evaluation using a multidimensional approach to plan and project evaluation can be found in multiple criteria analysis. Multiple criteria analysis takes for granted the various steps necessary in a multidimensional impact assessment (for instance, community impact analysis) and next tries to build upon a solid impact analysis a policy evaluation model. Multiple criteria analysis has become a popular tool in policy evaluation studies in many countries (see Nijkamp et al. 1990 among others for an overview). Seen from the viewpoint of conservation strategies, there is a need for an integrated cultural and functional economic urban development strategy, in which economic, social, architectural, and historical aspects of city life are brought into harmony. Therefore, it is no use looking exclusively at the cost side of monument policy. Monuments have a social benefit whose (economic, social and cultural) value is related to the history of society and is perceived by the present generation (including all direct and indirect users) with a view to the future.

These benefits are clearly multidimensional in nature. For example, an urban monument has to be valued from the angle of a multi-attribute utility approach. Its value for society is determined by various attributes such as age, uniqueness, artistic value, style period, integration in urban structure, and economic revenues. The multidimensional nature constitutes the indigenous socio-economic and historical-artistic value of a cultural resource, seen from the viewpoint of a multidimensional utility theory. In this context multiple criteria analysis has demonstrated its value, not only in the case of 'hard' (cardinal) information, but also in the case of 'soft' (qualitative) information. For each level of measurement of information in a multidimensional evaluation analysis a corresponding suitable multiple criteria method can be identified.

In the present paper we will make use of the Regime multicriteria analysis, mainly because this method is able to encapsulate both quantitative and qualitative information on the CBH. It is essentially based as a general pairwise comparison method; for more details we refer to Nijkamp et al. (1990). This method can also be used in our empirical case study on CBH for the city of Bassano. There are various steps to be undertaken in such an analysis, viz. identification of policy alternatives, assessment of impacts of CBH policies, and trade-off analysis based on policy preferences for various impact indicators or criteria. Such steps should of course also include - whenever possible - the assessment of financial costs and benefits. The use of the Regime multicriteria analysis will now be illustrated in the next section.

4. A Case Study on Bassano del Grappa (Veneto, Italy)

In the past decades the rapid economic progress in various regions in Italy has generated new spatial ramifications of economic activities, in which various economic activities which were traditionally located in the city centre moved to suburban sites. In various regions in Italy - including the Veneto region in the North-Eastern part of the country - this has led to a suburban sprawl of many production activities in the small and medium-size industries. This was also
accompanied - and sometimes even preceded - by residential relocation to suburban sites. This means that the socio-economic functioning of cities as cultural, political, technological and industrial nodes has increasingly come under pressure, leave aside also the emergence of negative environmental externalities. This complicated phenomenon poses questions on SUD policy, CBH management, private-public modes of partnership, the strategic profile of historical city centres and their cultural assets, land speculation in the city, and communication with residents.

Such issues do of course emerge everywhere, but have a particular bearing on Mediterranean cities which house cultural assets of an unprecedented value. Consequently, these are also the cities where conflicts between urban development and conservation planning are becoming very tense. This also holds for the city of Bassano del Grappa in Veneto (Italy). We will first give some information on the issues prevailing in this city.

Bassano del Grappa is a lovely city with over 40,000 inhabitants, situated in the North-Eastern Italian region of Veneto, at the Southern edge of the Valsugana Valley. It is surrounded by hills and mountains, and it is intersected by the Brenta river and overlooked by the Monte Grappa, an area that was the theatre of battles during the First World War and the Resistance Period. Thanks to its favourable geographical position, it enjoys pleasant climatological conditions with mild temperatures which allow the growth of olive trees and other typical mediterranean vegetations (including wines, for the production of local wilne). The city is also very well known for its ceramic products and its grappa (distilled from the grapes). Furthermore, in the 1970s and 1980s the number of enterprises specializing in the manufacturing of antique furniture, gold and jewellery products has grown; also the tannery and leather industries are rapidly increasing in number in the area.

The historical city centre of Bassano has a high artistic-historical value. It is classified as one of the most important medieval historical centres. Unfortunately, the city has no clear policy programme for an integrated urban conservation strategy, which is also reflected in the fact that socio-cultural aspects have been substantially neglected in the urban development policy of Bassano. As a result, the pressure for widespread economic growth of the Bassano area and the related urban sprawl have had many negative impacts on the environmental quality in the city and hence on SUD. This uncontrolled growth has caused a

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1 The first castle and surrounding walls in Bassano were built more than a thousand years ago. The Inferior Castle dates from 1315 (under the dominance of Padova); about ten years later more fortification walls, the Civic Tower (recently restored in 1986/87) and the superior Castle were built up. The most famous monument of the city is the Alpini Bridge, built in the 12th century (destroyed at various times by floods and war actions). It was always rebuilt in its precise original form (its actual shapes were designed by Palladio in 1570). The museum hosts a painting collection of great value by artists such as Da Ponte, chalks and sculpture by Canova and works by Durer; also the archeological section is of great value; the museum annex contains the civic library.
tendency towards a 'city without quality', where interest in the historical context of the urban architecture vanished. Local planning was at best mainly focused on the preservation of monuments.

In recent decades the economic interests in the Bassano area shifted back from the periphery to the city centre, with an increased emphasis on coping with the obsolescence and degradation of historical heritage. Land use speculations necessitated also the development of public interventions, but local authorities were insufficiently able to implement the necessary administrative tools and control measures for a proper management of the CBH.

A major urban rejuvenation process has taken place in the last decade, paralleled by a rising demand for services and the subsequent rise in the building/construction sector. In this period public interventions reflected in re-urbanisation works and monument restorations started on a more structural basis, accompanied by private initiatives in urban renovation. As a consequence, the total number of dwellings in the city centre gradually declined. This is also indicated by the fall in population in the city centre, from a share of 14.1% in 1971 to a share of 9.7% in 1981. At the same time, the share of people living outside the historical centre has proportionally increased. This trend has continued in the past decade. The share of population in Bassano's historical centre was in 1989 approximately 8.9%, with a large proportion of elderly and an under-representation of the younger generation. In general, the historical centre is mainly occupied by small-size households (with an average household size of approximately 2).

Apart from demographic developments in the city centre, it is also noteworthy that public services and traditional social services are gradually replaced by commercial services which have become the focus of the inner-city system's life. This new and unanticipated process has affected most of the original houses in the traditional medieval quarter of the city and has led to commercial interests in converting these properties into functional buildings, mainly meant for retail activities (with a focus on clothing shops).

Only a few historical buildings of a public nature are left: the town hall, churches, the museum, the magistrate's court, and the main court. Even the most important cultural architectural properties are not used anymore for indigenous cultural uses: the Castle and the medieval Torre degli Ezzelini. Similarly, the ancient walls around the city centre are not well maintained and are just used for passage by pedestrians.

Attractive tourist shops are concentrated around the Ponte degli Alpini, the main attraction of the city of Bassano. This successful 'tourist complex' is mainly composed of ceramics shops, wine bars, and art shops. This development however, creates even more speculation on land use and the built environment, and is also confronted with negative externalities caused by tourism congestion. Thus, shops tend to drive out the original inhabitants and other traditional activities (such as handicraft), while the new retail development is not integrated in Bassano's original city profile. An illustrative example is the monofunctional development around the Ponte Vecchio. Also craft activities in a broad range of the city have become marginal economic activities, located either behind main
streets or relocated to smaller villages, rather than in previous prestigious locations around the river. A further decay of this original sector in Bassano will undoubtedly further erode the CBH of the city and cause an irreversible cultural loss.

In conclusion, the main impacts of the spatial and functional restructuring in Bassano’s city centre are:
- a commercial use of many restored traditional buildings, with a rapid increase of clothing shops in the retail sector
- a structural decay of traditional trade activities in the centre
- a difficult survival position for the handicraft sector
- a decline in the number of inhabitants
- an uncoordinated supply of public and private services (weekend congestion, insufficient parking space)
- a limitation of CBH management to ‘normal’ urbanisation activities and monument conservation
- a commercial interference driven by private profit interests in the CBH.

Thus, in general, there is insufficient scope for a balanced SUD in Bassano due to lack of integrated public strategies and measures for using and managing the CBH as a resource for long-term sustainable development of the city. For the time being, the urban development is dominated by uncontrolled commercial developments. After this extensive description of bottlenecks in a SUD of Bassano, we will in the next section describe some interesting policy initiatives for a balanced CBH management and use multicriteria analysis to identify a feasible and desirable policy direction.

5. **Different CBH Strategies for Bassano**

In this section we will briefly describe some possible interesting policy strategies for Bassano’s city centre. We will focus in particular on renewal strategies for an area in the city, called Largo Corona d’Italia. This is an open court area, located at the South-Western side of the historical city centre. It is circumvented at the Northern side by an important pedestrian street (Via Jacopo da Ponte) ending up into some squares, at the Eastern side by one of the main circular roads (Viale della Fosse) and at the Western side by an alley which used to be entirely residential (Vicolo da Ponte). In the Middle Ages this area used to be the ‘vegetable garden’ of the city. Later on, it was converted into a recreational area for the clients of a famous hotel Corona d’Italia, located next to this place. After the hotel was closed down, the court was largely neglected by the city officials. However, its strategic position at the edge of the historical centre and its particularly spacious courtyard close to the medieval walls of the city warrant the position of Largo Corona d’Italia as the gateway to the city.

The public interest in the economic functioning of this private court started already several decades back, especially after private developers and property operators put a pressure on the city administration in order to restructure the Largo Corona.
The argumentation for restructuring was based on the lack of space for residential and service buildings. In 1972, the city department responsible for monuments and historic-artistic assets did not allow an extension of the pre-existing structures in this area, but allowed for a drastic recovery of the 'ex Barchessa', an old building in the middle of the courtyard. After that, the reconstruction works were carried out and a subterranean shopping area and private parking areas were built.

Actually more than 15 years ago even a new draft plan was put forward for commercial and tertiary sector development which neglected the original purpose of the city's historic-cultural and social conservation policy. The plan was adopted to develop buildings for commercial and private use around the court, so that public authorities would largely lose control on the development of the area. Subsequently, in the past decade this plan was largely implemented, although at the same time new commercial activities had already started elsewhere in the city and the demand for new houses and recreational services had gone up. Nevertheless, the expected profitability of the new development plan was believed to be very high, irrespective of the accompanying environmental degradation of this traditional part of the city.

It is noteworthy that, although the court is actually in close proximity to the most important pedestrian street leading to the city centre, all new shops located at the court look rather isolated from the centre. As a consequence, new customers do not regard this new area as an attractive shopping facility, and as a result new shops are not becoming very profitable.

At present, the economic feasibility of the reconstructed area is still uncertain. This means that there is a need for a more thorough reflection on alternative development strategies of the Largo Corona in Bassano, leading to a higher SUD of the city. This requires a more systematic evaluation of different policy strategies aiming at a high quality architectural reconstruction of the court. Even tough such a choice process in the Italian context is highly politicized, there is a need for a transparent evaluation approach which would serve as a vehicle for communication between conflicting interest. The aim of this empirical part of the paper is to compare the plan adopted in 1972 with some alternative development options, named here 'adjustment' and 'alternative', respectively. The information on the expected impacts of these plans and the consequences of different policy views on these impacts can be handled by using the above mentioned Regime method. We will describe in the next section in more detail the data available for this plan evaluation in the CBH sector of Bassano.

6. Application of the Regime Method

In this section we will briefly describe the three alternative development plans for the Largo Corona d'Italia in Bassano, followed by a presentation of the results of the multicriteria Regime method. This description is based on various information sources, such as local documents, statistical data on Bassano, interviews with developers, private operators, shop keepers and households.
1. **Current plan**

   This plan incorporates the impacts of the implementation of the development taken place in the 1980’s, based on the original plan approved in 1972. It has the following features:

   - ample recovery and full utilisation of degraded buildings (including demolition, reconstruction and widening of the court)
   - creation of new subterranean buildings for commercial purposes and private parking areas
   - development of a 'green passage' above the commercial underground centre for pedestrians
   - a subordinate position of dwellings with respect to office buildings
   - recovery efforts for the CBH only according to the strict terms of the law (the 'ex Barchessa').

2. **Alternative plan**

   This rather different development plan aims to preserve environmental and historic-cultural values of the area; it has the following characteristics:

   - full respect of conservation regulations, controls and measures for destinations of the CBH, including individual properties
   - public interventions for compulsory purchase of CBH as a safeguarding against speculation
   - strict public control over functional transportation of buildings in the area
   - complete recovery of the court for environmental and cultural quality purposes
   - stimulation of a new socio-economic value of the CBH on the basis of cultural-recreational services (public gardens, art exhibits, libraries etc.) and adjusted housing.

3. **Adjustment plan**

   This plan presupposes a functional restructuring of the current lay-out and architecture of the court, with a particular view on the importance of the CBH. Elements of this plan are:

   - more emphasis on the historical elements in the change of destinations of restored buildings
   - stimulation of adjusted services - such as craft activities, cultural utility services or recreational spaces - to the detriment of general purpose facilities (like book shops or jewellery stores).

   It goes without saying that the evaluation of these three development plans would have to be based on public interests of local authorities and planners.
Their objective is normally concerned with different SUD criteria, such as:

- urban socio-economic development
- recovery of built heritage
- fulfilment of demand for dwellings
- private commercial development
- improvement of urban quality of life
- general increase in urban welfare
- conservation and valorisation of aesthetic-artistic-historico-cultural values in the CBH.

Based on the above set of objectives, the following judgement criteria - main criteria and sub-criteria - may be distinguished for the evaluation of the three alternative development plans for Largo Corona d'Italia in Bassano:

A. **Functional restructuring of the area**
   A1: residential function
   A2: tertiary function
   A3: cultural function

B. **Economic valorisation of the area**
   B1: property value of real estate
   B2: commercial value
   B3: socio-economic value

C. **Common utility**
   C1: public recreational services
   C2: public supporting services

D. **Historic - environmental value**
   D1: conservation and restoration value
   D2: aesthetic aspects of urban assets
   D3: integration with the historical city centre

It is clear that the above mentioned judgement criteria cannot easily be measured on a ratio (cardinal) scale, as they are mainly described as latent variables. At best, they can be represented on an ordinal ranking scale. Based on background documents and interviews with experts, the following qualitative impact table for the three alternative CBH plans for Bassano's Largo Corona could be constructed (see Table 1), where the impacts are ranked in increasing order of importance ('the higher the better').
Criterion

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<th>A3</th>
<th>B1</th>
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</table>

Table 1. Effect matrix for Largo Corona d'Italia in Bassano

Next, it is important to identify a set of political weight profiles, in order to trace the best feasible option by means of a multicriteria analysis. First, we have identified a base case scenario (BC) in which the policy priorities for all main criteria are assumed to be indifferent; in other words, all weight combinations are equally probable. Next, in our study, we have adopted - by way of sensitivity analysis - two contrasting weight schemes, denoted here as contrast policy scenarios. Clearly, such weights should concern both the four main criteria (A through D) and the various sub-criteria.

In policy scenario I we focus on economic efficiency and hence the most important policy orientations are:

- improvement of urban income
- low cost restructuring
- private services and profits

Policy scenario II addresses historical conservation issues and emphasizes the following aspects:

- historic - cultural preservation
- public utility from policy interventions.

These two scenarios can now be described in qualitative (rank order) terms for the policy weights as follows (see Table 2), again in increasing order of importance.

Criterion

<table>
<thead>
<tr>
<th>Scenario</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>I : main</td>
<td>A1</td>
<td>A2</td>
<td>A3</td>
<td>B1</td>
</tr>
<tr>
<td>sub</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>II: main</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>sub</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2. Policy scenario profiles for Largo Corona d'Italia in Bassano

13
The next step in the multicriteria analysis is the calculation of the rank order of the three alternatives (Current, Alternative and Adjustment) for the BC scenario and for each of the two scenarios (viz. the economic and the restoration scenario). These results have been assessed in a two-stage procedure. First, for each of the individual main criteria A, B, C and D the three choice alternatives were investigated and ranked via an unweighted regime approach (see Table 3). Second, the overall ranking of the results was identified for the BC scenario and for each of the two other scenarios (see Table 4).

### Criterion

<table>
<thead>
<tr>
<th>Alternative</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Current</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2 Alternative</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3 Adjustment</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 3. Results of ranking of alternatives for each separate main criterion

### Scenario

<table>
<thead>
<tr>
<th>Alternative</th>
<th>base case</th>
<th>economic</th>
<th>restoration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Current</td>
<td>third</td>
<td>third</td>
<td>third</td>
</tr>
<tr>
<td>2 Alternative</td>
<td>first</td>
<td>first</td>
<td>first</td>
</tr>
<tr>
<td>3 Adjustment</td>
<td>second</td>
<td>second</td>
<td>second</td>
</tr>
</tbody>
</table>

Table 4. Results of overall ranking of alternatives for BC scenario and two contrast scenarios

The results from this exercise are interesting. They show that the choice option 'Alternative' and 'Adjustment' have both a better score, whereas 'Current' has to be rejected. Furthermore, it turns out that in all three cases the option 'Alternative' scores the best. This provokes the question how robust these results are. Therefore, we may test this by investigating the weight combination [3 4 2 1], which would give the best chances for the option 'Adjustment'. The results however, show that also in this case the Alternative project is to be preferred, so that we may conclude that the choice possibility 'Alternative' is a robust solution, which has to be chosen irrespective of prevailing (changes in) policy priorities for the criteria.
7. **Concluding Remarks**

Starting from the concept of SUD, this paper has made an attempt to investigate the role of the CBH for urban development, in particular in case of rehabilitation projects. Impact assessment and evaluation methods are essential conditions for a balanced urban planning. This requires also the availability of social, economic, cultural and spatial information. In view of the intangible nature of many aspects, qualitative impact assessment and multicriteria evaluation methods seem to be good analytical tools. Especially the regime method offers a promising potential in this context.

It is clear that a multicriteria method should not be regarded as a mechanical tool leading to forced solutions. It is rather a communication instrument for a structured evaluation exercise, especially in case of multiple conflicting criteria. This was illustrated by our case study from Bassano. The interesting result attained here was that the final ranking was very robust, so that already the impact structure was decisive for the final ranking. In this respect, multicriteria analysis turned out to be a fruitful analysis instrument in a politically divergent choice environment.
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