Doctoral Dissertation

Doctoral Program in Energy Engineering (33rd Cycle)

20th century 'invisible' heritage: qualities and values in the real estate market.

Ph.D. Candidate

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Summary

New requirements due to global socio-economic and environmental changes are affecting cities and driving their transformations. Assessment of the "value" of built heritage is a complex trans-disciplinary issue, that both public administrations and real estate developers need to carefully consider for any intervention. This research places a particular focus on 20th century buildings, inspired by recent literature and changes in the Italian heritage protection regulations.

This work aims to study the residential heritage of the second half of the 20th century and its real estate market and to understand if, how and in what measure the building qualities that characterize this residential heritage are recognized and monetized by buyers. Considering that the real estate market is the expression of behaviours and preferences of the demand, this market is constituted by individuals who choose how to spend within their budgetary constraints, according to models of a social and cultural nature.

The city of Turin was chosen as study area: residential buildings were investigated which were built in the second half of the 20th century, characterized by high architectural and building quality or by widely recognized authorship, whose value is not adequately recognized currently. These qualities are synthetized by two indicators: "RecQ" represents quality which is recognised by entities for the protection of cultural heritage and by experts, while "ObeQ" represents quality observed by this researcher based on a number of specific criteria. Geo-statistical models were applied to study the influence of these building quality indicators on listing prices and to understand which features are mostly appreciated by possible buyers. Spatial Autoregressive models (SAR) and Geographical Weighted Regressions (GWR) were performed on point data, in order to manage spatial dependence and to identify the variables that significantly influence the process of the formation of housing prices.

The results of the analysis highlighted that the housing quality indicators (RecQ and ObeQ) are generally not yet recognised by the real estate market and these variables do not have a significant influence on housing prices. Nevertheless, the local regression (GWR) outputs highlight that in some areas of the city, the quality features prevail on other building features for price determination: in particular, the building category (i.e., economic, medium, classy, etc.) and the Energy Performance Certificate (EPC) labels are commonly monetized by the real estate market.

A further analysis was performed using a second regression model, with buyers' favourite real estate ads (Leads) as the dependent variable; this detected which building features influence the preferences of the demand and the possible buyers. Using the Leads frequency as dependent variable and some buildings and locational features as explanatory variables, only a few characteristics resulted as decisive for the buyers' choice: the price, the number of rooms, the highest level of EPC and some specific locations.

The results of this study confirm the need and urgency to intervene in the recognition and safeguarding of contemporary residential heritage. They can constitute a real support for both public and private bodies to identify which “invisible” quality building features of the housing stock built from 1950 to 2000 are immediately exploitable for the enhancement of the stock. The spatial distribution of the predicted price suggests new possibilities for the sub-segmentation the real estate market and new opportunities to render it more dynamic. In fact, currently, the quality of these residential buildings is not recognized enough by buyers or reflected in market prices; high quality buildings therefore risk being underestimated and offered on the market with a low price comparable with low quality ones. The recognition of building quality offers a real opportunity for urban redevelopment. Educating the market on the value of this heritage would allow the creation of an urban landscape capable of increasing knowledge and understanding of this heritage and triggering regeneration processes and public policies to enhance the awareness of this heritage. Greater awareness of the architectonic and building quality of the residential heritage of the second half of the 20th century could then lead to more respectful retrofit interventions and a modern protection policy to guarantee preventive maintenance of this heritage and to increase its value.