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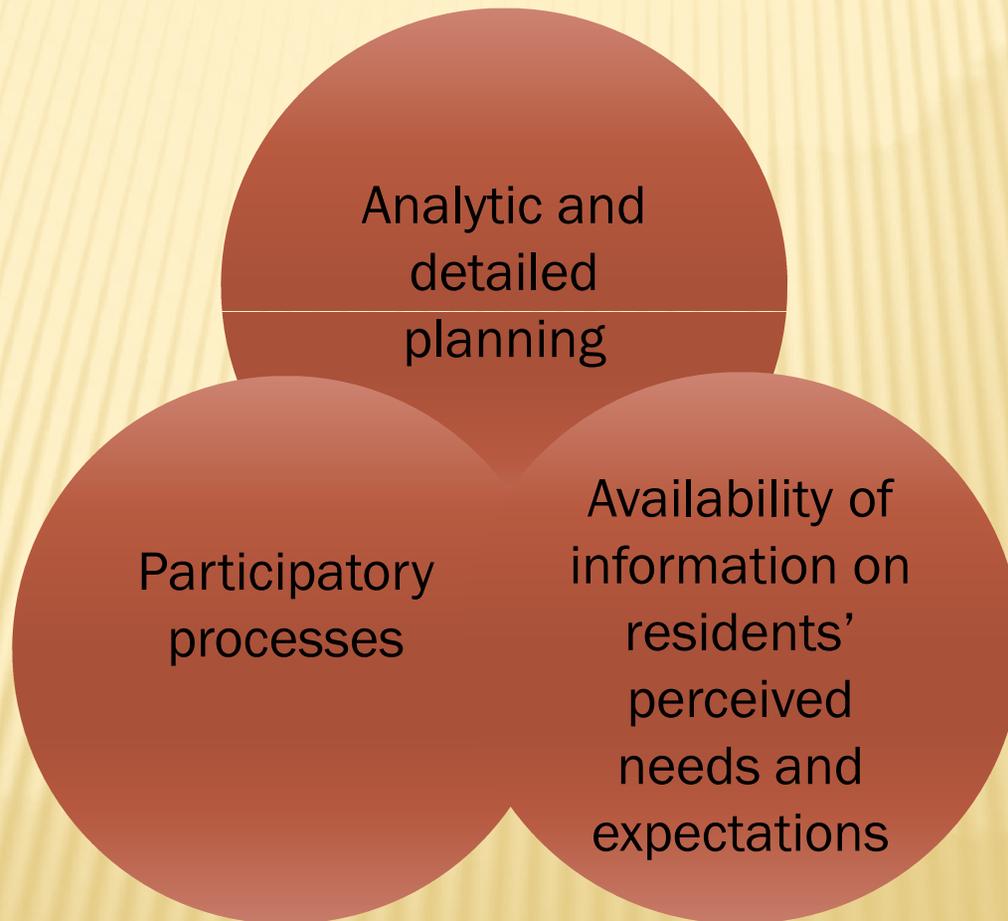
HISTORIC CENTERS AND URBAN QUALITY: A STUDY CONCERNING PERCEIVED NEEDS AND EXPECTATIONS

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INTRODUCTION

Effectiveness of preservation of historic centres is founded on



INTRODUCTION

Definition of a methodology based on an econometric approach to identify planning policies for the requalification of historic centres, taking into consideration people's needs through interviews addressed to resident families



Methodology to analyse people's needs: Discrete Choice Models (Ben-Akiva and Lerman, 1985; Greene, 1993; Greene and Hensher, 2010) whose results put in evidence several important inferences related to residential satisfaction

Application: Analysis of needs and expectations of the residents of the historic center of Cagliari (a medium-sized city of the Italian region of Sardinia).

INTRODUCTION

The DCM-based analysis is implemented through a questionnaire delivered to residents and provides information on correlations between perceived urban quality and the following determinants:

- i. level of satisfaction related to house;
- ii. neighborhood's characteristics;
- iii. respondents' social and demographic characteristics.

Qualitative and quantitative inferences on the correlations imply important arguments on planning policies related to the spatial organization of the historic centers.

INSTITUTIONAL AND NORMATIVE FRAMEWORK

Cagliari

- ✗ is the main Sardinian conurbation and a regional capital city;
- ✗ has been identified as one of the nine main Italian metropolitan areas by the Italian Law No. 1990/142 and confirmed as one of the twelve Italian metropolitan areas by the Italian Law No. 2014/56.

The Sardinian regional administration has primary jurisdiction for land-use and urban planning, according to its special constitution.



The metropolitan area of Cagliari can be considered a significant and well-defined urban environment to analyze the historic center-related planning policies, one which is sufficiently internally developed and integrated, and isolated from external influences as well.

INSTITUTIONAL AND NORMATIVE FRAMEWORK

- ✘ Regional Landscape Plan (RLP, 2006): Implementation Plans of Historic Centers (IPHCs) are connected to the Planning implementation code (PIC) of the RLP and are related to the “Areas characterized by historic settlements”.
- ✘ PIC defines a set of prescriptive rules and planning criteria: article no. 52 identifies the IPHC as a plan approved through the cooperation of the Sardinian regional administration and municipalities



In the planning processes of the IPHCs:

- i. a strong attention to historical, typological and morphological characteristics in terms of the territorial analysis of “Centers of antique and primary development” (as identified by RLP);
- ii. a strong prescriptive ruling framework characterized by a markedly-conservative attitude.

HISTORIC CENTER OF CAGLIARI



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METHODOLOGY

- ✘ The ordered-choice models are suitable to analyze the determinants of a dependent variable which represents a scale of preferences (Aitchison and Silvey, 1957; Snell, 1964).
- ✘ The ordered-choice model-based methodology is used to study phenomena characterized by observations represented by categories of naturally-ordered outcomes.
- ✘ There are different kinds of ordered-choice models, depending on the prior on the error distribution.
- ✘ An Ordered Logit Model (OLM) is used to analyze the relation between a residential satisfaction with the neighborhood where a family lives, and some covariates that are: i. level of satisfaction related to the house; ii. neighborhood's characteristics; iii. respondents' social and demographic characteristics.

METHODOLOGY

- ✗ The model operationalizes by assuming that a latent continuous dependent variable y^* is linearly dependent on a vector of explanatory variables, $x = (x_1, \dots, x_k)$, through the following relation:

$$y^* = \beta'x + \varepsilon$$

where $\beta = (\beta_1, \dots, \beta_k)$ is a vector of coefficients and ε is the error term, vector x is a set of k covariates that are assumed to be strictly independent of ε . The components of a vector which represents a set of $J+1$ discrete outcomes, $y = (1, \dots, J)$ are assumed to be related to the latent variable y^* as follows:

$$\begin{aligned} y = 1 & \text{ if } 0 < y^* \leq \mu_1, \\ y = 2 & \text{ if } \mu_1 < y^* \leq \mu_2; \\ y = 3 & \text{ if } \mu_2 < y^* \leq \mu_3; \\ & \dots \\ y = J & \text{ if } \mu_{J-1} \leq y^*; \end{aligned}$$

METHODOLOGY

- ✘ The logistic form and the standard normal form for the error distribution, that lead to an Ordered Logit Model or to a Ordered Probit Model respectively, are expressed by:

$$f(\varepsilon_i) = \frac{\exp(\varepsilon_i)}{[1+\exp(\varepsilon_i)]^2}$$

where ε has mean equal to 0 and variance equal to $\pi^2/3$;

$$f(\varepsilon_i) = \frac{\exp\left(-\varepsilon_i^2/2\right)}{\sqrt{2\pi}}$$

where ε has mean equal to 0 and variance equal to 1.

SAMPLING METHOD

- ✘ Random sample of 1000 people living in the historic center of Cagliari was extracted by associating a random number to each name listed in the phone directory. Out of these 1000 people, just 167 people agreed to participate, implying a 16,7 percent rate of participation.
- ✘ Questionnaire of about 30 questions includes questions related to the determinants of residential satisfaction.

MODEL IMPLEMENTATION AND RESULTS

Basic elements

Residential satisfaction entails an assessment of the qualitative difference between the present and the desired conditions of a house's and of a neighbourhood's characteristics (Galster, 1987).

Residential environment = House + Neighbourhood

RESULTS

Socio-demographic characteristics	Qualitative influence on satisfaction	Quantitative influence on satisfaction
People older than 40 years old	Positive	Odd ratio 1,86
Women	Positive	Odd ratio 1,22
Relatives living in the same neighbourhood	Positive	Odd ratio 1,33
Good relations with neighbours	Positive	Odd ratio 4,84
Duration of residence	Positive	Odd ratio 1,26

- ⇒ Younger people should have higher expectations
- ⇒ Comparatively deeper affective relations with residential environment
- ⇒ Feeling of having things in common with neighbours
- ⇒ More social ties and social interaction
- ⇒ Strong emotional bond

RESULTS

Socio-demographic characteristics	Qualitative influence on satisfaction	Quantitative influence on satisfaction
High educational level	Lower than low educational level	Odd ratio 0,86
Students, unemployed, retirees	Lower than public employees	Odd ratio 0,63
Practitioners	Lower than public employees	Odd ratio 0,64



Low educated people should be less aware of alternatives and should have few desires to change their condition

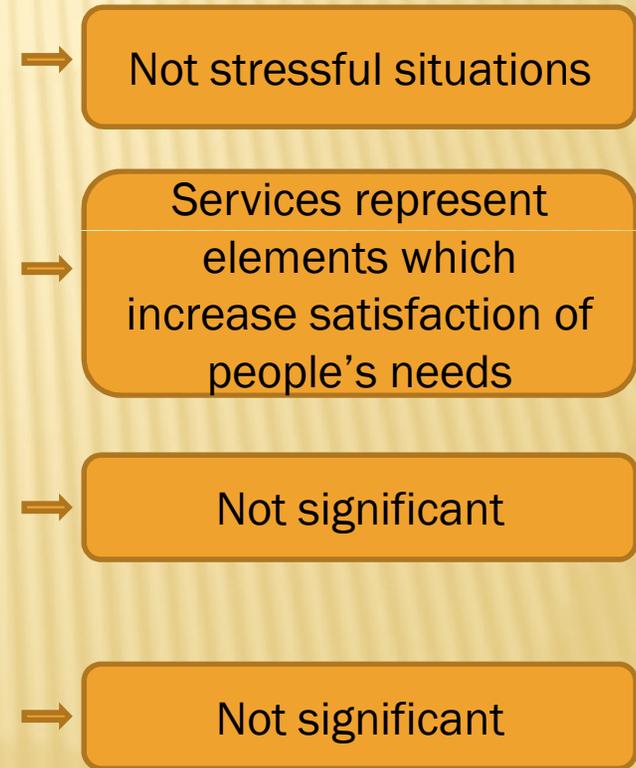


Higher-income people should be less satisfied, as they should have a higher awareness of other residential alternatives.



RESULTS

Neighbourhood's characteristics	Qualitative influence on satisfaction	Quantitative influence on satisfaction
Tranquillity of neighbourhood	Positive	Odd ratio 2,06
Schools, post offices, pharmacies, bus stops	Positive	Odd ratios 1,41 - 1,42 - 1,76 - 2,81 respectively
Retail shops, gardens	Negative	Odd ratio 0,50 - 0,91 respectively
Absence of car parks, insufficient street lighting	No influence	Odd ratio 1,03- 1,05 respectively



RESULTS

Neighbourhood's characteristics	Qualitative influence on satisfaction	Quantitative influence on satisfaction
Traffic, crime, problems related to refuse collection, water losses, noise, bad paving	Negative	Odds ratios 0,57 - 0,40 - 0,41 - 0,69 - 0,30 - 0,94 respectively

⇒ Problems in the neighbourhood should cause a lower quality of life and a lower residential satisfaction

Level of satisfaction related to house	Qualitative influence on satisfaction	Quantitative influence on satisfaction
Satisfaction related to house	Positive	Odd ratio 2,59

⇒ Satisfaction related to house and that related to neighbourhood have a strong relation; if a person is satisfied with his house, he is more satisfied also with his neighbourhood

DISCUSSION AND CONCLUSION

- ✘ The outcomes of the DCM-based model entail important implications for future planning policies.
- ✘ The restricted availability of public services and infrastructure is a very influencing factor in determining low satisfaction. As a consequence, it could very possibly be effective to provide the historic center with important services such as schools, parking lots, bus stops, groceries and pharmacies.
- ✘ Moreover, crime control, effective refuse collection, thoughtful noise mitigation strategy, improved street lighting and paving, and traffic control are other factors which could increase the perceived satisfaction by the residents.

DISCUSSION AND CONCLUSION

Examples of policy:

- ✘ Improvement of the public transportation network in order to make it easier for the residents to commute from the historic center to other urban destinations.
- ✘ Increment and a more effective management of parking space very close to the historic center boundary could generate a positive effect on residential satisfaction related to neighborhood, which may possibly imply the pedestrianization of the most part of Cagliari's inner-city as well.
- ✘ A more effective refuse collection system could be based on the project of locating dustbins underground, which could possibly improve the urban cleanliness perception.
- ✘ Making available public facilities where residents can implement social activities and build a sense of community. These facilities could also improve participation related to planning decisions, since residents and city users could feel at ease with a familiar environment for public discussion.

DISCUSSION AND CONCLUSION

- ✘ Residential satisfaction related to neighbourhood is positively related to residents' satisfaction concerning the house where they live.



A decisive role to improve perceived quality of the neighborhood is played by public planning policies for residential reuse and renewal, which is the core of the implementation plans of the historic centers (IPHCs) defined by the Regional Landscape Plan of Sardinia (RLP).

A urban-renewal policy that entails the transformation of private buildings into public housing, in order to revitalize the historic center through the integration of public and private financial efforts.

DISCUSSION AND CONCLUSION

- ✘ Moreover, the model's outcomes indicate that a comprehensive planning approach to public transportation, parking, and pedestrian paths would help making the historic center comparatively more attractive, since these issues are much more important for the historic center than for other urban neighborhoods.
- ✘ The applied method can be used by city planners as a supporting analysis in the development of policy-making processes concerning city residential areas.
- ✘ The analysis is based on a set of variables representing the best choice given the information available, rather than the optimal choice. Nevertheless, they give us an interesting picture of the phenomenon.
- ✘ There are a number of variables that should have been included in the OLM model and were not included since no information is available (household income, data on capacity of the system of public infrastructure and services).

DISCUSSION AND CONCLUSION

- ✘ The method: could be exported to assess residential satisfaction in other urban contexts, such as in residential peripheries, by adapting the questionnaire to the different situations at stake.
- ✘ The results obtained with reference to Cagliari's historic center allow generalization for two reasons:
 - No similar empirical studies have been implemented to analyze the determinants of residential satisfaction related to neighborhood in other Italian conurbations by means of a DCM-based approach;
 - it is not possible to compare the situation of the urban area of Cagliari to a situation in which a more flexible, participatory, faster and bottom-up planning process was implemented. This kind of situation would have probably encouraged people to lobby in favor of effective planning policies concerning the historic center, since the established planning process has been developed quite homogeneously in all of Italy, and counter-examples are very rare.

Thanks