

## EVALUATION OF THE ECONOMIC VALUES OF URBAN HERITAGE IN THE CENTRAL AREA OF PLOIEȘTI MUNICIPALITY

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**Abstract:** *Heritage buildings incorporate multiple values (architectural, historical, cultural, aesthetic, social, symbolic, authenticity value) to which the economic one (they can be used as commercial and residential spaces, or it can offer cultural experiences for tourists) is added. The cultural services generated by the heritage properties are also used by the local population. The aim of this paper is to analyse the economic values of use and non-use of heritage properties in the central area of Ploiești Municipality. The authors used the contingent valuation method to identify the non-used economic value. The economic use value of heritage properties was estimated by using the hedonic price method (e.g. expressed in accessibility from homes to shops on foot). Moreover, the economic value was evaluated using the indicator types of use of the heritage buildings. The results obtained by using the non-market valuation highlight the economic potential of the heritage properties located in the central area of Ploiești city.*

**Keywords:** cultural heritage, conservation, non-market valuation, contingent valuation method, hedonic price model

### 1. Introduction

The increasing importance of material cultural heritage can be related to its multivalent character (historical, architectural, symbolic, spiritual, educational, aesthetic, scientific, and commemorative) [1, 2, 3, 4, 5]. Through the social and cultural values, heritage buildings have an important effect on the people's well-being and quality of life [4]. At the same time, heritage buildings have an economic value [1, 2, 3, 6, 7]. Economic values overlap strongly with the sociocultural values, and they are mostly distinguished, because they are measured by economic indicators [8, 9].

In identifying the economic value of heritage properties, a distinction is made between the use and non-use values, that is, between the direct value of the consumers of heritage services as a private good and the return-value of those who benefit from the heritage advantages as a public good such as the availability of public buildings or services directly provided by infrastructure [6, 9].

The non-use value is the passive use that appears, for example, when pedestrians enjoy the aesthetic value of a building or historical site, as people appreciate the existence of the patrimony element, even if they cannot consume their services directly [9].

The purpose of the study is to evaluate the economic use values and the non-market values of the heritage properties within the central area of Ploiești Municipality.

## **2. Case study**

Ploiești municipality has a varied cultural heritage in terms of typology (buildings with architectural value, museums). However, the cultural heritage of the city has been diminished over time due to natural hazards (the earthquakes in 1940 and 1977 affected many old buildings) and the bombings from the Second World War, which aimed at the destruction of oil refineries, but which also affected the built fund [10]. During the communist regime, numerous buildings in the historic center of the city were demolished, as an action of the process of systematization of the urban territory. Thus, a large part of the historic center has undergone substantial transformations in order to build the civic center.

However, the city of Ploiești has 144 historical monuments, more than half of which are architectural monuments (82). 26 architectural monuments are classified in value class A (monuments of national importance) [11], which are located in the central area of the city: the Palace of Culture, the Clock Museum, the County Museum of Art, Ion Luca Caragiale Memorial Museum, etc.

## **3. Methodology**

To measure the non-use values of historical monuments in the central area of Ploiești city, the authors applied the contingent valuation method. This method aims to estimate the willingness of the residents to pay for the conservation of historical monuments [2, 8]. This method is useful for assessing the awareness and concern of the local population for the historical monuments and sites.

The valuation of the non-use value of the heritage buildings located in the central area of the Ploiești city implied the application

of a questionnaire to the resident population coming from different neighborhoods of the city in order to highlight their preferences to pay for the preservation of some monuments within the study area. The questionnaire was applied in the study area on a sample of 234 people between 01 and 30 June 2019.

The hedonic price method was used to estimate the monetary value of housing. In several studies, the application of the hedonic price method consisted in measuring the accessibility due to the fact that the location represents the most important element of the assessment of the dwellings, implicitly of the patrimony ones. Thus, accessibility measures are key variables in the hedonic price model [12, 13]. The calculation of accessibility for the hedonic price model is based on three fundamental aspects: opportunities (green and recreational spaces, public transport); impedance (Euclidean distance, network distance: underground or bus line network, travel time, cost, and zone); type: different types of accessibility measures based on different combinations of specification of components: cumulative opportunities that can be reached up to a particular time, distance, or cost: to measure for a property how many shops are within 800m walking distance; etc. [13]. The Geographic Information System (GIS) software was used to calculate the accessibility of the properties from the central area of the city to the shops. Using the Origin Destination Cost Matrix Network Analyst Tool, the travel time between sets of points (houses and shops) was calculated.

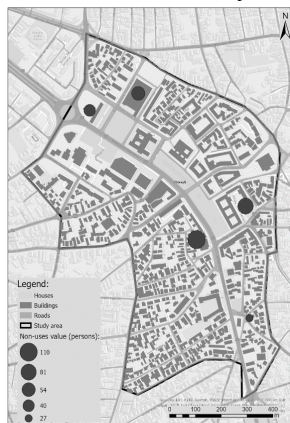
The economic value of the heritage buildings in the study area was assessed using the building use indicator.

## **4. Results and discussions**

Respondents were asked to mention at least three historical monuments for whose conservation they would like to pay, and their responses were reflected using circles

of different sizes correlated with the number of options.

The analysis of the respondents' answers highlights the fact that the monument indicated by most respondents, regardless of age or social status, is the Clock Museum located in a heritage building (Figure 1). The Clock Museum is unique nationally. It represents a cultural objective, representative for the city and, as a result, it is also perceived by the local population as an element of cultural identity.



*Figure 1: Valuation of the non-use value for the historical monuments in the central area of city of Ploiești*

*Source: data calculated by authors*

The second building mentioned by the local population is St. John the Baptizer Cathedral, one of the oldest religious buildings in the city. The cathedral stands out from an architectural point of view (facades built of red brick and concrete, dominated by the great dome and the tower).

The Central Halls and the National Petroleum Museum (Figure 2) have accumulated a relatively close number of options (mentioned by 54 and 40 people respectively).



*Figure 2 a, b: Exhibits from the National Petroleum Museum*

*Source: Merciu C., 2019*

The Central Halls are a representative architectural objective for the city of Ploiești, having an interesting architecture, being built of red brick by the architect Toma Socolescu who also built the St. John's Cathedral. The Central Halls have kept their original (commercial) function even today.

The Cathedral and the Central Halls are considered landmarks for the municipality of Ploiești [14].

Other heritage buildings indicated by the respondents are the Palace of Culture and the building that houses the memorial house of the writer Ion Luca Caragiale, created on the occasion of the 110th anniversary of his birth. Regarding the use of buildings in the central area of Ploiești, there is a varied typology (Figure 3): buildings that host cultural institutions (museums, Toma Caragiu Theater, Philharmonic, Palace of Culture, which houses the largest public library in Ploiești), administrative offices at county and municipal level, commercial spaces and galleries, the most representative accommodation units of the city (Central Hotel), educational institutions (university, national high schools), bank offices.

A mixed use of the stock of housing (housing and commercial premises) has been identified. Figure 2 reflects direct uses for tourism of historical buildings (hotels, restaurants) and indirect use values (commercial units). Although most of the buildings are used as dwellings (84%), several buildings still keep the commercial function at the ground floor or have acquired it in recent years under the impact of tourism development.

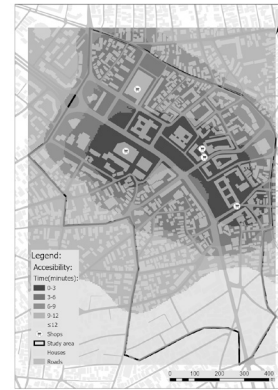


*Figure 3: Types of use of the buildings in the central area of Ploiești*  
*Source: data calculated by authors*

Accessibility to the commercial services area was represented by calculating the travel time in minutes required for a person living in the central area of the city of Ploiești to reach the shops, by walking. In the first stage, the authors considered a large series of points of origin (774 houses) and destinations (50 shops). In the second stage, a service area of each store was calculated, taking into account its position and the houses.

With the shades of dark gray, the short travel times from home to shops were represented (1-3 minutes), the intensity of the shades decreasing with increasing time. Regarding the accessibility indicator, the shortest travel time from the housing area to the shops is in the central area of the study area, where most of the shops are located (Figure 4).

The model to calculate the accessibility is intended to show the applicability of this approach (structures modeling network such as Geographic Information System), in guiding a person who wants to buy a house in the central area of Ploiești and who wants to know the distance he or she should walk from the residence to the shops located in the housing area.



*Figure 4: Measured accessibility for properties from the central area to shops*

## 5. Conclusions

The central area of the city of Ploiești represents the oldest inhabited nucleus, being distinguished, at the same time, by a high density of heritage buildings.

The application of the contingent valuation method highlighted the attachment of the local population for the built heritage elements, as well as the desire to enjoy them through the willingness to pay for their conservation.

The economic assessment of the use value of the heritage properties from the central area of Ploiești city was analyzed from a double perspective: by identifying the benefits resulting from their use not only by tourists, but also by the local population.

There is a varied typology of uses of the heritage properties: residential, commercial, cultural, etc. Following the analysis of the economic value of historic buildings by assessing the value of use, there is a relatively small weight of cultural uses, which draws attention to a better management of heritage buildings. This situation also explains the fact that the city of Ploiești needs a rethinking of the capitalization of the built heritage, which should be correlated with the restoration action, due to the fact that there are many historic buildings in a precarious state of preservation.

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