

## **CULTURAL HERITAGE AND CREATIVE CITIES: AN ECONOMIC EVALUATION PERSPECTIVE**

Faroek Lazrak

Peter Nijkamp

Piet Rietveld

Jan Rouwendal

Dept of Spatial Economics  
VU University Amsterdam  
De Boelelaan 1105  
1081 HV Amsterdam  
Email: flazrak@feweb.vu.nl

### **Abstract**

Creative classes are usually found in inspirational, cultural environments. From that perspective, the presence of an attractive cultural or historical environment that is actively enjoyed by many people is a major asset for many cities. Cultural heritage has become a resource of both historico-cultural and socio-economic significance in a modern society. The needs of a leisure society as well as the needs of those who want to relax from their daily labour race are often met in places with a local identity and an appreciative specific built environment. Undoubtedly, a main challenge of the modern creativeness fashion is to translate creative and cultural assets and expressions into commercial values (value added, employment, visitors etc.), which means that private-sector initiatives are a sine qua non for effective and successful urban creativeness strategies. In the present paper a survey of methods to value cultural heritage is offered. Most valuation approaches appear to use stated preference methods, but we also observe a limited set of studies using hedonic price approaches. Given the orientation on the local benefits of cultural heritage, the latter class of methods is a promising area of research on the valuation of amenities in creative cities.

**Keywords:** Creative city, cultural heritage, valuation methods, stated preference methods, hedonic prices

**JEL codes:** R200

## **1. Cities: the Place to Be**

In contrast to a century ago, the majority of the current world population is living in cities (or urban areas). This statistical fact is not just a cool number, but tells us that cities have become the home of man (Barbara Ward, 1976) who expect – and are entitled to find – in modern urban settlements an identifiable, attractive, sustainable and financially viable living environment. Urban planning is in our age not just an isolated fragment of dense land-use planning, but is the essence of modern planning theory and urban architecture (Batey et al., 2008). This new view on modern cities calls for visionary ideas and inspirational practise that may guide our appreciation for the emerging urban settlement pattern of our planet, as is exemplified by cities like Beijing or Dubai.

Clearly, cities are not just densely populated areas, but enjoy an enormous innovative and cultural potential which positions cities nowadays at the cross-roads of a transformation of civilization, sustainable development and societal imagination by seeking for a balance between business, arts and culture, liveable environment and human well-being. In this vein, we see the emergence of the concept of the ‘creative city’ as a new mantra for urban architecture and urban planning in which the urban way of life forms a breeding place for (inter)cultural interaction of residents, businessmen and visitors who engage themselves in shaping a place transformation marked by imagination and future orientation without a blueprint in mind. It goes without saying that the urban creativity movement prompts a tour de force from all actors and stakeholders involved (businessmen, planners, economists, artists, environmentalists, NGOs, policy-makers) to assemble original concepts that will shape – or perhaps lead to the discovery of – a new creative and vital urban society with a distinct place identity (see Florida, 2002; Landry, 2006; Scott, 2003).

The creative city idea captures two elements: creative creatures shape a creative city, and an enchantment of imaginative cities will create and attract innovative people aligned to an open and global society. Planning creative cities goes through evolutionary cycles based on learning from successes and failures. In the history of our world, numerous examples can be found on the close connection between socio-economic progress and artistic and cultural expressions (e.g., the Golden Age in Europe). And also the economics literature witnesses the importance attached by

many scholars to the cultural, artistic or innovative sector as a cornerstone for urban vitality and wealth creation. But the broad recognition of the economic significance of the creative industry for cities took place with Florida's publication on 'The Rise of the Creative Class' (2002). In his view, a modern – often urbanized – society with a broadly differentiated work force and economy needs not only high-knowledge intensity, but also creative minds. Such a creative class does not have a '9 to 5' work rhythm, but is a mobile and floating group of well-educated, often young innovative people who need an inspiring work environment and a high-quality living environment. The 'sense of place' (place of identity) is then decisive for their job career and work involvement. The arts, media, sports, fashion, research and cultural sector offer usually such inspiring urban environments for creativity, which are generally characterized by the availability of talents, the presence of high-tech sectors, and the existence or acceptance of a tolerant lifestyle.

Landry (2006) makes in his book on 'The Art of City Making' a plea for a creative urban movement that forms a balance between passion and compassion: the ultimate goal is not to be the most creative city *in* the world, but the best and most imaginative city *for* the world, so that individual wants and collective and planetary needs are served in parallel. Consequently, the city is also an emotional, cultural and artistic experience; a city offers a human cultural narrative about the past, the presence and the future of our civilisation. And therefore, cultural heritage – not as a fixed asset firmly rooted in the history of a place, but as a transparent collective property aligning the past to an open future – is the soul – and hence one of the critical infrastructures – of modern cities.

For an economist, the overarching emphasis on seemingly intangible and visionary dimensions of creative urban environments may sound somewhat inconvenient, as creativity and imagination do not belong to the standard jargon of the profession. But even when cultural expressions and artistic profession may seem to take the lead in contemporaneous urbanistic thinking, it ought to be recognized that cities are dynamic spatial entities that go through difficult and often unanticipated stages as a result of human acts and man-made decisions, even in an evolutionary economic perspective. From a Schumpeterian perspective, we might wonder whether innovative entrepreneurship only applies to the animal spirits of an individual businessman or also to a city as both a fragile and a resilient organism, that might need dramatic transitional periods in order to survive from the one era to the next one ('creative destruction').

Against this background, cultural heritage may provide a city with some long-lasting and sustainable anchor points that may create stability in a permanently fluctuating and competitive environment of cities in an open world.

In addition to the changing views on and perceptions of the position of the city as a core determinant and signpost of modern civilization and innovation, it ought to be recognized that changing lifestyles – in particular, the unprecedented rise in geographical mobility (which stimulates both global tourism and short-haul recreation) and the emerging welfare society in many countries (which produces more discretionary income and leisure time) – most likely prompt a global appreciation for the attractiveness of modern cities as places to live, to work, to enjoy or to visit. From that perspective, cultural capital is a powerful asset of any city. In the next section we address more in particular the significance of cultural heritage in a modern urban economy.

## **2. Cultural Heritage: the Appreciative Economy of Cities**

Cities like Venice, Jerusalem, Florence, Amsterdam, Istanbul, Kyoto, Bangkok or Acapulco house a wealth of cultural assets that make them distinct from other places and determine their place identity (see Coccossis and Nijkamp, 1995). It is noteworthy that such cultural capital is not present in the form of petrified lava, but offers an appealing productive asset to the urban economy. The tourism sector depends even to a large extent on the appreciation by millions of people for the artistic, aesthetic, historical, cultural or emotional sense of cultural assets. Thus, a significant part of modern urban economies – especially centres of culture and arts performance – is based on collective emotion from millions of visitors. This is also the type of environment that inspires and attracts creative minds, such as artists, designers, scientists and so forth. And there, the ‘appreciative economy’ of cities offers a socio-economic added value that supports and enriches the traditional urban economy and offers a stepping stone for attracting innovative talents in an imaginative environment. ‘Made in the city’ has become almost a paradigmatic belief of the creative class.

Creative classes are usually found in inspirational, cultural environments. From that perspective, the presence of an attractive cultural heritage that is actively enjoyed by many people is a major asset. Cultural heritage has many appearances and takes the form of many

artefacts, such as monuments, historic buildings, museum collections, ‘cityscapes’, archaeological sites, but also historic environments in cities, artists’ café’s etc. Throsby (2001) mentions three criteria to identify cultural goods: a form (or sense) of creativity in the production; the provision and communication of symbolic meaning; the output embodies some form of intellectual or artistic property. To qualify as cultural heritage, such goods should of course have a historic significance (intergenerational meaning) and a sense of local identity (Nijkamp and Coccossis, 1995).

Cultural heritage is interpreted in this paper in a broad sense and comprises those parts of cultural capital that have an explicit and distinct historical connotation to the past of a place and that may be seen as a self-identifying landmark for that place<sup>1</sup>. Cultural heritage and place identity are thus closely interrelated concepts.

It is interesting that UNESCO (1972) makes a distinction between cultural, natural and intangible heritage (see also Arizpe et al., 2000; and Klamer and Zuidhof, 1999). Cultural heritage is next subdivided into monuments, groups of buildings and sites. Clearly, cultural heritage is a broad and heterogeneous concept, so that a comparative study of cultural heritage or an unambiguous economic evaluation is fraught with many problems, of both a methodological and empirical nature.

It is noteworthy that in recent years not only cultural cities have made an attempt to be more visible in a globally mobile and competitive tourism world (witness the ‘cultural capital cities of Europe’ movement), but also villages have joined hands to be more visible on the tourism stage witness the emergence of the ‘beautiful villages association’ (see Gülümser et al., 2009). Culture, creativity and economic progress appear to be well connected in current debates on urban revitalization and urban futures for the high-tech and service sector.

In general, cultural heritage may produce many market benefits (such as tourism revenues, spillovers to the hospitality and service sector) as well as non-market benefits (externalities through the appreciative economy in the form of local self-esteem, attraction of creative minds, open-mindedness of urban population etc.) (see also Navrud and Ready, 2002).

---

<sup>1</sup> Cultural capital is a more general concept and may be seen as those forms of public or quasi-public goods which comprise the stock of cultural value embodied in an asset, while this stock may give rise to a flow of goods and services over time in the form of commodities that themselves may have both cultural and economic value (Throsby, 1999).

We may thus conclude that cultural heritage has become an asset of both historico-cultural and socio-economic significance in a modern society. The needs of a leisure society as well as the needs of those who want to relax from their daily labour race are often met in places with a local identity and a specific built environment. Consequently, cultural heritage is highly appreciated for its externality value for the broader community (see Hubbard, 1993; Riganti and Nijkamp, 2007).

Clearly, the question may be raised whether cultural goods may be seen as 'normal' economic goods (cf. Throsby, 2001). The answer has to be affirmative, in the sense that they contribute to our well-being under conditions of scarcity, while the means to acquire or maintain them are limited and can be used for alternative purposes. Cultural goods may be supplied by both the private sector in a market context and the public sector in the context of common or corporate responsibility. With an increasing private sector involvement with many cultural goods, these goods enter more and more the realm of the private market. Clearly, cultural goods have specific characteristics which may render their socio-economic evaluation slightly more complicated (Riganti and Nijkamp, 2007). In the first place, they are usually subjected to many (often positive) externalities, as the market value is often absent or does not incorporate at full scale the variety of user preferences. In this context, stated preference methods such as contingent valuation methods or conjoint analysis may be helpful. A second special feature of cultural goods is the fact that very often they are specific, authentic or unique in the sense that they cannot easily be substituted or replaced by an identical good. If this is the case, one might have to resort to a Hicksian economic compensation analysis in order to find out in an experimental way which value would be foregone if a certain good would be no longer available. Valorisation schemes on cultural potentialities may also be helpful here, by including next to direct and indirect use values also option values, legacy values, existence or bequest values. In all cases, it is clear that the presence of cultural heritage contributes to the creation of an appreciative urban economy which in turn may favour the rise or reinforcement of a creative class.

### **3. Economic Assessment of Urban Cultural Heritage**

#### **3.1 A variety of methods**

To develop a rational basis for smart and in a sense creative urban policy, a systematic assessment of various choice options has to be made. The economic literature offers a wide array of evaluation methodologies. Examples are stated preference methods (such as contingent valuation techniques or conjoint analyses), travel cost methods or multi-attribute utility methods (see Mitchell and Carson, 1989). Some of these methods have been fruitfully applied to the valuation of unpriced goods with external effects (Schuster, 2003). Cultural heritage has usually been approached with so-called stated preference methods. However, the economic elicitation of cultural heritage valuation based on market-oriented methods, in particular hedonic prices, has received far less attention. In this section we will briefly review such evaluation methods and their applications to cultural heritage. In the next section we take a closer look at the hedonic price method and the challenge it offers for valuing cultural heritage.

#### **3.2 Physical compensation**

If a physical good is (threatened to be) lost, one may try to compensate for this loss by reconstructing the same asset preferably at the same place. If the physical asset is not really rebuilt, the estimated economic costs involved in reconstructing the same good might be interpreted –in a Hicksian sense- as the financial compensation for the loss of the good concerned. The essence is that compensation takes place for a loss in welfare. Thus, the physical compensation may be virtual. Although this is often impossible, cultural heritage sometimes has the possibility to be reconstructed. There are numerous examples of old buildings (castles, mansions) or even small towns (for instance, Heusden in the Netherlands, Willemstad in Curacao) that have been restored in their former glory after a period of decay. In such cases the amount of money necessary to rebuild or restore a physical cultural heritage good in its historical state provides a shadow price for that good that offers useful information for compensation costs in project evaluation. It will then be worthwhile to rebuild or restore an asset when its social value is at least equal to its shadow price. Clearly in this case we do not need an exact assessment of the value of the good in question: it suffices to know that its value exceeds the particular threshold given by the shadow price. However, in many cases, also in valuing cultural

heritage, it is hard to determine the shadow price or it is uncertain whether the social value will exceed the shadow price, unless further investigation into the valuation of the good in question is undertaken.

### **3.3 Project evaluation methods**

Project evaluation methods are usually deployed to assess the economic benefits and sacrifices of projects that may have significant socio-economic and other (e.g., social or ecological) implications. In the cost-benefit analysis tradition a sophisticated toolbox has been developed to deal with complex project evaluation, sometimes with large spill-over effects. In the past decade, also many attempts have been made to incorporate intangible (e.g., environmental) effects in these calculation schemes. In this subsection we will briefly discuss two general methods: economic impact analysis and multicriteria analysis. In the two subsections that follow we focus on two instruments from the toolbox that aim specifically at the determination of the willingness to pay, which is the key concept of evaluation from the perspective of welfare economics.

In the context of cultural goods, Tyrrell and Johnston (2006, p.3) describe economic impact analysis as seeking “to estimate changes in regional spending, output, income and/or employment associated with tourism policy, events, facilities of destinations”. Economic impact studies are used for valuing various types of cultural heritage, especially cultural heritage that attracts large numbers of tourists who spend money from outside the impact area (Snowball, 2008, p. 33). Impact studies try to monetize the direct and indirect effects of an event on an impact area. Snowball (2008) points out that impact studies focus mainly on the private good character of the arts which is captured by market transactions instead of merit or public good characteristics.

To measure direct net impacts of cultural heritage provisions on user groups, it is important to identify the main spending groups in the impact region affected by the cultural event. Spending groups which otherwise would spend their money in another way in the impact area should be identified. It is important to take only the spending into account that otherwise would not be realized. Indirect net impacts depend on chain effects or induced effects of direct net impacts for the impact area. Clearly the amount of leakage in a multiplier sense depends on the size and nature of the impact area (Snowball, 2008). Baaijens and Nijkamp (2000) offer an



empirical meta-analysis approach with regard to those leakages and present a rough set analysis approach to estimate income multipliers for different characteristics of impact areas (see also Van Leeuwen et al., 2006).

The criticism on the validity of impact studies focuses in particular on methodological issues and conceptual problems (Snowball, 2008). Conceptually, there is a number of problems which impact studies have to address and to solve. First, the definition of the impact area influences the outcomes of the study. Because there are alternative spending opportunities, the size of the impact area influences the size of those alternatives. Another caveat is that redistribution issues usually remain implicit. Especially with regard to cultural events, rich residents usually profit more than poor residents (Richards, 1996). Impact studies are also plagued by methodological issues in valuing the public good characteristics of cultural events. Costs are relatively easily measured, but when cultural events are free of charge the benefits are hard to quantify. In conclusion, economic impact analysis is a prerequisite for a solid evaluation of cultural goods, but its implementation is still fraught with uncertainties.

Another strand of the project evaluation literature focuses on methods which do not require a monetary translation of project impacts, but are able to capture in principle all relevant intangible effects. These methods are usually captured under the heading of multicriteria analysis (see e.g. Nijkamp et al., 1991). An example can be found in Coccossis and Nijkamp (1995), who show how multicriteria analysis in the cultural heritage field may be applied. Multicriteria analysis offers an opportunity to assess and weight qualitative and quantitative effects. With the broad range of value-generating aspects of cultural heritage, multicriteria analysis makes it possible to deal with categorical information in economic evaluation and to address policy trade-offs by assigning weight to the different attributes of cultural heritage. Often multicriteria analysis is pursued on an item-by-item stated preference evaluation.

### **3.4 Stated preference methods**

The core concept of economic evaluation methods is the marginal willingness to pay of a consumer for a particular commodity. For market goods, the marginal willingness to pay is equal to the price, which is clearly convenient for welfare analysis. However, many valuable commodities -cultural heritage offers important examples like historical city districts- are not traded on a market. Optimal design of public policies with respect to such goods calls for an

estimate of the willingness to pay and mainly for this reason economists have worked for decades already on the development of techniques to uncover this value, also for non-market goods. In the present subsection we will review one family of such methods that exploit the idea that one may approximate the willingness to pay for a non-market good by asking consumers about their preferences. Such methods are known as stated preference methods. In the next section we pay attention to a second important class of economic evaluation techniques, which are based on market outcomes.

Stated preference valuation techniques try to discover what individuals are willing to pay or are willing to accept, through the use of survey questionnaires. Contingent valuation methods form an important sub-class of preference elicitation methods and focus directly on willingness to pay by using open ended questions (for an overview see, Mitchell & Carson, 1989). A second subset of stated preference techniques are choice experiments. That is, one tries to investigate the preferences of people from the choices they make between bundles of attributes that describe the good to be valued at different levels (Noonan, 2003; Snowball, 2008). Although choice experiments extract the willingness to pay in a more indirect way than contingent valuation methods, their focus on concrete choices is generally regarded as an advantage, because it reduces the risk that respondents indicate a willingness to pay on the basis of a superficial impression of the value of the good in question.

The strength of stated preference techniques is that they can be applied in circumstances in which consumers do not reveal their preferences in other ways, for instance, by buying goods at a price on the market. However, this strength is also a considerable potential weakness of these techniques. The hypothetical character of the statements made by consumers prompts questions on reliability for investigating the willingness to pay of the consumers in actual cases (Hoevenagel, 1994; Arrow et al., 1993; Snowball, 2008, Murphy et al., 2005). Indeed, a number of biases in stated preference methods has been identified in the literature (see, among others, Kahneman & Knetsch, 1992; Snowball, 2008). One problem with the implementation of these methods is that the stated willingness to pay often differs significantly from the willingness to accept, while differences should be negligible (Morrison, 1997a, b; Kahneman et al., 1990, 1991). However there exist a number of potential advantages that reduce the risk of some biases. It is noteworthy however that, Snowball (2008) identifies also a number of potential problems in

the literature with regard to the conjoint method. These problems relate to complexity and choice consistency, and individual valuation and summation (Snowball, 2008).

In the context of valuing cultural assets, Snowball (2008) mentions two reasons why a mixed good<sup>2</sup> could cause a bias. In the first place, there is an incentive for users to overstate its non-use value (see, Throsby, 1984). Users who experience use values of cultural heritage have an incentive to overstate their willingness to pay over users who only experience the public aspects of cultural heritage and therefore only experience non-use value. This incentive arises because non-users also benefit from the use value so they overstate the non-use value and then drive up the price for the non-users. Secondly, as Seaman (2003) suggests, willingness to pay studies may also capture expected economic benefits which not only reflects present earnings but also bequest earnings. Because mixed goods could have positive employment effects, people can take this into account and thus come up with higher willingness to pay figures.

There is evidence that research which is conducted according to the NOAA recommendations<sup>3</sup> (Arrow et al., 1993) is more valid, more reliable and reduces the size of a number of biases (Noonan, 2003; Snowball, 2008). Benefits transfers can be used if estimations in one context can be generalized to indicate values in other contexts. Nevertheless, it remains a problem to realize benefit transfers because every situation is very bounded to a specific context and the adaption to the new context stays troublesome. Because validity and reliability of the contingent valuation method is still a source of debate (see for example, Diamond and Hausman, 1994) benefit transfers are harder to realise.

One of the first contingent valuations of cultural heritage is of Navrud and Strand (1992) which values the Nidaros Cathedral in Norway. Stated preference techniques have been applied to the evaluation of cultural heritage in numerous evaluation studies. Noonan (2003) offers a meta-analysis of this rich literature. Snowball (2008, chapters 4 and 6) provides an update of the contingent valuation literature, while she also reviews the application of choice experiments in the cultural economics field. In a study undertaken by Alberini et al. (2003), the value of the cultural and historic dimensions of a square in a city is determined by comparing the actual

---

<sup>2</sup> Goods which have both private and public good characteristics.

<sup>3</sup> The National Oceanic and Atmospheric Administration (NOAA) reviewed the use of contingent valuation and concluded that, if its guidelines and recommendations were followed, "CV studies can produce estimates reliable enough to be the starting point of a judicial process of damage assessment, including lost passive-use values" (NOAA, 1993, p. 24).

square with a hypothetical square. The hypothetical square is made as close as possible to the real square, except for its cultural and historic dimensions. The authors conclude that aesthetic and use attributes contribute to the explanation of the hypothetical choices individuals made. Also, they found significant differences between the actual and hypothetical square. They conclude that with exception of the height attribute, the attributes are valued differently for the actual and abstract squares (Alberini et al., 2003).

An example of a choice experiment recently undertaken by Willis (2009) is a case study to investigate the preferences of visitors in the management of Hadrian's Roman Wall. The study results can be used in managing an archaeological site and heritage sites. In his study interaction effects between attributes are examined and the study concludes that visitors to Vindolanda were clearly able to state their preferences for the future management of the archaeological site.

### **3.5 Revealed preference methods**

#### *3.5.1 Introduction*

In subsection 3.3, we observed that the stated preference method is sometimes criticized for the fact that it uses hypothetical alternatives. Contrary to the stated preference methods, revealed preference valuation focuses on market outcomes. There are a number of ways for an economist to pick-up the clues which real market transactions give about the economic value of cultural heritage. One is the travel cost people are prepared to pay to visit particular cultural locations. Another is the price actors are willing to pay for real estate objects that can be considered as cultural heritage or are located in the proximity of such objects. The travel cost and hedonic price methods use these two pieces of information to investigate, the willingness to pay. These will be discussed in the next subsection.

#### *3.5.2 Travel cost method*

Visiting cultural heritage means that one has to travel to its location. The associated travel cost acts (i.e., the financial sacrifice to get there) as a price for the visit in much the same way as a ticket price does, and indicates the consumer's willingness to pay for the cultural heritage good. The costs of visiting the cultural heritage good do not only refer to monetary outlays but also to the time spent at the site and all other costs which stem from that visit (Snowball, 2008; Navrud & Ready, 2002). The demand curve for the cultural heritage good can be derived from

the differences in travel costs of different visitors. In this way one can use demand analysis, even if there is, strictly speaking, not an unambiguous (ticket) price associated with the visit.

Although it is based on revealed preferences, and therefore avoids some of the problems associated with stated preference techniques, the travel cost method has some other problems. In the first place, travel cost methods are faced with the problem of multipurpose trips. A tourist making a trip and visiting several cultural heritage goods will find it hard to distinguish which part of the costs of the trip are related to a particular cultural heritage good. He buys essentially a non-separable bundle of goods. A related problem is that the visitor of a cultural heritage good can derive utility from the trip itself or from the company in which it is made (social externalities). Secondly, the opportunity costs of a visitor are hard to estimate; currently the visitor's wage is often used to value the opportunity cost (Navrud & Ready, 2002). Thirdly, with travel cost methods substitutes of cultural heritage can cause disturbances and provide difficulties to address the direct effect of cultural heritage. Especially for those who live near cultural heritage this is a problem.<sup>4</sup> When people who chose to live in the vicinity of cultural heritage value cultural heritage most, the distance to cultural heritage itself is then a residential factor which may cause complications in estimating the related demand function.

There are two types of travel cost models which use differences in total travel cost between visitors. First, there are *visitation frequency models* in which the survey of the travel cost method asks visitors at different distances from the cultural heritage good how often they visited in a specified period that particular cultural heritage good. This 'trip generation function' is estimated where the number of visits is taken as a function of total costs corrected for other explanatory variables. The 'trip generation' function is then the demand curve from which the consumer surplus can be derived. Because actually most people visit most sites only zero visitors are usually aggregated geographically into groups. This zonal travel cost model approach simplifies sampling, because it makes it possible to take a random sample at the cultural heritage good site (Navrud & Ready, 2002). The second travel cost model is the *site choice model* which surveys potential visitors and asks them which cultural heritage goods they have visited. The utility function is then estimated based on the characteristics of each heritage good and the total costs for that good. According to Navrud & Ready (2002), site choice models may become a

---

<sup>4</sup> Cultural heritage goods are often abundant at densely populated city centers.

promising variant of the travel cost method, because it is capable to measure site quality of cultural heritage which are often most policy-relevant (Navrud & Ready, 2002).

There are various examples of cultural heritage studies which estimate the values with the travel cost method. Boter et al. (2005) use a site choice model to estimate the value of different Dutch museums, while Bedate et al. (2004) estimate consumer surplus of four cultural heritage goods in the Castilla y Leon region in Spain on the basis of a travel cost method. The travel cost method was also used by Poor and Smith (2004) to value the historic St. Mary's City which is considered to be one of the United States' most significant archaeological sites. They use a zonal travel cost model to estimate consumer surplus. Depending on the functional form, individual consumer surplus ranges from \$8.00 to \$19.26. Finally it is interesting to note that Alberini and Longo (2006) combine the travel cost method with contingent valuation to value cultural heritage in Armenia. This combination offers them also interesting opportunities to separate use and non-use values.

### *3.5.3 Hedonic price method*

Contrary to the rather direct valuation of cultural heritage by the travel cost method, the hedonic price method measures the value of cultural heritage in an indirect way. The hedonic price method is based on the observation – generally attributed to Lancaster (1966,1979) - that “...goods are valued for their utility bearing attributes characteristics” (Rosen, 1974). This leads straightforwardly to the idea that prices of heterogeneous goods are related to the characteristics of the varieties. Griliches (1971) and Rosen (1974) developed the idea of implicit prices for characteristics, which can be estimated by regressing prices on these characteristics. Like ordinary prices, these implicit prices reveal the marginal willingness to pay of consumers. Although Rosen's (1974) original analyses were developed for a market with perfect competition the method is applicable under alternative market conditions (Bajari & Benkard, 2005; Rouwendal & van der Straaten, 2008).

Like the other methods, hedonic price methods have some intrinsic weaknesses and problems. For example, Jones and Dunse (1996) point out that the measurement of different attributes of the hedonic price method raises questions about the correct model specification. In another paper they criticize the fact that the method assumes equilibrium throughout the property market and no interrelationship between the price of attributes (Dunse & Jones, 1998).

An important problem for hedonic price analyses is that, in principle, there can be many variables that influence the value of real estate. In a conventional cross section, limited information about potentially relevant characteristics implies the risk of omitted variable bias. On the other hand, there is the possibility that some other determinants of value are strongly correlated with the variable of interest (for instance, an architectural feature that is typical for a particular period or style) which makes it difficult to pin down its effect. Moreover, economic theory offers little guidance for the specification of a hedonic price function.

Nevertheless, a further development and use of hedonic price analysis may offer a considerable promise for a better understanding of the value of cultural heritage. In particular the recent frequent availability of large databases – constructed, for instance, by Land Registry or Cadastral Offices – containing often detailed information about transactions in the real asset market offers large opportunities. These data are especially useful if they compose disaggregated data about the characteristics of the properties sold. In this context GIS techniques often offer the possibility to further enrich such data with information about geographic neighborhood characteristics. With such data, the problem of omitted variables can be mitigated considerably, while the large number of observations enables the analyst to incorporate a satisfactory number of regressors. Therefore, formulate the following provisional concluding remarks.

In the available literature various methods are used to value cultural heritage. Most of the existing studies use stated preference methods. A significant disadvantage of these methods is the presence of a number of serious potential biases. The increasing use of revealed preference techniques may provide alternative information about the value of cultural heritage. Because of the increasing availability of rich databases about real estate transactions, application of the hedonic method seems to offer a promising avenue for further research. For this reason we will in the next section offer a concise and selective review of a few such studies that offer applications of to the valuation of cultural heritage.

#### **4. Hedonic Pricing Studies on Cultural Heritage: Some Examples**

Although the existing literature on valuation of cultural heritage often uses stated preference techniques, applications of revealed preference methods are not completely absent from the literature. From the various applications in the literature, we have selected a few studies

which use the hedonic price method to explicitly value cultural heritage or aspects of cultural heritage. Clearly, the literature covers various aspects of cultural heritage. Some early studies concentrate on the effect of designation of a building as cultural heritage. Designation is supposed to have various use effects, both negative and positive. An important negative aspect of designation to buildings is that it restricts the owner's property rights. An important positive aspect of listing is being eligible for various forms of tax deductions. Leichenko et al. (2001) offers a table that surveys the estimated impacts of such designation on property values. Their summary table starts with a study of Heudorfer (1975) which uses difference-in-difference<sup>5</sup> to evaluate the impact of designation. Of the seven difference-in-difference studies, three found a positive impact and four failed to find any effect. The question is what a difference-in-difference study measures as treatment. For example is it the cultural heritage status or is it the tax deduction or restrictions caused by the designation?

The first study estimating a full hedonic price function mentioned in that table is Ford (1989) who reports a positive impact of designation on property values. Three other hedonic studies measure a positive impact, two a negative impact and one measures no impact of designation on property values.

More recently, Deodar (2004) used a hedonic price function to estimate the market price difference between heritage listed and regular, unlisted houses in Sydney's upper north shore. She finds a 12% premium of listed over unlisted houses in Ku-ring-gai after controlling for other property attributes.

Ruijgrok (2006) used a hedonic pricing method to monetize housing comfort value with respect to cultural heritage in the old Hanseatic town of Tiel in the Netherlands. In this study, houses with historic characteristics were selected from lists with national, municipal. She finds a positive effect of historical characteristics of almost 15% (Ruijgrok, 2006). Her study is a good starting point for further exploration of the positive effects of cultural heritage on housing prices in the Netherlands.

Noonan (2007) offers further insight into the different effects property designation and district designation have on property. He estimates a hedonic price function on data from the Multiple Listing Service of Northern Illinois, which includes Chicago. As explanatory dummy

---

<sup>5</sup> Difference-in-difference is an econometric technique which examines the effect of one type of treatment. In our case this is the effect of designation on real estate values.



variables, an indicator for allocation in a designated district (“district”) and an indicator for designation of an individual property (“landmark”) are included. Prices of landmarks are higher than those of otherwise comparable houses, while for districts a smaller premium is estimated. Noonan also conducts a repeat-sales analysis<sup>6</sup> with the dataset. The repeat-sales approach offers evidence for proximity effects. The more landmarks in the block group are designated the higher the cultural heritage premium is; this shows that the external effects of designation are stronger when more cultural heritage gets designated (Noonan, 2007). The repeat sales approach can value this because it follows neighbourhoods through time.

One concern raised by these studies is that it is not always clear whether there is a causal effect of designation itself (for instance, because it protects the valuable characteristics of a building or a district) or whether the listing merely signals the presence of valuable characteristics that are already recognized by the market. Even with a repeat sales approach a positive coefficient might be interpreted as the effect of listing or as the effect of increased appreciation of specific aspects of cultural heritage (both effects can be present simultaneously).

There are several hedonic studies which evaluate architecture and architectural quality (Ruijgrok, 2006; Vandell & Lane, 1989; Moorhouse & Smith, 1994; Hough & Kratz, 1983). The studies focus on different measurable aspects of architecture or architectural quality in a city. For example, the authors focus on architectural style, number of façade features, historical or architectural quality. In “Can “good” architecture meet the market test?”, Hough and Kratz (1983) investigate the way the office market of downtown Chicago values “good” architecture. Their results indicate that a considerable rent premium is paid for “good” new architecture, but not for “good” old architecture. In another study, Moorhouse and Smith (1994) regress the original purchase price as dependent variable on relevant architectural characteristics collected by Smith through visual inspections of houses which were built between 1850 and 1873.

Finally, we refer here to some studies addressing the effect of churches on neighbourhood quality. Regression of church amenities on transaction prices of neighbourhood property measures the effect cultural heritage component of churches (examples can be found in Carroll et al., 1996; Do et al., 1994). The study of Carroll et al. indeed find a significant impact of proximity to churches on house values. Our overall conclusion on the hedonic price approach in

---

<sup>6</sup> A technique which uses time series data to estimate the effect of listing on house price.

the cultural heritage domain is that the literature on this subject is still limited and fragmented. There is clearly a scope for an intensification of research efforts in this domain.

## **5. Cultural Heritage and Creative Urban Policy**

Cities are not just geographical settlements of people, they are also the ‘home of man’ (Ward 1976). They reflect the varied history of mankind and are at the same time contemporaneous expressions of the diversity of human responses to future challenges.

Actually, modern urban planning shows an avalanche of varying initiatives focussed on creative urban development, in particular by centering on culture and acts as multi-faceted cornerstones for innovative development of the city. Consequently, it has become fashionable to regard cultural expressions like arts, festivals, exhibitions, media, communication and advertising, design, sports, digital expression and research as signposts for urban individuality and identity and departures for a new urban cultural industry (see Florida 2002, Scott 2003). ‘Old’ cities like London, Liverpool, Amsterdam, Berlin, Barcelona, New York, San Francisco, Sydney or Hong Kong witness a profound transformation based on creative cultures. This new orientation does not only provide a new dynamism for the city, it also has a symbolic value by showing the historical strength of these places as foundation stones for a new and open future.

Undoubtedly, a main challenge of the modern creativeness fashion is to translate creative and cultural assets and expressions into commercial values (value added, employment, visitors etc.), which means that private-sector initiatives are a sine qua non for effective and successful urban creativeness strategies. Consequently, an orientation towards local identity and local roots (‘the sense of place’), a prominent commitment of economic stakeholders (in particular, the private sector), and the creation of a balanced and appealing portfolio of mutually complementary urban activities are critical success conditions for a flourishing urban creativeness strategy.

The revitalization of modern cities is anchored in two drivers: their historico-cultural heritage and their future economic dynamism. The real estate market is undoubtedly influenced by these two force fields. It seems plausible that a significant part of the creative opportunities in the urban economy is rooted in the sense of place, including its cultural history. From that perspective, it is of great importance to assess the impacts of the past (e.g., the urban cultural

heritage and history) on the value of real estate properties in relevant urban districts. Various empirical studies using a hedonic price approach highlight the importance of architectural, cultural, historic or artistic factors for real estate transactions, but the overall evidence is fragmented and at times ad hoc, or partial. There is, therefore, a clear need for solid empirical studies, in the form of both quantitative comparative studies and systematic case studies based on solid and extensive data sets, so that more reliable insight can be obtained on the potential of using hedonic price studies for estimating the impact of cultural heritage on real estate values.

### **Acknowledgement**

This paper was written in the context of the CLUE cultural heritage research program at VU University, and the NICIS project on ‘Economic valuation of cultural heritage’.

### **References**

- Alberini, A. & Longo, A. (2006). Combining the Travel Cost and Contingent Behavior Methods to Value Cultural Heritage Sites: Evidence from Armenia. *Journal of Cultural Economics*, 30, 287-304.
- Alberini, A., Riganti, P., & Longo, A. (2003). Can People Value the Aesthetic and Use Services of Urban Sites? Evidence from a Survey of Belfast Residents. *Journal of Cultural Economics*, 27, 193-213.
- Arizpe, L., Preis, A. B., & Taurus, M. (2000). *World Culture Report 2000: Cultural Diversity, Conflict and Pluralism*. UNESCO, Paris .
- Arrow, K., Solow, R., Portney, P. R., Leamer, E. E., Radner, R., & Schuman, H. (1993). Report of the NOAA Panel on Contingent Valuation. *Federal Register*, 58, 4601-4614.
- Baaijens, S. & Nijkamp, P. (2000). Meta-Analytic Methods for Comparative and Exploratory Policy Research An Application to the Assessment of Regional Tourist Multipliers. *Journal of Policy Modeling*, 22, 821-858.
- Bajari, P. & Benkard, C. L. (2005). Demand Estimation with Heterogeneous Consumers and Unobserved Product Characteristics: A Hedonic Approach. *Journal of Political Economy*, 113, 1239-1276.
- Batey, P., Baycan Levent, T., Button, K., & Nijkamp, P. (eds.) (2008). *Urban Planning*. Edward Elgar, Cheltenham
- Bedate, A., Herrero, L. C., & Sanz, J. (2004). Economic Valuation of the Cultural Heritage: Application to Four Case Studies in Spain. *Journal of Cultural Heritage*, 5, 101-111.
- Boter, J., Rouwendal, J., & Wedel, M. (2005). Employing Travel Time to Compare the Value of Competing Cultural Organizations. *Journal of Cultural Economics*, 29, 19-33.
- Carroll, T. M., Claurette, T. M., & Jensen, J. (1996). Living next to godliness: Residential property values and churches. *The Journal of Real Estate Finance and Economics*, 12, 319-330.
- Coccosis, H., and P. Nijkamp (eds.) (1995). *Planning for Our Cultural Heritage*. Ashgate, Aldershot.
- Deodhar, V. (2004). Does the Housing Market Value Heritage? Some Empirical Evidence. *Research Papers from Macquarie University*, 403.
- Diamond, P. & Hausman J.A. (1994). Contingent Valuation: Is some number better than no number? *Journal of Economic Perspectives*, 8, 4:45-65.
- Do, A. Q., Wilbur, R. W., & Short, J. L. (1994). An empirical examination of the externalities of neighborhood churches on housing values. *The Journal of Real Estate Finance and Economics*, 9, 127-136.
- Dunse, N. & Jones, C. (1998). A Hedonic Price Model of Office Rents. *Journal of Property Valuation and Investment*, 16, 297-312.
- Florida, R. (2002). *The Rise of the Creative Class*. Basic Books, New York.

- Ford, D. A. (1989). The Effect of Historic District Designation on Single-Family Home Prices. *Real Estate Economics*, 17, 353-362.
- Griliches, Z. (1971). Introduction: Hedonic Price Indexes Revisited. In Z. Griliches (Ed.), *Price Indexes and Quality Change* (pp. 3-15). Harvard University Press, Cambridge MA.
- Gülümser, A., Baycan Levent, T. & Nijkamp P. (2009). Sustainability and Locality as Competitive Vehicles for Settlements: A Logistic Regression Analysis of the Most Beautiful Villages in France and Italy. *International Journal of Sustainable Development* (forthcoming).
- Hanemann, W. M. (1991). Willingness to Pay and Willingness to Accept: How Much Can They Differ? *American Economic Review*, 81, 635-647.
- Hoevenagel, R. (1994). *The Contingent Valuation Method : Scope and Validity*. Vrije Universiteit, Amsterdam.
- Hough, D. E. & Kratz, C. G. (1983). Can 'Good' Architecture Meet the Market Test? *Journal of Urban Economics*, 14, 40-54.
- Hubbard, P. (1993). The Value of Conservation. *Town Planning Review*, 64, 4, 359-373.
- Jones, C. & Dunse, N. (1996). *The Cutting Edge 1996*.
- Kahneman, D. & Knetsch, J. L. (1992). Valuing Public Goods: The Purchase of Moral Satisfaction. *Journal of Environmental Economics and Management*, 22, 57-70.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1990). Experimental Tests of the Endowment Effect and the Coase Theorem. *Journal of Political Economy*, 98, 1325.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias. *Journal of Economic Perspectives*, 5, 193-206.
- Klamer, A. & Zuidhof, P. W. (1999). The Values of Cultural Heritage: Merging Economic and Cultural Appraisals. In R. Mason (Ed.), *Economics and Heritage Conservation: A Meeting Organized by the Getty Conservation Institute, December 1998* (pp. 23-61). The Getty Institute, Los Angeles.
- Lancaster, K. J. (1966). A New Approach to Consumer Theory. *The Journal of Political Economy*, 74, 132.
- Lancaster, K.J. (1979). *Author Variety, Equity, and Efficiency: Product Variety in an Industrial Society*. Columbia University Press, New York
- Landry, C. (2006). *The Art of City Making*. Earthscan, London
- Leichenko, R. M., Coulson, N. E., & Listokin, D. (2001). Historic Preservation and Residential Property Values: An Analysis of Texas Cities. *Urban Studies*, 38, 1973.
- Mitchell, R. C. & Carson, R. T. (1989). *Using Surveys to Value Public Goods: The Contingent Valuation Method*. Resources for the Future, Washington, D.C.
- Moorhous, J. C. & M. S. Smith (1994). The Market for Residential Architecture: 19<sup>th</sup> Century Row Houses in Boston's South End. *Journal of Urban Economics*, 35, 267-277
- Morrison, G. C. (1997a). Resolving Differences in Willingness to Pay and Willingness to Accept: Comment. *American Economic Review*, 87, 236-240
- Morrison, G. C. (1997b). Willingness to Pay and Willingness to Accept: Some Evidence of an Endowment Effect. *Applied Economics*, 29, 411-417.
- Murphy, J. J., Allen, P. G., Stevens, T. H., & Weatherhead, D. (2005). A Meta-analysis of Hypothetical Bias in Stated Preference Valuation. *Environmental and Resource Economics*, 30, 313-325.
- Navrud, S. & Ready, R. C. (2002). *Valuing Cultural Heritage : Applying Environmental Valuation Techniques to Historic Buildings, Monuments and Artifacts*. Edward Elgar, Cheltenham.
- Navrud, S. & Strand, J. (1992). The Preservation Value of Nidaros Cathedral, In: Navrud, S. (ed.), *Pricing the European Environment*. Oxford University Press. Oxford.
- Noonan, D. S. (2003). Contingent Valuation and Cultural Resources: A Meta-Analytic Review of the Literature. *Journal of Cultural Economics*, 27, 159-176.
- Noonan, D. S. (2007). Finding an Impact of Preservation Policies: Price Effects of Historic Landmarks on Attached Homes in Chicago, 1990-1999. *Economic Development Quarterly*, 21, 17-33.
- Nijkamp, P., Rietveld, P., & Voogd, H. (1991). *Multicriteria evaluation in physical planning*. Amsterdam: Elsevier.
- Poor, P. J. & Smith, J. M. (2004). Travel Cost Analysis of a Cultural Heritage Site: The Case of Historic St. Mary's City of Maryland. *Journal of Cultural Economics*, 28, 217-229.
- Richards, G. (1996). Production and consumption of European cultural tourism. *Annals of Tourism Research*, 23, 261-283.
- Riganti, P., & Nijkamp, P. (2007). Benefit Transfer of Cultural Values: Lessons from Environmental Economics. *Journal of Environmental Policy and Law*, 2, 135-148.
- Rosen, S. (1974). Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition. *The Journal of Political Economy*, 82, 34-55.

- Rouwendal, J. & van der Straaten, W. (2008). The Costs and Benefits of Providing Open Space in Cities. *CPB discussion paper*, 98.
- Ruijgrok, E. C. M. (2006). The Three Economic Values of Cultural Heritage: A Case Study in The Netherlands. *Journal of Cultural Heritage*, 7, 206-213.
- Schaeffer, P. V. & Millerick, C. A. (1991). The Impact of Historic District Designation on Property Values: An Empirical Study. *Economic Development Quarterly*, 5, 301.
- Schuster, Th. (2003). *News Events and Price Movements. Price Effects of Economic and Non-Economic Publications in the News Media*. Finance 0305009, EconWPA.
- Scott, A.J. (2003). *The Cultural Economy of Cities*. Sage, London.
- Seaman, B. (2003). Contingent Valuation vs. Economic Impact: Substitutes or Complements? Paper presented at the Regional Science Association International Conference, Philadelphia.
- Snowball, J. D. (2008). *Measuring the Value of Culture: Methods and Examples in Cultural Economics*. Springer Verlag, Berlin.
- Throsby, D. (1984). The Measurement of Willingness-to-Pay for Mixed Goods. *Oxford Bulletin of Economics and Statistics*, 46, 279-289.
- Throsby, D.C. (2001). *Economics and Culture*. Cambridge University Press, New York.
- Tyrrell, T. J. & Johnston, R. J. (2006). The Economic Impacts of Tourism: A Special Issue. *Journal of Travel Research*, 45, 3.
- UNESCO (1972). *Convention Concerning the Protection of the World Cultural and Natural Heritage*. UNESCO, Paris.
- Vandell, K. D. & Lane, J. S. (1989). The Economics of Architecture and Urban Design: Some Preliminary Findings. *Real Estate Economics*, 17, 235-260.
- Van Leeuwen, E. S. , P. Nijkamp and P. Rietveld (2006) Economic impacts of tourism; A meta-analytic comparison of regional output multipliers. In M. Giaoutzi and P. Nijkamp (Eds.) *Tourism and Regional Development New Pathways*. Ashgate, London.
- Ward, B. (1976). *The Home of Man*, Norton, New York.
- Willis, K. G., (2009). Assessing Visitors Preferences in the Management of Archaeological and Heritage Attractions: a Case Study of Hadrians's Roman Wall. *International Journal of Tourism Research*