# Assessing public preferences for managing cultural heritage: tools and methodologies

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## Summary

*It is crucial to increase citizens' and stakeholders' participation in all decision-makings, particularly when conservation issues are present, as sometimes conservation may appear in conflict with the particular interests of specific sectors of society. This paper reviews the role played by public participation in the assessment of interventions in historic cities. Preserving the cultural identity of the city is an important dimension of its sustainable development. The paper addresses the issue of public participation in planning processes involving cultural heritage conservation. The economic role of conservation in the regeneration of historic cities is highlighted and a tool for public participation based on economic as well as architectural indicators is suggested. The proposed tool combines spatial analysis and reliable estimates of economic values.*


## Conservation and sustainable development: the role of public participation

Despite the acknowledgment of the role played by *cultural heritage* in the development of the city, European research efforts have not been sufficiently integrated to tackle the complex issues related to its *conservation* and the need to develop comprehensive approaches and methodologies for its *management.* Planning the *sustainable development* of today's European cities implies accounting for an adequate *conservation of* their *heritage.*

Cultural heritage goods bear symbolic values that help building common identities. Monuments and historic areas can be regarded as a *stock of social values* that need to be preserved and enhanced in order to increase the social capital of a specific society. Serageldin (1996) states that, in the wealthiest societies, the ratio between social and man-made capital is 2 to 1. This seems to suggest a relationship between the level of economic welfare, *social cohesion* and the presence of cultural heritage. However, different cultural minorities may perceive these symbolic values in diverse ways. They can even perceive them as a threat, as the symbol of their discrimination and cultural diversity. In order to enhance social cohesion in our multicultural cities, it is therefore crucial to understand public preference and attitudes towards cultural goods and their alternative management options.

Urban regeneration represents one of the spinning forces informing future economic and social developments in most European cities. Planning regeneration is a multidimensional issue aiming to enhance the quality of the *built environment* and create a better quality of life for the population involved. The problem of city governance and of enhancing democratic participation is a very complex one, which needs an *integrated approach*. In particular, there is the need to bridge the practice of urban design, conservation of the built environment and decision-making support systems. A new approach, which takes advantage of modern information technologies and the current knowledge in the fields of urban economics, visual representation, software development, and non-market valuation techniques, is here suggested. There is scope to explore a whole body of research based on the analysis of statistical data gathering information on citizens' preferences for different urban policies that, so far, seems to have been disregarded.

Successful city governance 'models', such as the Barcelona case, have accounted for public preferences in their regeneration policies and attempted a more comprehensive participation process. However, the level of participation in city governance is still relatively low and fundamentally biased, hardly representative of the majority of the public. In many cases, only those who are vocal may be listened to, and this prevents a realistic and informed knowledge-based approach to the resolution of social conflicts. Eliciting public preferences in the form of economic values that the relevant population attaches to policy alternatives may help in composing the arising conflicts.

The paper discusses possible improvements in city governance linked to new forms of involvement and participation of the general public based on elicitation of public preferences. Some urban governance issues, in particular those affecting the integration of cultural heritage in the urban settings, are here explored. It is known that urban policies related to cultural heritage, both mobile and immobile, have crucial impacts on the economic development of most European cities. For instance, tourism in Europe is one of the most important industries. Some policies may cause distress to both residents and the cultural heritage itself. Many cities of art, to different extents and degrees, suffer because of congestion and the negative externalities caused by it, but hardly ever is the public involved in the decision-making

process that will lead to the way the problems are tackled, since often this is regarded as experts' realm and general public's attitudes are tested only *ex post.* Therefore, it is important to develop new cultural heritage **management tools** that will account for urban changes and help decision makers to develop appropriate policies, accounting for people's preferences, considering minority and disadvantaged groups and their interests.

This paper is structured as follows: the following section discusses the role of non-market valuation in urban regeneration, then possible tools and methodologies are described, and finally some preliminary conclusions are drawn.

## Urban regeneration and non-market valuation

Architects and planners of the 21st century face problems and challenges that may be compared to those introduced by the Industrial Revolution. *New technologies* implied *new spatial relationships* between the city and its countryside: distances being shortened and communications improved. Historic cities had to compromise with new forms of development, far more hectic and sudden than in the past. Their growth was unexpected and mostly uncontrolled. These circumstances caused the development of the first British planning system, mainly concerned with the city rapid rate of growth and the social issues involved, such as housing, public health and social order (HEALEY, 1998). We are now facing a very similar technological revolution, comporting consequences that are even more complex. We are still partially unaware of the implications of *globalisation* and *information technology* on spatial development. However, a reduction of land space needed for the same social interactions represents an established trend. Many sites have already become redundant in the last decades, having lost their original functions. *Urban regeneration* has taken the place of the more traditional development of the city. Today's European cities, to many extents, do not need to be expanded; they need to be re-developed, regenerated. Therefore, the historic, or *man-made capital* becomes an economic and spatial resource of foremost importance.

Conservation strategies, as any other intervention in the urban tissue, ought to include public participation, and this need has been fully acknowledged by the current 'people sensitive' and 'collaborative' planning approaches (HEALEY, 1998). The emerging forms to manage conflicts over the use and development of conservation areas present a challenge to the current conservation and planning practices. Any intervention strategy in conservation areas involves a wide range of those with a 'stake' in culture goods of this area. It is extremely important for different stakeholders to be engaged in the decision-making process. Their conflicting concerns, interests, and strategies may well be shaped through discussion and negotiation, leading to a more sustainable intervention strategy.

This paper's argument is that, in order to improve the negotiation process among conflicting interests, we need to elicit the **economic values** attached to each stakeholder's set of preferences and values, experts as well as residents. Local residents may attach both positive and negative values to the environment (as well as to *changes* in its quality) where they live. In economic terms these values can be defined as *positive* and *negative externalities*. Residents have a personal perception of what enhances their quality of life *(positive externalities)* and what causes environmental distress *(negative ones).* They must be regarded as stakeholders in any development strategy for their area. General public's views must be accounted for, in order to achieve a sound development or regeneration programme. A way of doing so is to make their perceived values as explicit as possible. To this extent, some economic non-market valuation techniques, such as Contingent Valuation Method (CVM), may represent an important tool.

Non-market valuation techniques have been developed by environmental economists in the last few decades to tackle some market failures. These techniques aim at computing the monetary benefits of environmental policies, important when one wants to compare different categories of benefits, or when one wants to compare the benefits of a policy with its costs. Valuation implies finding how much of one resource (e.g., income) one is willing to give up to obtain an improvement in, or avoid a degradation of, another.

Usually, one can infer how much individuals value a good by observing their market behaviour, e.g. the amount of this good that is exchanged on the market and its price. However, most public goods such as environmental resources or cultural heritage sites are typically *not* exchanged on regular markets, making it impossible to observe prices and quantities. Economists have developed special techniques to estimate the value of environmental quality changes. Among these techniques, the **Method of Contingent Valuation** (MITCHELL, 1989) directly asks individuals how much they are prepared to pay for specified changes in environmental quality. The Willingness To Pay (WTP) for the proposed change in environmental quality (or for obtaining a public good) is the amount of money that can be subtracted from a person's income at the higher level of environmental quality for him to keep his utility unchanged, and is the theoretically correct measure of the value individuals place on the change.

In our discussion, we are resorting to this technique and its latest developments, arguing that this approach can prove useful for conservation purposes.

## Tools and Methodologies to assess urban interventions in conservation areas

The design of policies and plans regarding heritage sites and cities needs to involve measurement, analysis, and communication to designers and the wider public using new Information and Communication Technologies (ICTs). Decision support systems, which are frameworks for linking new IT tools together, are being developed in many areas of planning. Geographic Information Systems (GIS) lie at the heart of such systems, and provide the essential framework for data storage and analysis of urban and spatial data, such as that involved in heritage problems.

This paper discusses new tools specifically designed to tackle cultural heritage conservation issues. The development of new tools for the assessment of conservation strategies needs to be rooted in different research fields. We suggest integrating expertise from three different disciplines: conservation, economics, and information technologies. Some Spatial Decision Support Systems (SDSS) are currently being developed (JANKOWSKI, 1997). However, no systematic research of this kind has been undertaken at a European level. By integrating different approaches, namely Geographic Information Systems (GIS), non-market valuation techniques, such as conjoint analysis and contingent valuation methods, and multicriteria valuation, we can enhance the current state of the art. The produced software and tools might also have an impact on the way information on urban sites is gathered and recorded, introducing new ways of making inventory of cultural goods while recording and monitoring people's preferences.

### *The model*

The tool here envisaged is based on the definition of criteria for recording European cultural heritage and the relevant population's preferences for its transformation. One would gather and record information linking criteria describing the quality of cultural heritage goods to the preferences of the relevant population, at all levels of management. A multilayer IT tool can combine this information, which should be gathered first for priority sites and eventually for the other relevant sites. Multicriteria analysis (VOOGD, 1983) constitutes the framework allowing the identification of the *evaluation matrix*, describing the historic goods, and the site *priority matrix* for its transformation. Non-market valuation techniques, such as conjoint analysis or CVM, can be used to gather information about the aesthetic features or land uses preferred by the population affected by the changes. Benefits transfer approaches may then help generalise these results.

Figure 1 describes the different level of knowledge and information needed for the development of the IT tool. We assume that the role of experts is to develop, at national level, a consistent set of criteria, referring to the international charters and conventions to assess the relevance of artifacts and historic sites, which can constitute the basis for their listing process. This will inform the creation of an appraisal matrix to be applied at a regional level. Per each relevant site one can create an evaluation matrix. Different levels of information need to be gathered in order to inform the development of the evaluation matrix. First, site characteristics need to be recorded. Then alternative management and development options can be envisaged. Finally the chosen options need to be presented to different stakeholders, (such as planning agencies, investors, the general public, etc), in order to assess their preferences and negotiate a sustainable solution. We suggest the use of Contingent Valuation Method in order to elicit public preferences.

In a contingent valuation survey of cultural goods, people are asked directly to report their Willingness To Pay (WTP) to obtain a specified improvement in provision of the specific good. The change is hypothetical, and no actual transaction takes place. Contingent valuation has been used to place a monetary value on programmes for the preservation and restoration of specific *urban sites* or *buildings* with historical

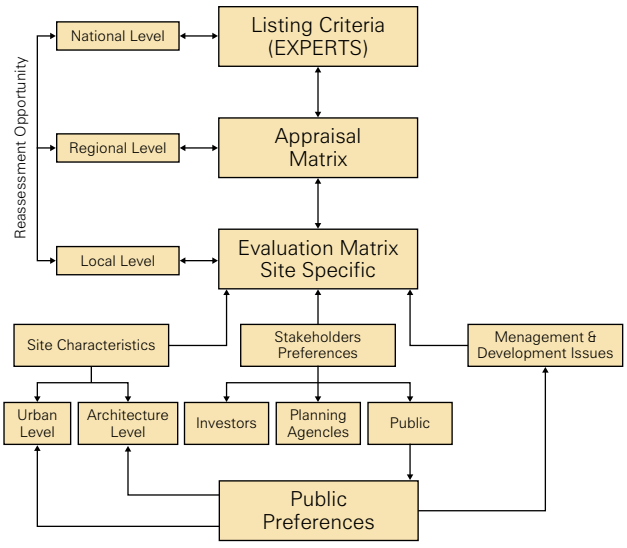


**Figure 1.** General framework of the needed levels of information.

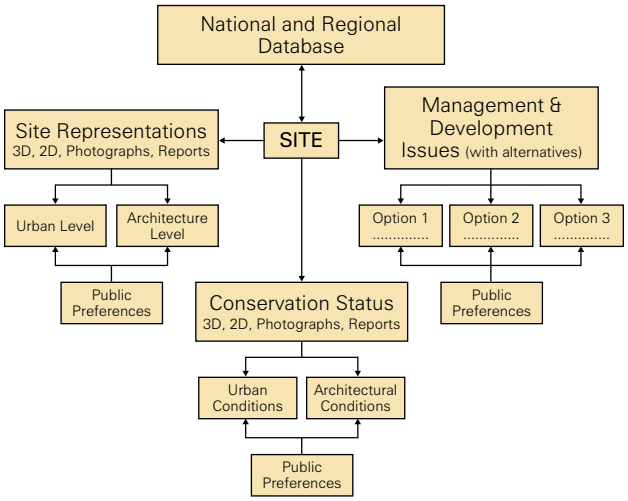


**Figure 2.** Multi-layer GIS based tool.

and cultural significance, such as churches, museums, theatres, and marble monuments (for a review see NAVRUD, 2002).

Figure 2 shows the structure of the conceptual framework organizing different criteria according to both the level of resolution and other sub-sets of criteria. The tool is based on GIS base map with links provided by a relational database.

The aim is to create a national and regional database for the preservation and management of cultural heritage. In order to do so, each site of interest needs to be recorded under different headings: visual representation of the site, representation of its conservation status, and representation of possible management or development alternatives. We distinguish between urban and architectural level when representing the site and its degrade status. At the very end of the gathering information process there is the public preferences elicitation one. Recording the public perception of aesthetic and symbolic values of a site can inform future management options.

Similarly, we aim to record public preferences for alternative management options for the site, as proposed by the relevant authorities. A multilayer GIS tool which contains the above information will become not only an useful tool to preserve the memory of important built heritage, but also the changes in people's attitudes through time. This will provide decision makers with an important decision support system.

Multi Criteria Evaluation (VOOGD, 1983) is here used to relate scores, given by the public for different criteria for various intervention strategies, to their economic values. Explicit criteria are presented to the public – as a series of indicators that comprise the evaluation matrix – to derive a final score for different criteria and different intervention strategies in conservation areas.

The indicators are organised in different categories and presented in a visual format using a combination of GIS and object-linked database. The public opinion on different intervention strategies will directly have its input into the evaluation matrix. The method can be easily elaborated to use within an Internet environment. The evaluation matrix, which relies mainly on public participation, can be further enhanced using a priority matrix. Scores, or indeed weight as expressed in the priority matrix, may be given to different criteria using Contingent Valuation Method (CVM) estimates.

## Discussion and concluding remarks

The role that valuation may play in urban planning is still to be fully explored. The paper aims to shed light on the need of implementing new consultation processes, and new design protocols where economic valuation may play a substantial role in revealing *ex ante* the strength of preferences of all the relevant actors, the stakeholders, in city development. This paper focuses attention on a topic, which lies at the frontiers between urban planning and economic valuation. More research is needed in this direction.

The model we suggest to use is in between a *performance criteria* and a *collaborative place making* approach. It is based on the use of economic valuation techniques (CVM) we regard as capable to pose a 'social weight' to relevant criteria. These criteria may express the quality of places as perceived by different stakeholders and be used when managing conflicting situations. The adoption of CVM for planning purposes is justified by the nature of the valuation technique itself, deeply rooted in social studies literature, being an *interview-based technique.* In fact, CVM is capable of gathering a great deal of information on attitudes and preferences of the relevant population. Valuing cultural heritage should not represent a purely academic economic activity, but need to be linked with urban planning decisions, in an *ex-ante* framework. In fact, the characteristics of *cultural goods* themselves, the values that people attach to *man-made capital,* opens up a new prospective on the debate about sustainable cities. In this perspective, the costs of implementing studies such as CVMs would be compensated by the social benefits gained, in terms of knowledge of the priorities that the relevant population may express for the development or the management of an important cultural area. This ensures participative grounds upon which to base policy and management decisions.

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