



## How to Understand Residential Value and Valuation<sup>1</sup>

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**Abstract:** *Sustainable urban development requires the education of professionals dealing with the built environment. Property valuers constitute one such important albeit neglected group of actors. When the aim is to comprehend value and valuation, the questions to ask include the following: What is the ideal definition of sustainable development in a valuation context? Is it about the diversity of value systems? Or is it about long-term thinking in terms of reinvesting the profits harvested? And what is the role of generating data on these factors? This paper reports some suggestions for answering these questions in a residential context.*

**Keywords:** Residential, value, valuation, sustainable urban development, property valuer

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## Introduction

The education of professionals who deal with the built environment is a crucial prerequisite for sustainable urban development. The current financial crisis was largely caused by misinformed actor-decisions and we are undoubtedly also reaching tipping points for other, more serious kinds of looming crises on the earth too. From this perspective, property valuers (real estate appraisers) constitute one such important albeit neglected group of actors. As Warrern-Myers (2012: 118) puts it: ‘... recently, the focus on valuers has increased and they have been identified as a primary barrier preventing the identification of the relationship between sustainability and market value’. However, as worldwide problems worsen, one might add that this focus needs to increase even more.

Instead of merely examining the issue of how to adjust the parameters of the operational value model, this paper proceeds to a higher level of analysis, where market signals and structures are the main target of the analysis rather than technical issues. This would furthermore enable us to shift towards a normative analysis. Here the normative element could, and perhaps should, focus on two important criteria of any valuation exercise: first, the ability to smooth the highs and lows of the price trend; and after that, to add some ethical considerations about the outcome, as to whether the result of the valuation is likely to withstand critical examination in terms of its broader economic, social and environmental consequences.

Three issues stand out here:

- First, ‘valuers’ do indeed impact the market and sale prices throughout their ‘hands-on’ attempts – even the simplest ones – to arrive at a value. Here a real-life example will do: when buying a flat one must be able to make an offer price; for this one has to look at the sales statistics of similar flats in the area. The simplest procedure is to calculate an average price, then adjust it to the particular circumstances so as to form an opinion, and, last, to propose a feasible price offer that will be accepted as the property’s true value by the estate agent, and more importantly, by the seller too.
- Second, ethical aspects are important; it can be argued that by paying more attention to the ethical aspect of valuations (during the years leading up to the market peak in 2007), the financial crisis could in principle have been avoided (in an ideal world, that is)! As we need to steer investments onto the right track, valuers (like other professionals) have a social responsibility (see Mooya 2011). The fact that such connections are traditionally ignored is a not an excuse.
- Third, despite the conventional wisdom, the reality is that market peaks and bottoms need smoothing, as they are abnormal situations. To give an example: a valuer assigns a value of 200,000 to a home that is then also sold at this price. Subsequently, the credit market conditions change and the value falls to 150,000. Mainstream or neoclassical economic (NCE) theory argues that the current value is still correct. However, we argue that the value should have been set lower than 200,000 in recognition of the fact that this value plausibly represents a peak value. The valuer has a responsibility to contain some of the bubble’s inflation by increasingly underestimating the value when the price trend is increasing; the opposite is required when the same trend is declining. This is the ‘value stability’ argument that also ties in with the ‘economic sustainability agenda’ (see Kauko 2010.)



The discussion that follows draws on prior contributions by the same author (see Kauko 2001; 2004a,b; 2008a,b; d'Amato and Kauko 2008). These contributions can be summarised as a three-category typology of 'methods in relation to data':

- Mainstream (hedonic regression with developments) statistics in a parametric distributional sense, which then validate the hedonic model. The aim of 'looking for regularity' favours the use of regression-based methodology.
- Other statistics and those techniques which are somewhat alternative but quantitative (nonlinear, pattern recognition and so forth). The aim of 'looking for detail' makes it possible to embrace complexity.
- Alternative approaches, based on qualitative/hypothetical data, that is to say, judgemental, possibly more qualitative approaches:
  - used when we need different information, that is to say, new variables. In particular, sustainability-related factors are not yet available in registers.
  - used when we don't have information even on standard variables.

The respective sections that follow cover conceptual, methodological, practical and concluding discussions.

## Conceptualisation

Hedonic pricing is an increasingly popular method aimed at establishing an equation between the price and the characteristics (descriptors) of the house. Using multiple regression analysis techniques, actual market transaction records, and large datasets of the descriptor values, the model can be 'parametricised' and partial prices for each descriptor isolated. What is more, from a valuation-applicability perspective, a price estimate can be computed by summing up the partial prices and quantities of each descriptor. The method has been well established since the 1970s and is not the main topic of this paper. The overarching question here is why the authors of residential valuation literature tend to focus on quantitative methods such as the hedonic approach and whether there is any other, more qualitative-based research at all. The answer arguably has to do with credibility and conservatism. While the hedonic approach was criticised long before the crisis, alternative approaches are not widely used by academics.

Not much research on the performance and validity issues connected with alternative methods and techniques has been conducted since the late 1990s. This is owing to the paradigm gatekeepers, who protect their own interests and, obviously, strive to maintain inertia in the field. It could be argued that any kind of work in this direction falls outside mainstream valuation research at a time when valuation research in itself – even mainstream – is relatively unfashionable. However, we can hope that the (near) global property market collapse of 2008 and the ongoing financial crisis could change this situation, as the public has lost faith in the conventional ways of determining value and its likely development. The inertia of funding organisations also plays a role. Nonetheless, there also exists some qualitative research (see, e.g., Canonne and Macdonald 2003; Dent and Temple 1998; Diaz 1998). Unfortunately such research undertakings are still seen as a maverick activity.



The point here is to avoid an artificial separation of dimensions – even though this has hitherto been the standard approach. We furthermore encourage looking at location more than has hitherto been done when comparing its value share against that of the building. In doing so, more emphasis is put on the behavioural and institutional elements. Goering's assertion (2009: 190-191) that community participation might be an issue to include then seems justified; he also proposes drawing links between rating systems and 'smart growth' planning. In general, the location issue is usually more complex and involves more interfering factors than the building issue (see Kauko 2002). In other words, what is required is methodological 'holism' rather than 'reductionism' (e.g. community participation is social and cultural; affordability is economic and social; transportation might even involve all these dimensions).

Data and technical problems notwithstanding, methodological underpinnings pose a challenge for valuation. It may be that unidentified and spatially unevenly distributed externalities caused by technical and political changes need to be corrected in order to guarantee the sustainability of future valuations. This prompts us to look at value as a multi-dimensional concept. It is reason to believe that in the future various social, environmental, ecological, and health criteria will have an impact on what is considered to give an added value or a penalty deduction to the value of a given property subject to assessment. (Renigier-Biłozor 2008; Kauko 2008b)

In the environmental valuation/economics literature, Gregory et al. (1997), among others, argued that multiple value dimensions cannot be examined with one and the same measure. As a consequence, multi-criteria decision modelling (MCDM) gained credibility. However, some problems still persist with this approach, especially in connection with context effects. These have been described well already in behavioural and experimental economic research, such as yes-saying, protest bids, and so forth (Vatn 2005). An account of the current achievements of this strand of modelling within valuation studies is given by Diaz III and Hansz (2010). These authors confirmed a positive bias in valuations of residential property when they compared two groups of 'actual, real-world appraisals': those with 'no incentive/pressure to over-value' and those with an 'incentive/pressure to over-value'.

To continue the enquiry a bit more philosophically, the question is which one is better: statistical 'patterns of the past' or subjective belief in 'projected future' trends? The paradox is that value is about the hypothetical case, so, by definition, something that has not yet happened, but we tend to arrive at it using records about past patterns. Why is this so? It is because 'classic scientific orthodoxy' requires it. However, there are some really helpful rational statistical approaches. For example, the less well-known residuals modelling approach, where a lack of knowledge or sudden market changes are captured from the model residuals (see Renigier-Biłozor 2008). Otherwise, this author's take on the situation is that the valuation methods lag behind the practical arenas because valuation theory is underdeveloped. To take a liberal stance here: all kinds of methods, especially when combined into an automated valuation model (AVM), can be justified – with critical reflection, of course.

Arguably, the right direction of development for the analysis of property value is to shift the focus from designing computationally extensive modelling tools for improving the accuracy of value predictions towards better coping with particular market circumstances (see Kauko 2008a). Accuracy would then involve ascertaining the underlying circumstances rather than achieving an unrealistic precision in value estimates. We must furthermore remember that



‘mass appraisal’ is not the same as ‘individual valuation’. Complete details of the renovation of an apartment, for instance, can only be accommodated in the latter approach. It can finally be argued that context is an important precondition that must be taken into account when deciding on the appropriate valuation methodology in relation to specific changes in the market environment.

Moreover, the issue becomes even more important for the emerging, but data-poor field of sustainability (or sustainable development) analysis (see, e.g., Warren-Myers 2012). Value can be sustainable or unsustainable with respect to a given criterion and to a certain degree. Definitions can, for example, be based on quality, affordability or product diversity. We can select one specific definition, such as the property value stability issue introduced earlier. The requirement of value stability is linked to the idea of a certification system (see also Goering 2009; Runde and Thoyre 2010). However, at the detailed level it is yet to be determined whether this issue ought to be included inside or outside the certification system; in other words, within the new value model both conceptually and in the calculations, or, alternatively, to keep value stability as a separate element to take into account afterwards? Thus we have two possibilities: determining what is a ‘sustainable value’ based on a model where a value stability variable is also included (thus adjustment parameters are inside the model); or, after this has been determined, deciding it is an external issue only. Care should also be exercised when selecting the adjustment system. In the words of Runde and Thoyre (2010, p. 240): ‘Care must also be taken not to double count green features where adjustments are already being made. For example, proximity to transit (site efficiency), might already be inherent in the appraiser’s generic “location” adjustment.’

## Methodology

It is largely accepted that seller-driven development can influence consumer preferences and consumption patterns, although ideally it should be the other way around: producers should be motivated to mirror expressions by consumers (see, e.g., Galbraith, 1st ed. 1958, 1999). One of the classic key problems is, therefore, how to integrate the prospects of the consumer to the prospects of the producer. On one hand, this shift towards development strategies that are truly sensitive to buyer preferences arguably has begun to emerge in some Western European contexts. On the other hand, when looked at from a global perspective, this kind of paradigm shift from a seller-driven to a buyer-driven market environment does not happen everywhere. For example, early evidence from ongoing work suggests that in Hungary the new gated community-like developments (residential parks) are almost completely seller-driven. Another case in point is the residential market of Bratislava, Slovakia, where new apartments of high quality remain unsellable as they do not meet buyers’ demands.<sup>2</sup>

The crux of the issue here is that the nature of the market varies across different institutional and geographical circumstances. It can be argued that minimum fulfilment of an adequate approach to valuation methodology requires an informed view of residential market mechanisms. This depends on an understanding of the following five main elements:

1. **Detailed analysis:** If aiming at a detailed analysis of a market for property products and locations, it is important to incorporate a ‘diversified

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<sup>2</sup> This was the point of a short keynote presentation by market researcher Filip Zoldak in the ERES educational seminar referred to in the preceding footnote. He concluded that it is no longer the case that in this city ‘every apartment finds its buyer’.



process/dynamics' view on the demand side: i.e. the diversified and changing preferences of buyers and renters as well as intermediaries need to be recognised, even if the variation is momentarily modest. Market value is indeed a fragile concept (Mooya 2011).

2. **The long-term situation:** If the long-term situation is the topic of analysis it is similarly important to incorporate a diversified process view on the supply side analysis (sellers, investors, builders, developers, planners etc.); for shorter terms merely a 'diversified static' view suffices (i.e. dynamics then only pertains to the demand side).
3. **Long-term diversification and dynamics equals sustainability:** As long as the market analysis concerns the long-term situation, economic sustainability is a natural issue. Owing to the context-dependent normative element here it is particularly important to look at diversification and the dynamics of how regulations vary and change.
4. **Data on market sustainability:** The arguments above all suggest that analysing market and sustainability is faced by huge challenges in the areas of producing and evaluating datasets (cf. Lorenz et al. 2006; Warren-Myers 2012). Even more so if non-economic dimensions are included. We nonetheless expect market actors to generate such data and make it available for analysts.
5. **The change towards sustainable markets is uneven:** Due to the local specificity of data sets the analysis must always set out from the institutional, behavioural, or geographical context, and then select the methods based on the available data (rather than the other way around: screen the data based on general assumptions of positivist or NCE-oriented research strategies).

## Concluding discussion

The aim when broadening the scope of house price/value analysis is to draw a link between market analysis and sustainability assessment. Two aspects here are noteworthy: the various definitions should be applicable to a long-term examination and often only some of them can be applied. A fruitful point of departure might be the aforementioned concept of value stability. Property value stability is measured by relating an approximation of property value to one or more other indicators — for example, by relating sales prices to assessed quality indicators at given locations or for a given property type. This suggested improvement is about smoothing the price trend on one hand and about a qualitative addendum (plus or minus) on the other.

This paper has emphasised the normative role of valuation. The way we understand and explain property value is evidently undergoing a paradigm change. In the old paradigm the separation of various dimensions (economic, physical, social, cultural etc.) was acceptable because use of the hedonic model, which would not have been possible without this manoeuvre, was considered the higher-level goal. In the new paradigm, the aim is not to fulfil a higher-level goal but to increase the realistic nature of the analysis.



It should be noted that the sustainability aspect is being brought to the fore even more than before owing to the financial crisis. Undoubtedly, the crisis has strengthened the defence of this position even more. Intuitively speaking, the research climate towards deviant lines of thoughts in the area of residential valuation is at present more favourable than it was before the year 2008.

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