

Urban design quality and downtown office rents: A case study of Belfast City Centre

Iilir Nase, Jim Berry, Alastair Adair

University of Ulster, UK

Abstract

While academic mainstream urban design theory is caught in a paradigmatic debate concerning normative and positive theories, practice research in the field has focused on the added value of quality design. The purpose is to promote, within the wide range of stakeholders, the concept that quality sells. Most of the research in this area is characterised by a descriptive approach based on best practice examples and lack of empirical evidence. This paper aims to fill this gap by investigating the impact of quality-led design on the value of commercial office properties in the urban core of a UK city. In line with mainstream urban economic theory and suggestions from previous research on the value of urban design, the research underpinning this paper uses Hedonic Price Modelling (HPM) to assess the contribution that high quality urban design makes to office rents. In the quest for *quantifying quality* a new set of ‘urban scale quality design’ variables is specified and each variable estimated for a unique dataset of property transactions. Another novelty relates to the variables that utilise geospatial analysis with the aim of integrating quantitative methods in urban design research and practice.

Summary

During the last decade an increasing amount of research has concentrated on the added value that can be generated by high quality urban design. Recent involvement of governmental bodies in the research on the impact of good design has shifted the agenda towards considerations on real estate value. Government-commissioned research focuses on assessing whether ‘good’ urban design adds value. The concept of added value implies that the ‘whole is greater than the sum of the parts’. In the case of urban design it implies that quality improvements in every field under consideration will result in an overall value added product – the built environment.

The acclaimed need for better design dates back to the 1960s with the seminal work of Jane Jacobs (1964) which was followed by the principles of ‘good city form’ introduced by Kevin Lynch (1981). These works were succeeded by a body of academic literature aiming to identify quality standards. However, the turning point was marked when governments realised the importance of delivering quality places. This heralded the beginning of a period where institutions and government bodies pursued quality standards for their urban design practice (RICS and DoE, 1996; Urban Task Force, 1999).

The theoretical backgrounds relating urban design quality and real estate value are encapsulated in Kelvin Lancaster’s work on utility theory. Lancaster (1966) postulated that “the good per se does not give utility to the consumer. It possesses characteristics and these characteristics give rise to utility. Generally a good will possess more than one characteristic and many characteristics will be shared by more than one good. Goods in combination may possess characteristics different from those pertaining to the goods separately” (p.134). This theory puts an end to the one-to-one relationship between the good and utility. It also postulates that a good possesses multiple characteristics which in combination give rise to utility. These concepts have very broad usage in general economics where a consumer buys specific goods regularly over time. The property market exhibits different characteristics though, simply because a household would not buy a home as often as it buys butter or bread.

The intangible nature of quality attributes of a property makes it difficult to attach a value or, put in other words, to *quantify quality*. Academic research uses the Hedonic Pricing Method (HPM) to ascribe a value to these intangible attributes of property. Based on Lancaster’s (1964)

consumer theory and applied to the property field by Rosen (1974) HPM suggests that the value of a heterogeneous product such as real property consists of the values of different attributes of that property. The HPM uses regression techniques to point out different contributions to the price of a good made by each of its ascribed characteristics.

The regression analysis utilised by the HPM is a powerful analytical tool for exploring all types of dependence relationships between dependent and independent variables. One such dependence technique is Multiple Regression Analysis (MRA). The building block of a multivariate analysis is the variate, a linear combination of variables with empirically determined weights (Hair et. al. 2010). In MRA each independent variable is weighted by the regression analysis to ensure maximal prediction from the set of independent variables. Following the formulation of the research problem the MRA proceeds with the selection of the variables. The two main frames here pertain to the choice of the two sides of the regression equation, the dependent variable and the variate. The general form of the model is specified in as:

$$\text{Unit rent price} = \beta_0 + \beta_{1i} \text{Phys} + \beta_{2i} \text{Amen} + \beta_{3i} \text{Qual} + \varepsilon$$

where *Phys*, *Amen* and *Qual* represent the Physical, Amenities and Urban Scale Quality descriptor series respectively.

This model, besides the more generally accepted control variables, employs a new set of variables and proxies designed to measure quality at the urban scale. The final model specified unit rent price as the dependent variable and included eighteen independent variables that showed mostly low to medium correlation to the dependent variable and low to very low correlation values among each other. Based on the characteristics of the office market and the literature, the dependent variable is specified as the unit rent price with a measurement £/m². The main rationale for the choice of unit price rather than transaction price stands behind the easiness of comparison and the reduction of the dependency of price on the area of the property.

The aim of this paper is to analyse and model the dynamic interrelationships between the criteria determining design quality and real estate value. The major practical implication is to inform various stakeholders about the development/investment costs and the downstream impacts on the

risk-return profile and investment potential in prime urban locations. The research investigates 285 office properties rented between 1995 and 2009 in Belfast City Centre obtained from the main commercial real estate agents. This sample was selected out of a larger transaction database for the whole Northern Ireland of 3074 lettings between 1982 and 2009. After a geographically-based, two stage reduction of the initial database, the resulting transaction list was supplemented with cases obtained from other commercial real estate agents operating in Belfast City Centre to obtain the final dataset of 285 cases.

In general, high design quality at various levels commanded a price premium. However, the interior design quality of a property exhibited interesting patterns peculiar to the current condition of the office market Belfast City Centre. The analysis concluded that even in depressed economic transition quality sells. However, the basic determinants of quality prevail over the high end quality specifications.

Tenants are also willing to pay to be situated in a building of higher design quality of the exterior. Furthermore, distinctiveness is a characteristic that positively impacts on the price of an office property. This is verified in the willingness to pay more for buildings with a different facade identity from the context. Also, buildings with relatively larger frontages to the surroundings (a proxy for distinctiveness) commanded a price premium. 'Porosity' of the urban fabric is another highly valued characteristic where the regression results indicate that properties situated in better connected 'emergent neighbourhoods' command a significant premium over properties located in 'emergent neighbourhoods' with low connectivity.

Amenities also significantly impacted the price of the office properties in Belfast City Centre. Plausibly explained by the scarcity of space in historic urban cores, parking space availability significantly increased unit price. On the other hand, the proxy utilised for view had an unexpected negative impact on value. A closer investigation on the partial correlation of the two variables revealed very interesting findings related to the vertical location of a property. It was concluded that after a certain height various dis-amenities overwhelm the view premium hence the overall vertical location penalty.

Finally, the model showed clear signs of high spatial-temporal dependence with the spatial and temporal lagged variables making significant marginal contributions in terms of t-values of the β

coefficients. Unit prices dropped significantly with increased distance from the predefined centre. Also a significant drop was recorded with increased distance to the centres of activities and amenities. On the other hand, there was a significant yearly increase on average unit prices during the period 1995-2009. Additionally, a longer duration of the contract incurred higher prices.

In conclusion, the research findings provide robust empirical evidence in support of quality design and impact on real estate value. The most straightforward message forwarded by the findings in this paper is the claim that ‘quality sells’. However, further consideration should be given to redevelopment projects in prime urban locations. Attention should be diverted towards the redevelopment potential of mixed use schemes. This calls for a broader consideration of the quality design indicators across different sectors and land uses, common to prime urban locations. In the quest for delivering quality places a holistic approach is required that better evaluates the development potentials of each sector separately and optimally delivers a final product whose whole is greater than the sum of its parts.