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Evaluation of social benefits generated by urban regeneration: a stated preference approach

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Introduction

Urban regeneration operations refer not only to buildings restoration operations, but also to programmes aiming at eliminating social decline, increasing the quality of life of the inhabitants, supporting the valorisation of cultural resources, protecting the environmental system, bringing economic development and so on. In fact, as mentioned by Roberts (2000), urban areas are complex and dynamic systems, reflecting the processes that drive physical, social, environmental and economic transition and generating themselves important changes. Taking into consideration this complexity, it is of particular importance to provide the Decision Makers with integrated evaluation tools, able to consider the multiplicity of objectives and values when dealing with urban regeneration processes, to include the opinions and the needs of the different stakeholders involved and to assess the impacts and the consequences of each decisions. (Bottero, Mondini and Ferretti, 2015; Tyler et al., 2013).

The paper focuses on the use of stated references approaches for evaluating the benefits that urban regeneration programmes generate on local community. These methods are used for valuing non-market public goods that contain social, cultural and environmental benefits that are impossible to quantify using monetary values (Boxall et al, 1996; Louviere et al, 2000). In particular, state preferences methods are based on the creation of a simulated market data collection by asking individuals for their opinions or views. The methods lie on the elicitation of the individuals Willingness To Pay (WTP), that is the willingness to pay of the society for using a certain good or service, or Willingness to accept (WTA), corresponding to the willingness to accept for abandoning a certain good. Stated preferences approaches also offer an opportunity for community engament and participation in the decision making processes.

Among stated preferences methods, a very important role is played by the Contingent Valuation Method (Mitchell and Carson, 1989; Carson, 2000). The CVM is widely applied in environmental cost benefit analysis and is based on the development of a survey for collecting data about the good or service under examination. In a CVM survey the respondents are asked what they are willing to pay towards the preservation or an improvement of a certain asset. The research can then estimate the monetary value of the asset by calculating the average WTP of respondents and multiplying this by the total number of potential consumers.

The present study aims at evaluating people's perception of the social value of urban regeneration programmes and their WTP to fund specific transformation operations. Starting from a real case related to the urban regeneration programme for the city of Collegno (Italy), the research considers the application of the Contingent Valuation Method (CVM) for the estimation

of the social benefits that the operation is able to deliver.

Methodology

Selection of the sample and development of the survey

The first step in the application of the CVM consisted in the selection of the sample for the development of the survey. In particular, the questionnaire was conducted in the city of Collegno in March 2016 and addressed both to residents and to visitors and to visitors. Around 100 interviews were conducted using face-to-face approach.

Design of the CVM questionnaire

The questionnaire consisted of three components, that can be described as follows.

Attitude of the respondents towards the good under investigation.

In this part questions aiming at understanding the familiarity of the respondents with the site in Collegno were included.

Simulation experiment and WTP elicitation.

This second part presented the hypothetical scenario for the evaluation.

The respondents were asked if the regeneration of the city of Collegno were to transform a specific site with the creation of an urban park, how much they would be willing to pay for the construction of the new facilities. Figure 1 shows the representation of the transformation operation that was included in the questionnaire

The CV question was offered according to the "open format" and the payment vehicle was represented by a one-off payment in the form of an income tax.

Scenario without intervention Scenario with intervention

Fig. 1. Representation of the hypothetical scenario for the evaluation.

Background information.

The final part of the questionnaire requested standard demographic information from the respondents, including sex, age, education, income level, location of residence and location of work or study.

Data analysis

The data collected through the questionnaire were analyzed in order to estimate the mean WTP and to provide statistics about the respondents' socio-economic characteristics and other variables included in the questionnaire.

Results and discussion

According to the data collected in the questionnaire, different WTP were defined by the respondents (Table 1).

Tab. 1. WTP responses collected in the CVM survey.

WTP	Frequency
0	55
1	1
5	1
10	7
15	1
20	7
30	1
50	7
100	17
200	1
300	2

The respondents mean WTP was 31 €. This mean WTP value can be used for estimating the aggregated WTP amounts for the urban regeneration operation under investigation.
In order to provide an aggregate measure of the social benefits delivered by the transformation, the catchment area of the new park has been defined. In particular, an isochronous map showing the places from which the park will be accessible in 20 minutes by car has been created in order to understand the potential beneficiaries of the new facilities (Figure 2).

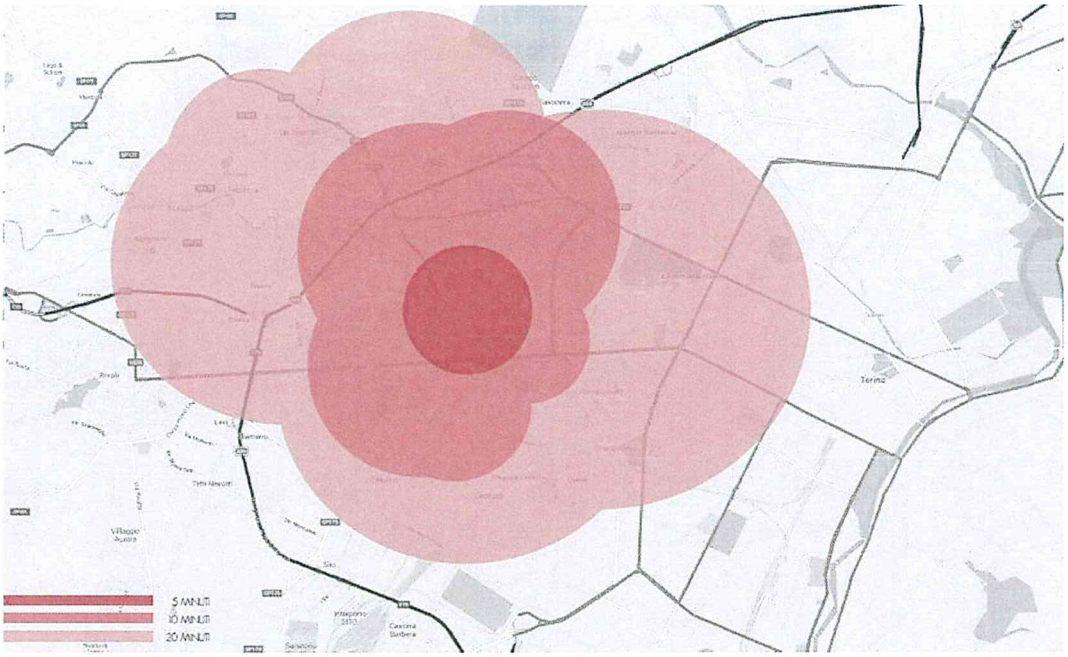

Fig. 2. Isochronous map for the definition of the catchment area.

The mean WTP was multiplied by the number of family unites in the catchment area. According to the calculations done, the overall social benefit accrued from the regeneration project was estimated to be around 7 millions of Euro.
This value shows that the respondents pay attention to the conservation and valorization of the built environment and urban landscape.
Apart from the estimation of the WTP, the results of the questionnaire highlighted other relevant issues about respondents' preferences towards the future transformation of the site, suggesting functions and services that could be included in the project.
The study shows the importance of adopting public participatory approaches in proposing and deciding new uses in urban regeneration processes. In fact, active involvement can ensure good decisions, able to match the public's preferences (Hing and Chan, 2015).

Conclusions

This paper focused on the evaluation of the social benefits that urban regeneration processes deliver on local community. In the research, the requalification programmes of the city of Collegno (Italy) has been considered and the benefits provided by the creation of a new urban park were estimated using the CVM approach. The results of the evaluation showed an overall benefit of around 7 millions of Euro, thus confirming the relevance of non-economic value of urban regeneration processes.
With reference to the perspective of the work, it would be useful to use the results of the present study in a cost benefit analysis (Hanley and Spash, 1993; Stellin and Rosato, 1998) that would allow to compare the social benefits delivered by the operation with the cost for undertaking the project, providing a benefit/cost ratio able to inform public Decision Makers about the social return of urban regeneration investments.

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