

Market structures of rental housing – comparing the competitiveness between social and private renting in two local housing markets in England and the Netherlands

Paper for the Bengt Turner Award 2011

Abstract:

Governments in many countries have required social housing providers to operate more market-orientated and engage in commercial activities. Conversely, public authorities in some countries have tried to strengthen the role of the private rental sector in the provision of housing for low income households and homeless people. As a result, the once clear demarcation between the activities of social and private landlords appears to be shifting, which has possibly led to increased competitive pressure on both landlord groups. In an attempt to establish a constructive and innovative way forward to analyze and give meaning to the concept of competition between rental tenures, this paper sets out the idea of a perfectly competitive market structure of rental markets.

The theoretical part of the paper is guided by the questions of how one can translate established economic theories of competitive markets to rental housing and what a competitive market structure is in the context of competition between social and market renting. In the second part of the paper, the theoretical concept is applied to two local housing markets, Coventry in England and Breda in the Netherlands. Here, I will provide some evidence on how and why rental housing in Breda seems to be more competitive than in Coventry. The application of the model will highlight the value of the present approach.

Key words: Comparative Housing Research, Competitiveness, Market Structure, Private Renting, Social Housing

I Introduction

In the last two decades, there has been a surge of social housing privatization through transfers of public housing stock to private non-profit housing associations, tenant cooperatives, and profit-oriented landlords in most European countries (Scanlon & Whitehead, 2007). This shift in the supply structure has been accompanied by a change of housing policies from object subsidies to means-tested demand-side subsidies (Kemp, 2007). For that reason, policy makers have required social housing suppliers to operate more market orientated and increasingly use private finance for developing and managing social housing dwellings. Here, public policy interventions have allegedly promoted competition between social housing organizations and introduced commercial management tenets in order to increase the efficiency of the sector (Walker, 2000). What competition in this context means and the politicians' aims of promoting competition have remained unclear. Simultaneously, public authorities have tried to strengthen the role of private landlords in the provision of rental housing for low-income households and homeless people in various countries, which was also facilitated by the relative increase of means-tested subsidies for private renters (Hulse & Pawson, 2010; Retsinas & Belsky, 2008; O'Sullivan and DeDecker, 2006).

Arguably, these two concurrent, yet not necessarily directly related developments have led to a blurring of the activities and responsibilities of social and private landlords in many national housing systems. This in turn has resulted in increased competitive pressures on both landlord groups and possibly more competitive rental housing markets in general. To contribute to a better understanding of the process of increasing competitive pressures, various housing researchers have sought to give meaning to the notion of competition between social and private landlords in a comparative perspective (e.g. Hulse et al, 2010; Haffner et al, 2009a; Rhodes & Mullins, 2009; Kemeny et al, 2005; Atterhög & Lind, 2004). The authors provide some valuable discussion points. However, their analyses remain partial or – as I think even more problematically – their competition frameworks are unsatisfactorily grounded in economic theory.

Guided by the key question of how we can understand and use economic competition theory to analyze a competitive relationship between social and private landlords in contemporary housing markets, the author of this article (together with two further authors) has proposed the Structure-Conduct-Performance (SCP) of rental housing, which is grounded in neoclassical competition theory, but considers some basic ideas of institutional economics and the specifics of rental housing (anonymous, 2009). This framework provides a more comprehensive approach since it covers various competition aspects: It deals with the competitiveness of the market environment in which landlords and tenants operate (structure); it is about the competitive behavior and strategies of rivaling landlords and the consumption choices of tenants (conduct); it touches on market outcomes and welfare effects of more or less competitive markets (performance); and finally, it is about the analysis of the links between these three

elements. As part of this wider research project, here the focus lies on the idea of market structure as a way to describe and analyze the competitiveness of rental housing markets. Accordingly, this paper aims to apply and empirically test the concept of market structure in a real world context and evaluate the use of the framework as an innovative way to understand the meaning of competition on rental housing markets.

The paper proceeds as follows: Section 2 develops the concept of a competitive market structure in rental housing. Developing the conceptual framework is guided by the questions of how established theories of competition, particularly the concept of perfect competition, can be translated to rental housing and what a competitive market environment is with regard to the relation of the two tenures. Hereafter, I will briefly describe the methodological approach and the kind of data that is used for the empirical application of the framework. The fourth section then applies the model of competitive rental market structures to two local housing markets, Coventry in England and Breda in the Netherlands, discussing the competitiveness of the two local markets in the context of the general use of the presented theoretical approach. The paper concludes on its main parts and outlines the case for further research on competition between social and market renting.

II The concept of competitive market structures in rental housing

Competition theory and rental housing

When economists analyze the competitiveness of a market environment in which firms operate they tend to look at three aspects (see Clarkson & LeRoy Miller, 1983, Oz, 1995): Product differentiation measures the homogeneity of the products that are being traded. Supply concentration measures the number and market shares of suppliers in a market. Barriers to entry and exit assess how likely new suppliers enter and exit a market and thus how stable the supply structure in a market is. Under the assumption that information is perfect and products are divisible, a perfectly competitive market is defined as a market in which the market shares of all suppliers are so low that no individual firm can influence the price, products are identical and thus perfect substitutes, and barriers to entry do not exist, meaning that the threat of newly entering firms is omnipresent (Motta, 2004). Neoclassical economists argue that when all these conditions are fulfilled, the outcome of the market is efficient and welfare-optimal (Tirole, 1988). If one or more conditions are violated an imperfectly competitive market structure prevails (e.g. monopolistic competition, oligopoly, monopoly).

The concept of market structure and the model of perfect competition in particular face several limitations and a direct application to rental housing is neither meaningful nor desirable. For one thing information is never perfect – which certainly holds true in the context of rental markets – and rental services are not divisible (Quigley, 2003). Yet due to simplicity reasons and in line with traditional neoclassical theory, market structure of rental housing will abstain from information aspects. Another insufficiency is that market structure does not make any reference to government rules and regulation, even

though they have a decisive influence on how the production and consumption of a service takes place (North, 1990). Considering that social and private renting fulfill different purposes in housing systems and are thus subject to specific policies and regulations, this needs to have an explicit role in the framework. Most importantly, instead of analyzing competition in one coherent industry, competition between the providers in two industries in one market is explored. Finally and in line with this, as policy approaches and social structures differ across countries, the substitutability of market and social housing services needs to be made explicit rather than treating it as an exogenous factor. It follows that, in contrast to the traditional meaning, market structure of rental housing looks at both supply and demand side market aspects, since tenants' consumption decisions are decisive for determining the degree of substitutability between the two rental services.

To conclude, if we accept that perfect competition is and can never be a reality but treat it as a tool of competition model-building, and if we further take the specifics of rental housing markets and regulation aspects into account, the neoclassical notion of a perfectly competitive market structure might still provide a good starting point for examining the relation between social and market renting.

The elements of market structure of rental housing

Having outlined in what way the mainstream approach needs to be modified, we can now turn to the different aspects of rental housing market structure (for an overview see Table 1). First, there is a strong impetus for analyzing supply concentration for the two rental sectors separately, the reason being the existence of two industries, which might or might not operate in the same market. The assumption here is that a deconcentrated supply structure is more competitive than for instance a situation in which both industries were characterized by a monopolistic supply structure – surely, this is highly unlikely in the private rental sector. It also seems to be meaningful to assess the position of housing associations in the whole rental market. Are individual associations by far the biggest players, or are there private landlords with similar market shares?

In contrast to the original framework, supply concentration does not only deal with the number of firms and their respective market shares, but also with spatial concentration aspects. The rationale to include spatial concentration aspects into the model is grounded in the condition that (rental) housing is spatially fixed. If social housing was supplied in completely different locations than private renting, the whole rental market would surely be less competitive, than a market environment in which social and private landlords provided housing in the same neighborhoods. In other words, the SCP of rental housing controls for spatial monopolies of private renting and particularly social housing suppliers.

There are good grounds to follow Arnott's (1995) judgment that barriers to entry and exit are negligible, if one looks at market rented housing only. The small-scale supply structure of private renting can be regarded as a consequence of these low entry

barriers. Nevertheless, looking at the relation of market and non-market renting, entry and exit barriers can exist if they are defined as the requirements and preconditions providers have to meet when they aim to offer market or social housing services. The underlying supposition is that when bureaucratic burdens are low for a landlord to operate in both sectors, or to switch from one sector to the other, the market environment is more competitive than a situation where providers are bound to a strict regulation of the types of housing services they may offer.

Table 1: Market structure of rental housing in comparison to the traditional model

Traditional concept of market structure		Market structure of rental housing	
Supply concentration	Number and market shares of sellers	Supply concentration	Number and market shares of landlords in each sector / Position of housing associations in the whole market
		Spatial concentration	Proximity of social and private rental housing stock in local markets
Barriers to entry and exit	Ease to access a market for new firms. Stability of supply concentration	Barriers to entry provision of rental services	Conditions and rules for different landlord groups to supply social and private rental services
		Barriers to access consumption	Conditions and rules under which tenants can consume either rental service
Product differentiation	Degree of product homogeneity	Product differentiation - rent	Similarity of social and market rent levels, rent regulation, and housing allowance schemes
		Product differentiation - quality	Similarity of quality of social and market dwellings and locations, security of tenure

It was argued that the demand side of the rental market needs to be made explicit in the model competitive rental market structures, since the degree of competitiveness is largely influenced by the question of who might actually consume private and social housing services; i.e. the question of whether barriers to access the consumption of social and market renting exist. To put it differently, is there free choice for tenants between the two rental services, or do regulatory or landlord-induced impediments for tenants to consume either rental service exist?

Product differentiation refers to the idea of substitutability of market and social housing; i.e. how heterogeneous the two services are. This framework follows the approach of Haffner et al (2009a; 2009b): On the one hand, an application of the framework needs to consider differences in rent levels and rent control policies, taking both initial rent setting and rent increases into account: If there are similar rents for comparable accommodation, and if social and market rents are subject to the same strict (or loose)

regulation of rent determination processes, the degree of similarity is higher. An investigation of rent expenditures should include the availability and generosity of housing allowances for lower-income households: Are allowances available for social and private tenants under the exact same conditions or are they treated differently. On the other hand, differences in the quality of the rental services need to be taken into account; this comprises both the quality of the dwelling and the quality of location. If low-standard social dwellings were only offered in deprived neighborhoods, while high-end market dwellings were mainly located in popular areas, the products would barely be seen as substitutes. Additionally, the similarity of security of tenure for tenants in both sectors is an important aspect of substitutability and thus competitiveness.

What is a competitive rental market structure?

To repeat, neoclassical economics states that a perfectly competitive market needs to fulfill five conditions – homogenous goods, high number of suppliers, no barriers to entry and exit, perfect information for all market participants, and divisibility of goods. Although the present theoretical model abstracts from information aspects and the divisibility of a good, the previous statements on each aspect of market structure suggest what competitiveness means in its own context. If we look at the three factors conjointly, one might argue that there is a state of ‘perfect competition’ between social and market renting. This would be fulfilled if each aspect were fully competitive in itself: high number of suppliers with low market shares and high spatial proximity; no barriers to entry supply and no barriers to access consumption; identical product characteristics with regard to rent and quality. Similar to the neoclassical concept, ‘perfect competition’ between the two rental sectors does not exist in reality. After all, social housing and private renting perform different functions by definition. However, it is possible to use this framework as a tool to test each rental market against the assumptions of a perfectly competitive market. This is exactly the rationale why the model might be seen as a tool for comparative housing research. Market environments differ: In one rental market, product differentiation might be high as might be barriers to entry and access, while in another market it might be the other way round.

III Methodology and data

It has been suggested that an application of the comparative research method is a meaningful way of applying and testing the value of the theoretical framework (Doling, 1997). For one thing there are differences of the roles and political expectations of social and private renting in various countries and thus the degree of competitiveness diverges between them. However, making this paper explicitly comparative transcends the idea that we expect the conditions (i.e. market structure) of competition between the two landlord groups to be different across housing systems. Rather, examining a small number of empirical cases holistically might help to build explanations of why the

relationship between social and private renting in country A might be classified as competitive, but not in country B (see Pickvance, 2001; Oxley, 2001). Aiming at a demonstration of the applicability and use of the model, this paper chooses to compare two cases in-depth, rather than examining a larger number of country cases more superficially. Based on a literature study of structural aspects in various Western European countries, the study has determined England and the Netherlands as appropriate cases. Both countries have large social housing sectors and a significant share of private renting in the entire housing market (see Table 2), yet they have been described as having very different rental systems. Amongst other things, the role of social housing in England is more residualized, whereas it performs a broader function in the Netherlands, accommodating all kinds of households (Scanlon & Whitehead, 2007); or in Kemeny's (1995, 2005) terms England has a dual rental market, whereas the Netherlands is characterized by a more competitive unitary rental market. Similarly, Elsinga et al (2009) provide some evidence that there is more inter-tenurial competition in the Netherlands. This does, however, not mean that rental housing is completely uncompetitive in England and highly competitive in the Netherlands; in the latter case, it was claimed that there are various signs of an unlevel playing field between social and private landlords (Elsinga et al, 2008; Priemus, 2008).

Table 2: Tenure shares in Coventry (England) and Breda (NL) (2006-2008)

	Owner occupation	Social renting	Private renting	Number of households
England (2008)	68%	18%	14%	21,400,000
<i>Coventry (2006)</i>	70%	19%	11%	129,000
Netherlands (2008)	57%	32%	11%	7,028,000
<i>Breda (2008)</i>	60%	31%	9%	75,100

Source: CCC, 2006; CLG 2009; O&I Breda, 2010; WoOn, 2009

Moreover, there is a strong impetus to apply the market structure framework in a local housing market context rather than staying on a national level. Rental housing markets are primarily local markets (Golland et al, 2006), meaning that indicators of competition and how it is expressed in reality can best be examined on local levels as well. If we look at the six factors of market structure, it seems obvious that there can be large differences between local markets in one country; rent levels and supply concentration indeed differ significantly between local markets. Therefore, in a preceding step to this paper, a review of policy documents and examination of secondary data of various local housing markets in England and the Netherlands was carried out in order to find a typical case study city in each country. The following selection criteria were used: The local market should be

middle-sized and in a relatively solitary location (no direct borders with another agglomeration). The share of both housing tenures should resemble tenure shares in the whole country. The types of landlords should be representative for the overall country; although I decided to select a case study in England with no council supplier. And finally the demand/supply relation in private renting and the average time of social housing waiting lists should exclude abnormally tight local markets (such as parts of London and Amsterdam). Based on these criteria Coventry in England and Breda in the Netherlands were determined as appropriate case study cities within the two country cases, since they matched the given criteria better than all other possible case study cities, particularly with regard to tenure shares (see Table 2), the location of the city, and the structure of supply in both rental sectors.

The selection process of the two case study cities gives a first impression on the structure of the two rental housing markets. Yet, in order to get a full and coherent idea of rental market structures in the two cities, the study uses secondary data from official statistical sources, analyses national and local policy documents as well as the scientific literature on social and private renting regulation, collects primary data to calculate rent levels and market shares, and further relies on a series of interviews by the author with a number of local experts and practitioners.

IV Competition and the market structure of rental housing in Coventry and Breda

In line with the main aim of this paper this section primarily tries to demonstrate the applicability and test the concept of market structure of rental housing as a framework that gives meaning to competition between social and private landlords. This is to say that that an assessment of the degree of competitiveness and each individual element of market structure could be much more extensive. However, for our purposes it seems to be suggestive to concentrate some selected parts of the empirical material.

Supply concentration

There are two ways of measuring supply concentration in markets, the n-firm concentration ratio and the Herfindahl Index (HI)¹. The latter is supposed to be less arbitrary, as it takes both the number of suppliers and each individual market share into account. Table 3 shows that 15 housing associations own approx. 21,000 social dwellings in Coventry (TSA, 2010). These dwellings are, however, not equally distributed among suppliers, since the three largest housing associations own about 92 % of the social housing stock in the city, where the largest association almost has a monopolistic position. The calculation for different supply concentration indices of landlords who are voluntarily registered with the City Council (which covers about a third of the whole

¹ The HI is calculated by squaring the proportion of supply from each firm and squaring the results. In antitrust agencies a HI of more than 0.18 is considered as a highly concentrated industry. Values between 0.1 and 0.18 are concentrated as moderately concentrated. Values below 0.1 are regarded as deconcentrated and competitive (Kelly, 1981).

private rental stock) suggests a deconcentrated private rental industry. Although the 3-firm (32.5 percent) and 10-firm (50 percent) supply concentration show that there are a few larger providers, the low value of the Herfindahl Index (0.04) proposes the existence and dominance of a large number of landlords with small portfolios.

Table 3: Supply concentration in the social and private rental sectors of Coventry and Breda (2010)

	Number of landlords	Number of dwellings	3-firm concentration ratio	10-firm concentration ratio	Herfindahl Index
<i>Coventry</i>					
Social housing	15	21,042	91.9 %	99.1 %	0.57
Private rental	358	1,331	32.5 %	50.5 %	0.04
<i>Breda</i>					
Social housing	3	23,193	100 %	100 %	0.33
Private rental	74	3,898	21 %	46.9 %	0.03

Source: TSA, 2010; data provided by Coventry City Council, Gemeente Breda, and housing associations in Breda; own calculation

In Breda, social housing seems to have an oligopolistic supply structure with only three housing associations operating in the market. Even though their stock sizes and thus market shares compare – the smallest association owns 6,736 general needs dwellings and the largest 8,439 dwellings – the calculation of the HI shows that social housing in the city is indeed highly concentrated. The calculation of supply concentration in the private sector is less accurate since it is based on the number and market shares of landlords with a portfolio of more than 10 dwellings only. Nonetheless, the data provides two interesting insights: First, as expected, supply concentration in the private rental sector is very low (HI = 0.03). Second, the data provides evidence on the different supply structures of the two main landlord groups, where we can observe some concentration and a more oligopolistic structure in the institutional investor segment.

To conclude, we can observe similar patterns of supply concentration in both cities, where social housing is highly concentrated – even more so in Coventry due to the position of the stock transfer association. Private renting seems to be relatively competitive in both cases; yet, the position and size of institutional investors in Breda is certainly a distinct trait. Generally, one should keep in mind though that if we distinguish between ownership and management the picture might be slightly different. In the last decades, landlords in both cities have increasingly made use of letting agent services for managing their housing stock (Interviews Coventry & Breda, 2010). Considering that agents can have a decisive influence on rent setting, investment decisions, and tenant selection, the low concentration in the two private rental sectors might at least be questionable. A final observation is that if considered as a whole, the two rental markets

are strongly dominated by the housing associations. No single private landlord comes even close to matching the stock size of the main housing associations.

Spatial concentration

Ideally spatial concentration of the social and private rental stocks would be measured in as small as possible neighborhood units. A lack of reliable data, however, only allows for analyzing the vicinity of the two tenures on a ward level in Coventry (6,000 to 8,000 dwellings), and housing area² level in Breda (3,000 to 9,000 dwellings). The empirical material suggests that both cities have some classical social housing areas, where housing associations own up to 30 percent of the housing stock. In some neighborhoods and blocks within the wards and housing areas this share might be as high as 80-90 percent. Nonetheless, there is a substantial difference between Coventry and Breda. Where social housing in the former is almost entirely concentrated in specific parts of the city, the sheer size of the sector in Breda warrants that, despite some larger concentrations, the whole social housing stock is relatively well distributed throughout the city (O&I Breda, 2010) (see Appendices 1 and 2).

Interestingly enough, spatial concentration of the private rental stock exists in both case studies as well. The largest concentrations of the PRS stock can be found in the city centers, peripheral areas, as well as (particularly in Coventry) in the vicinity of higher education facilities. However, the degree of spatial concentration is much lower as it is in social housing, since there are no neighborhoods where private renting is the largest tenure overall. A specific trait in the Breda market is that individual landlords and institutional investors tend to provide accommodation in different areas; the first mostly in the city center and the latter in peripheral areas (ibid, 2010).

In brief, there are relatively few neighborhoods/wards in Coventry with an above average size of both private renting and social housing. Spatial monopolies of social housing and the low geographical proximity of the two sectors suggest a low degree of competitiveness between social and private renting. In contrast, spatial proximity between the two rental tenures is much higher in Breda, as there is a considerable overlap between the locations of the two sectors.

Product differentiation – rent levels and regulation

Most publications (e.g. Scanlon & Whitehead, 2007) that compare the mean rent levels in both sectors do not refer to the size and quality of dwellings. This is however a crucial aspect since higher rents in the private sector might, *inter alia*, just be based on larger and better dwellings across the whole stock. Since data on private sector rents is limited, it is not possible to present rent levels for specific quality levels in both cities. However, it is

² Housing areas in Breda are assembled for purely statistical reasons. They are based on the perceptions of local citizens about which parts of the city form larger districts. They are thus relatively arbitrary units. (Gemeente Breda, 2010)

possible to calculate social and private rents for different property sizes, here measured by the number of bedrooms in both cities and also by total floor size in Breda.

Table 4: Market and social rent levels in Coventry and Breda (2010)

<i>Property size</i>	Social housing		Private renting	
	<i>Net rent pcm¹</i>	<i>n</i>	<i>Asking rents pcm</i>	<i>n</i>
Coventry				
Bedsit/studio	£ 231	1048	£ 335	24
1 bedroom	£ 269	5,502	£ 443	181
2 bedrooms	£ 302	6,509	£ 520	514
3 bedrooms	£ 325	5,730	£ 619	393
4 bedrooms	£ 361	392	£ 933	170
<i>average</i>	£ 296	19,181	£ 591	1,282
Breda				
Bedsit/studio	€ 252	224	€ 411	17
1 bedroom	€ 345	1093	€ 836	102
2 bedrooms	€ 413	3346	€ 1055	162
3 bedrooms	€ 461	2607	€ 1201	66
4 bedrooms	€ 523	412	€ 1377	33
<i>average</i>	€ 421	7682	€ 1020	380
	Net rent pcm / sqm	n	Net rent pcm / sqm	n
	€ 6.6	7682	€ 11.8	380

pcm= net rent (excl. service charges) per calendar month; rents include general needs dwellings only; Coventry: includes rents of the three largest associations (Whitefriars, Midland Heart, Orbit) only – average rent levels of smaller associations are comparable. For private rents - rightmove.co.uk (April & August 2010) Breda: Social housing stock of one housing association; private renting – data collected on property websites funda.nl and pararius.nl (September 2010 & January, 2011); own calculations

Table 4 shows that there is a large gap between private sector and social housing rents in Coventry. The average rent of a private rental dwelling is almost twice as high as the one of a social dwelling. It also shows that the gap in rent levels increases with the number of bedrooms in a property. While rents of bedsit and one-bedroom apartments are about 1.5 times higher in private renting, two and three bedroom apartments are almost twice as expensive. Part of this large rent gap can most likely be explained by the different systems of rent regulation. Whereas the private sector is almost completely deregulated, social housing rents are determined through an administrative rent setting mechanism and are kept at a below-market level (Haffner & Boelhouwer, 2006). Furthermore, the actual rent level should be seen in the context of what tenants have to pay on their own and which share of the rent might be covered by demand subsidies. In principle housing allowances are available to both social and private rental households; yet, there are important differences in how the two systems operate. Housing Benefit in social housing is calculated in a way that post-rent incomes do not fall below the social assistance eligibility level. The Local Housing Allowance in the private sector is based on

local reference rents and is thus not connected to actual rent levels (Stephens, 2005). Taking into account that in reality the largest share of private renters rent expenses are covered by LHA payments in Coventry (CCC, 2010a), there appears to be little differences between social and private renting from this viewpoint.³

Table 4 also illustrates the existence of high rent differentials in Breda. Absolute average net rents in Breda are about 2.5 times higher in the private rental sector than in the market sector. Similar to the situation in Coventry, it can also be observed that rent differentials grow with the number of bedrooms. However, the rent gap in Breda might be significantly overestimated. Ideally, the calculation of average rents should consider actual floor sizes as well, since private rental dwellings with an identical number of bedrooms tend to be larger than social rentals – a finding that does not hold in Coventry, since dwelling types are similar across rental sectors. Indeed, if we look at actual property sizes in Breda, average rents in the private sector are less than two times as high; yet, it remains true that rent differentials are substantial. Again, the national rent regulation scheme seems to play a significant role for the rent gap. Rental housing in the Netherlands is not only divided by the provision of housing associations and private landlords, but there is also a distinction between regulated and unregulated rents, where rents of more than €650 pcm fall in the latter category (see Haffner et al, 2009a). Unlike regulated rents – here, rent setting follows a quality valuation system – initial rents and rent increases in the deregulated sector are based on market forces (Ministerie van VROM, 2009). Arguably, private landlords thus have a strong incentive to provide rental services that exceed the liberalization threshold, which leads to a small overlap with the housing association stock with respect to rent levels, except for the relatively inexpensive student accommodation market. Out of the 380 dwellings, only 34 (9 percent) have an asking rent of below the so-called liberalization threshold. The difference between the two rental sectors is most likely exacerbated by the structure and availability of housing allowances. In general they are available on a similar basis for social and market tenants. However, allowances are only available to tenants whose rent does not exceed the €650 deregulation limit (Haffner & Boelhouwer, 2006). This means that in the light of actual rent levels in the PRS, housing allowance recipients in the social sector who consider moving to the private sector would most probably lose their entitlement.

In conclusion, rent differentials are large in both cities. However, in order to get a better understanding of the homogeneity of social and private renting it seems to be crucial to look at different market segments in the private rental sector. First of all, there seems to be a significant share of rental services for low-income households in Coventry's private sector. In contrast, the low-rent segment in Breda is relatively

³ The proposed caps of LHA by the current Conservative-Liberal coalition government will supposedly change this significantly, since market renting becomes more unaffordable, if average rents are significantly higher for each property type than the level of the LHA cap. As a result, Housing Benefit and thus the social sector in Coventry might become more appealing to low-income household since the largest share of their rent is covered by the allowance, while they can expect additional housing costs in the private rented sector.

marginal. From the viewpoint of the low-income demand group, there thus seem to be more options to rent a social or a private dwelling in the English city. On the other hand, when rent regulation and housing allowances are taken into account, the picture is quite converse. Below liberalization threshold the consumption of a private or social rental service takes place under identical conditions in Breda.

Product differentiation – quality levels

In order to assess the quality of dwellings in the private rental sector, public authorities in Coventry conducted a house condition survey in 2006. As measured by the Decent Homes Standard⁴ (DHS) approx. 40 percent of the private rental stock is classified as non-decent, whereas the decency rate in the social housing sector is much higher (90 percent). This quality gap is probably based on the age profile of the PRS stock. The largest share of private rental dwellings was built before 1919 (ca. 32 percent), and another 20 percent was built before the end of World War II. In contrast, social housing was mainly constructed in the postwar period until 1964 (almost 50 percent) (CCC, 2006 a; 2006b). An assessment of the quality of location is in this study based on the English indices of deprivation.⁵ In Coventry, 33 out of 197 areas belong to the 10 percent most deprived areas in the whole country (CCC, 2008). Most of these localities can be found in neighborhoods where social housing is the dominant tenure. Interestingly, the two wards with the highest share of private renting show some of the highest deprivation levels in the city as well. However, other private rental areas in the city are associated with low levels of deprivation. This finding reflects the great diversity between private rental submarkets, indicating that part of the private rental stock compares to social housing with regard to quality of location and quality of dwellings, but certainly not all of it. Finally, from the tenants' viewpoint market rental tenants in England savor much less security of tenure, meaning that, for instance, the risk of being evicted is marginal in social housing, while it seems omnipresent in the private sector.

Similar to the situation in Coventry direct measures of the quality of the dwellings are not available in Breda. Hence, this study will turn to a more indirect quality indicator, the value of dwellings. As shown in Table 5 the average value of a private rental dwelling is significantly higher than in the social sector, where dwellings of private individual landlords are the most valuable. One reason for this is that with 65 sqm social rental dwellings are on average significantly smaller than their private sector counterparts (100

⁴ In the Housing Green Paper 2000 the government stipulated that all rental houses in England should meet the current statutory minimum standard for housing, which was redefined in 2006 with the Housing Health and Safety Rating System (HHSRS); all dwellings should be in a reasonable state of affair and have reasonably modern facilities. Furthermore, all dwellings must have a sufficient degree of thermal comfort, best achieved through effective isolation and efficient heating.

⁵ This relies on measuring seven factors of deprivation for small-scale neighborhoods of about 3000-5000 inhabitants: income deprivation, employment deprivation, health deprivation and disability, education, skills and training deprivation, barriers to housing and services, living environment deprivation, and crime.

sqm on average). Furthermore, dwellings owned by institutional investors tend to be of younger age than social housing dwellings, which were to a large extent constructed in the 1970s and 1980s. In contrast, most of the small-scale individuals' stock is considerably older (O&I Breda, 2010). Yet, it seems that good maintenance of these dwellings makes up for the older age of the stock.

Table 5: Average values (WOZ) of social and private rental dwellings in Breda (2010)

Sector	Total number of dwellings	Average value (€)
Social housing	23,220	163,491
Institutional investors	2,717	195,378
Private individuals	2,829	206,333

Source: Data provided by the municipality of Breda; own calculations

Additionally, higher values in the private rental market reflect that they are more often associated with neighborhoods of high demand and quality. A recent publication by the Ministry of Housing (VROM, 2009) on the livability of neighborhoods, measuring aspects such as security, social inclusion, population structure, quality and availability of public facilities, public spaces, and the quality of housing stock itself, shows that levels of deprivation are generally low throughout Breda. Yet, there are some differences between neighborhoods. The highest deprivation scores exist in peripheral social housing areas in the Northeast and the Southwest around the city centre. Nonetheless, the quality of location in social housing is in general relatively high. Crime levels and upkeep problems that can be observed in Coventry are unknown in social housing areas of Breda. From the tenants' viewpoint the differences between social and private tenants' property rights is much lower in Breda. Although tenants in the regulated sector savor the highest security of tenure, property rights are generally strong across the whole rental market (see Haffner et al, 2008).

In brief, the quality aspect of product differentiation is quite different in Coventry and Breda. Where social housing in Coventry tends to be of relatively low quality, particularly due to locational aspects, the sector in Breda is of a relatively high standard. However, if compared to the private rental sector, the analysis shows that almost the entire private rental stock is of an even better quality and larger per-dwelling size in the Dutch case. In Coventry, part of the private rental stock is of a lower quality than social dwellings and can be found in locations with similar deprivation levels. This suggests that the rental market in Coventry is more homogeneous than in Breda.

Barriers to entry provision

In Coventry as in the rest of the country, national regulation allows and encourages private developers and landlords to engage in the provision of social housing, since the allocation of grants for new social dwellings is allegedly given to the most efficient applicant, regardless their organizational status (see Gibb & MacLennan, 2006). However,

in local practice it has not been recorded that a private party provides social rental dwellings. Interviews with local experts (Coventry, 2010) suggest that this might not only be due their reluctance to engage in social housing, but also due to the local practice of social housing development. The council identifies the need and locations for social housing and also decides which developer actually receives funding. The Coventry council takes a rather pragmatic approach in this decision, meaning that it solely cooperates with locally operating housing associations. Hence, even if there were private companies willing to engage in social housing, they probably would find it very difficult to get access to government funding, or in other words, enter the social housing business. Conversely, except for the relatively higher developing costs, there are no barriers for housing associations to enter the market rental industry. In local practice, they have, however, been quite reluctant and tend to operate in other commercial housing market segments (e.g. shared ownership projects).

National rules on the supply of social housing in the Netherlands stipulate that it is the exclusive task of approved institutions. Private organizations that wish to provide social housing would therefore have to become such an institution. Considering that this status is connected to specific rules (e.g. focus of an approved must be the provision of housing to low-income households, they should engage in urban renewal projects), and considering the absence of direct object subsidies for developing and managing social housing, there seems to be little incentive and thus high barriers for private landlords to operate in the social housing sector. On the other hand, housing associations can and do engage in the provision of market rental housing. As long as they have the financial means to do so, there are no barriers to enter except for capital costs and the commercial risks of managing market renting (e.g. long-term vacancies). The three housing associations in Breda engage in market rental provision on various scales, where the largest share of market renting is about 5 percent of the total stock. However, the question remains whether these activities comply with the idea of a contestable market, as housing associations have been accused of using indirect subsidies (cheap loans, cheap land) for their commercial operations (see Elsinga et al, 2008; Priemus, 2008).

To conclude, barriers to entry social and private renting supply are potentially lower in Coventry than in Breda. After all, all kinds of providers can apply for social housing, where access to funds is based on contestability principles. In Breda, the social housing industry is an insular system; considering the commercial activities of social landlords in both countries it seems that housing associations in Breda are more risk seeking and entrepreneurial than their English counterparts.

Barrier to access consumption

In both cities, social housing is allocated through a Choice-Based Letting (CBL) scheme.⁶ However, the CBL systems operate quite differently in the two localities. The so-called Coventry Homefinder works as follows: Generally, anybody who is older than 16 years, is not an asylum seeker or a student, and has not been evicted from a previous tenancy can register with the system. There are however explicit entry barriers in the actual allocation of dwellings. First, different properties are reserved for households of a corresponding size. The general rule is that the number of bedrooms is one less than the household size (CCC, 2010b). Second, there is a priority banding system, which is based on an applicant's housing need.⁷ 75 percent of all bids are allocated based on banding priority and the length of registration time, the other 25 percent is allocated on the basis of waiting time only. Income is not directly considered in the allocation of housing; yet, housing need is by definition higher among low-income households, which means that there is at least an indirect barrier for more affluent households. Finally, the existence of a long waiting list severely restricts access to social housing. In May 2010, 13,509 people were registered for social housing, most of which (~ 90%) do not have any housing need. If we compare this with the number of available dwellings (2500 in 2010), it should be obvious that the chance for people with low housing need to get into the sector is marginal; and indeed, the waiting time for people with non-housing need adds up to about 10 years (ibid, 2010b).

In Breda, anybody who is older than 18 years can register with the CBL scheme. Exceptions are made for students (they are treated as a separate group of applicants, since they are only eligible for housing in student housing complexes) and adolescent households in urgent housing need (mostly people who are affected by redevelopments). Registrations are made in two ways: People can either state that they are actively looking for social housing accommodation, or they can register as passive applicants in order to accumulate waiting list time. Active applicants, but not passive ones will receive offers with available properties that match their individual criteria (e.g. a given number of bedrooms, neighborhood). A smaller part of the stock for active applicants is allocated through a lottery drawing. Housing need plays an insignificant role in social housing allocation; nonetheless, barriers to access exist, where the most profound is the existence of long waiting lists. In practice, each dwelling has an individual waiting time, which is based on property type, size, and location. For instance, a single-family house requires an average waiting time of about 70 months; the average waiting time in Breda is 4.5 years. Property type is, however, not the only defining factor. The household structure and age

⁶ The main idea of a CBL is that all available social dwellings in a locality are offered via the same channel (mostly internet pages), where tenants can place bids for dwellings and have the right to turn offers down (see Brown & King, 2005)

⁷ Housing need is subcategorized in very urgent need (Bands 1A and 1B – e.g. exceptional medical need, affected by redevelopment), urgent need (Bands 2A, 2B, 2C – e.g. statutory homelessness, people fleeing violence), and no housing need (Bands 3A and 3B – e.g. owner occupiers).

of the applicant is taken into account as well, where older and larger households need to accumulate more waiting time than others (Gemeente Breda, 2009). This suggests that barriers to access social housing are extremely high. A further significant barrier to access social housing is the introduction of explicit income limits. Since January 2011, it is stipulated that 90 percent of all new allocations in the social sector (< €650) must be appointed to tenants with an income of less than € 33,614. The access of middle and higher-income households to social housing thus has become more restricted (Priemus, 2010).

One might assume that in comparison to social housing access to market renting is fairly easy in both cities; that is not to say that there are no barriers to access in the private sector. Interviews with private landlords in Coventry suggest that a common practice in the allocation of accommodation is the application of minimum income requirements. Here, tenants might be required to show proof of a steady and sufficient monthly income. Furthermore, there are high transaction costs for new private tenants, since they have to make a deposit and, most often, pay a letting agent fee of about 20-40 percent of a monthly rent. Though no figures are available on the scale of discrimination many advertisements for private rental properties specify that the landlord will not accept tenants who receive LHA or other social benefits. The interviews propose that there is a lot of stigmatization in the tenant selection process. On the other hand, high demand for certain properties, particularly two-bedroom properties and bedsits in certain areas of the city, leads to a limited availability of those dwellings and thus limits access to the sector. Similar patterns of discrimination and housing market pressures can be observed in Breda. Private landlords often require tenants to fulfill specific income requirements –e.g. monthly income has to be four times as high as the net rent. Transaction costs for prospective private renters are even higher in Breda, since most tenants have to pay a deposit and a letting agent fee of a one-month rent. Finally, there is shortage of supply at the lower-end of the private market (< €650), which means that particularly younger households and students are affected by high barriers to access the PRS (Interviews Breda, 2010).

To conclude, barriers to access the consumption of social and market renting exist in both rental markets. Yet, taking into account the prioritization of housing need in social housing allocation and the strong stigmatization of low-income households by private landlords, it seems that barriers to access in Coventry are even higher. Here, one might add, that even though income limits have been introduced in social housing allocation in Breda, middle-income households can still access the social housing sector, if they acquire enough waiting time.

How competitive are the two rental markets?

So far, the analysis compared rental housing in the two cities without making a reference to the question of how competitive they are in relation to the model of a perfectly competitive relation between social and market rental housing. Based on a five-point

competitiveness scale, Table 6 classifies the two rental markets and shows that they are quite diverse on most aspects. Only the analysis of supply concentration suggests a similar market environment for all kinds of landlords and tenants. The degree of competitiveness seems to be moderate only, since social housing is highly concentrated in both cases and if taken as a whole, the rental markets are very much dominated by housing associations. One of the main distinctions is the high geographical proximity and thus high competitiveness of social and private renting in Breda. Social housing in Coventry is extremely concentrated; therefore, the competitiveness of spatial concentration is very low.

Table 6: The competitiveness of rental housing markets in Coventry and Breda in comparison to a perfectly competitive market

	Coventry	Breda	Model of perfect competition
Supply concentration	+/-	+/-	++
Spatial concentration	--	+	++
Product differentiation – rent	-	-	++
Product differentiation - quality	+/-	+/-	++
Barriers to entry supply	+	+/-	++
Barriers to access consumption	--	-	++

If we look at rent and quality aspects of product differentiation conjointly, the two rental markets can be similarly classified, however, due to different reasons. In Coventry, a low-rent/low-quality market segment exists in rental housing. This suggests a relatively high degree of competitiveness since at least parts of market renting and social renting are homogeneous. However, taking into account that private tenants often have to pay more for similar qualities and that they lose out property rights, the idea of substitutability can be contested. One might argue that if tenants in Breda rent a private dwelling rather than a social dwelling, they have to pay a lot more; yet they most likely get a dwelling of higher quality and size. Substitutability then becomes a question of willingness to pay for a better product. Barriers to entry supply is the only aspect where Coventry scores higher than rental housing in Breda; at least in theory rental housing is a relatively open market. With regard to barriers to access consumption the degree of competitiveness is low in both cities; however the priority of housing needs makes the social housing in Coventry more residual and the rental market less competitive. Here,

one further crucial aspect is that in Breda both social and private landlords provide accommodation for the student population, a market segment in which we would thus expect fierce competition between all types of landlords.

A final remark is that in comparison to the state of perfect competition between social and private renting both rental markets are relatively uncompetitive. And although Breda is slightly more competitive than Coventry, it seems to be surprising that the Dutch case study city does not score higher overall in relation to the model of a perfectly competitive rental market. After all, the Netherlands has been described as a more competitive rental market than England (see previous remarks). Certainly, the approach of using case study cities for the empirical research might play a substantial role in this outcome, since local markets never reflect the national situation perfectly, even if one selects a typical case. However, my contention is that the market structure framework is just able to give a more precise account of how competitive rental markets are with regard to the relation of social and private renting. This is because previous studies have often remained on an abstract level, where the assessment of competitiveness is less based on empirical material than in the present approach.

V Conclusion

This aim of this paper was to test and evaluate the concept of perfectly competitive market structures as an original and constructive approach to understand the competitive relation between social and private landlords in different housing system contexts. It was demonstrated that the competitiveness of a local rental market in a certain country can be classified in comparison to the perfectly competitive type. As such the model seems to be relatively straightforward and simple to apply, since the collection of empirical material that is necessary to assess supply and spatial concentration issues, the homogeneity of the two services, and regulation aspects of barriers to entry supply and access consumption is a manageable procedure; the approach might thus be repeated for more local markets in the same or other countries. Furthermore, the comparison between the two case study cities in England and the Netherlands has proven to be particularly useful, as it has provided valuable evidence on the questions of how and why the degree of competitiveness differs between the two localities, thereby informing the theoretical value of the model. In this context I propose that using the approach of a 'typical' case study is not the only meaningful way of applying the model in a real world context. Where the aim is not necessarily to make a link between the local market and the national housing system, but just to compare two or more case study cities, or analyze the degree of competitiveness of rental housing in one market, the perfectly competitive market structure still seems to be a constructive way forward. In brief, I think the paper indeed provides a valuable framework to give meaning to competition between rental tenures in contemporary rental markets.

That being said, there are, of course, some unresolved issues. First, although the assessment of the six elements of market structure in the two cities is based on extensive

empirical material, the actual classification within the five-point competitiveness scale remains to a good deal the subjective estimation of the author. Certainly, I tried to justify each classification; yet, it remains debatable whether one or another point could not have been ranked slightly differently. Second, I have already pointed out that the typical case study city approach has its own weaknesses. There is no local market that perfectly represents the national rental market. Hence, there remain some questions of how we can abstract from the local to the national level. Maybe the market structure model should thus be seen more as a tool for comparing local markets rather than national systems?

Third, it was mentioned before that competition has more facets than just the competitiveness of the market environment. In neoclassical competition theory it might be the case that the idea of market structure and competition were merged, and thus one might be inveigled to neglect behavioral and welfare traits of competition. However, as was argued through the Structure-Conduct-Performance of rental housing, the competitive strategies of social and private landlords as well as their perceptions on each other need to be made explicit; similarly, it is important to get a better understanding of the outcomes of a more or less competitive rental market: Do tenants get more choice and satisfy their preferences, and do competitive pressures lead to a more efficient and equitable supply of housing services? These aspects of competition will be examined in the subsequent steps of the wider research project, and only then can we make some definite conclusions on the value of the perfectly competitive market structure model.

References

Arnott, R. (1995): Time for Revisionism on Rent Control?, *Journal of Economic Perspectives* 9 (1) pp. 99-120.

Atterhög, M. & Lind, H. (2004): How does increased competition on the housing market affect rents? An empirical study concerning Sweden, *Housing Studies* 19 (1) pp. 107-123.

Brown, T. and P. King (2005): The power to choose: effective choice and housing policy, *International Journal of Housing Policy* 5(1): 59-97.

Clarkson, K. & LeRoy Miller, R. (1983): *Industrial organization: theory, evidence, and public policy*, McGraw-Hill Auckland, New Zealand.

Coventry City Council (CCC) (2010b): *Coventry Homefinder Policy*, Coventry.

Coventry City Council (CCC) (2008): *Index of Deprivation 2007*, Coventry.

Coventry City Council (CCC) (2006a): *Coventry in Context Update 'To ensure Decent Homes, Housing Choice, and Support for Coventry Citizens'*, Coventry.

Coventry City Council (CCC) (2006b): *Private Sector House Condition Survey 2006*, Coventry.

Doling, J. (1997). *Comparative housing policy*, Macmillan Press, London.

Elsinga, M., Haffner, M., van der Heijden, H. & Oxley, M. (2009): How Can Competition in Social Rental Housing in England and the Netherlands be Measured? *European Journal of Housing Policy* 9 (2) pp. 153-176.

Elsinga, M., Marietta H. & van der Heijden, H. (2008): Threats to the Dutch Unitary Rental Market, *European Journal of Housing Policy* 8 (1) pp. 21-37.

Gemeente Breda (2009): *Vastgoedmonitor 2008 (Real estate monitor 2008)*, Breda.

Golland A, Oxley, M, Brown, T (2006): *Housing Market Areas in the East Midlands*, Melton, East Midlands Regional Assembly.

Haffner, M., Hoekstra, J., van der Heijden, H. & Oxley, M.J. (2009a): Bridging the gap between social and market rented housing in sic European Countries, *Housing and Urban Policy Studies* 33, IOS Press, Amsterdam.

Haffner, M., Hoekstra, J., van der Heijden, H. & Oxley, M.J. (2009b): Substitutability between Social and Market Renting in Four European Countries, *International Journal of Housing Policy* 9 (3) pp. 241-258.

Haffner, M., Elsinga, M. & Hoekstra, J. (2008): Rent Regulation: The Balance between Private Landlords and Tenants in Six European Countries, *European Journal of Housing Policy*, 8 (2), pp. 217-233.

Haffner, M. and P. Boelhouwer (2006): Housing allowances and economic efficiency, *International Journal of Urban and Regional Research* 30(4): 944-959.

Hulse, K., Jones, C. & Pawson, H. (2010): Tenurial “competition”, tenure dynamics and the private rented sector: An international reappraisal, *Journal of European Real Estate Research*, 3(2): 138-156.

Hulse, K. & Pawson, H. (2010): Worlds Apart? Lower-income Households and Private Renting in Australia and the UK, *International Journal of Housing Policy*, 10 (4), pp. 399 — 419.

Kelly, W (1981): A generalized interpretation of the Herfindahl Index, *Southern Economic Journal*, 48 (1), pp. 50-75.

Kemeny, J., Kersloot, J. & Thalmann, P. (2005): Non-profit Housing Influencing, Leading and Dominating the Unitary Rental Market: Three Case Studies, *Housing Studies* 20 (6) pp. 855-872.

Kemeny, J. (1995): *From public housing to the social market: rental policy in comparative perspective*, Routledge, London.

Kemp, P. (ed.) (2007): *Housing allowances in comparative perspective*, The Policy Press, Bristol.

Ministerie van VROM (ed.) (2009): *Huur en verhuur van Kamers 2009/2010 (Rent policy 2009/2010)*, Den Haag.

North, D. (1990): *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge.

O’Sullivan, E. & De Decker, P. (2007): Regulating the private rental housing market in Europe, *European Journal of Homelessness*, 1 (1), 2006.

Oxley, M. (2001): Meaning, science, context and confusion in comparative housing research, *Journal of Housing and the Built Environment*, 16(1): 89-106.

Oz, S. (1995): *Industrial Organization – Theory and Applications*, MIT Press, Cambridge.

Pickvance, C. (2001): Four varieties of comparative analysis, *Journal of Housing and the Built Environment*, 16(1): 7-28.

Priemus, H. (2008): Real Estate Investors and Housing Associations: A Level Playing Field? The Dutch Case, *European Journal of Housing Policy*, 8 (1), pp. 81-96.

Priemus, H. (2010): The Future of Social Housing – The Dutch Case. Paper presented at the ENHR Conference 2010 ‘Urban Dynamics and Housing Change – Crossing into the Second Decade of the Third Millennium’, Istanbul.

Quigley, J. (2003): Transactions Costs and Housing Markets, In: O’Sullivan, T. & Gibb, K. (eds.): *Housing Economics & Public Policy*, Blackwell, Oxford, pp. 56-66.

Retsinas, N. & Belsky, B. (eds.) (2008): *Revisiting Rental Housing – Policies, Programs, and Priorities*, The Brookings Institution: Washington DC.

Rhodes, M. & Mullins, D. (2009) :Market Concepts, Coordination Mechanisms and New Actors in Social Housing, *International Journal of Housing Policy*, 9(2): 107-119.

Rugg, J. & Rhodes, D. (2008): *The Private Rented Sector: its contribution and potential*, Centre for Housing Policy, University of York: York.

Scanlon, K. & Whitehead, C. (eds.) (2007): *Social Housing in Europe I*, LSE: London.

Stephens, M. (2005): An assessment of the British housing benefit system, *European Journal of Housing Policy* 5(2): 111-129.

Tirole, J. (1988): *The Theory of Industrial Organization*, MIT Press, Cambridge.

Walker, R. (2000): The changing management of social housing: the impact of externalisation and managerialisation, *Housing Studies*, 15(2): 281-299.

Internet sources

Coventry City Council (CCC) (2010a): Local Housing Allowance, accessed at 22.07.2010 under <http://www.coventry.gov.uk/ccm/navigation/social-care-and-health/welfare-benefits/housing-benefits/local-housing-allowance/>

Funda (2010): Rent Levels Breda, accessed at 17.09.2010 under www.funda.nl

Ministerie van VROM (2010): Leefbaarometer (Livability Index), accessed at 14.10.2010 under <http://www.leefbaarometer.nl/>

Rightmove.co.uk (2010): Rent levels in Coventry; accessed at 30 April 2010 and 12 August 2010 under <http://www.rightmove.co.uk/property-to-rent/map.html?locationIdentifier=REGION^368&insId=1>

Pararius (2010): Rent Levels Breda, accessed at 17.09.2010 under www.pararius.nl

Tenant Services Authority (TSA) (2010): Find and Compare Landlords, accessed at 18.09.2009 under <http://portal.tenantservicesauthority.org/FindAndCompare.aspx>

Onderzoek en Informatie (O&I) Breda (2010): Bredata buurtmonitor (Statistical publication of the municipality of Breda) accessed at 19.12.2010 under <http://breda.buurtmonitor.nl/>

Appendix 2: Concentration of social and private renting in Coventry wards (2006 & 2010)

Ward	Total number of dwellings in ward (2006)	Number of PR dwellings (2006) ¹	% of overall dwellings in ward (2006)	Number of social dwellings (two largest HAs) (2010)	% of total stock in ward (2010)
Bablake	6,686	200	3.0	439	6.5
Binley & Willenhall	7,811	640	8.2	2312	29.6
Cheylesmore	7,328	790	10.8	478	6.5
Earlsdon	6,396	760	11.9	221	3.4
Foleshill	6,897	1270	18.4	1242	17.4
Henley	8,215	400	4.9	1680	20.6
Holbrook	6,759	650	9.6	553	8.2
Longford	8,236	1000	12.1	1427	17.3
Lower Stoke	7,175	810	11.3	1055	14.4
Radford	7,788	1170	15.0	1362	17.1
Sherbourne	7,090	660	9.3	669	9.2
St Michaels	7,744	1930	24.9	1838	22.9
Upper Stoke	7,383	770	10.4	949	12.5
Wainbody	5,126	310	6.0	71	1.4
Westwood	7,260	600	8.3	1257	16.7
Whoberley	7,165	1040	14.5	264	3.7
Woodlands	7,157	470	6.6	1201	16.7
Wyken	6,992	570	8.2	926	13.0
<i>Coventry</i>	129,208	14040	Ø 10.8	17944	Ø 13.7

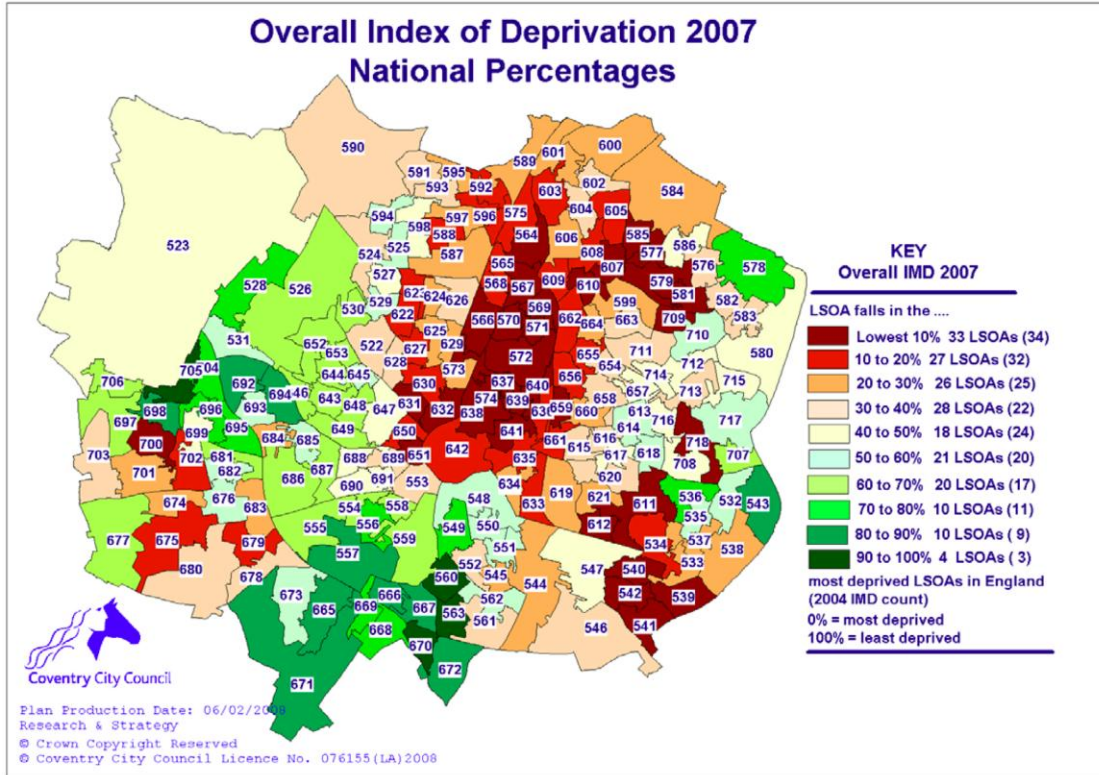
Source: ONS 2010, CCC 2007, data provided by Whitefriars and Midland Heart housing associations, rightmove.co.uk

Appendix 2: Spatial concentration of tenures in housing areas in Breda (2010)

Housing area	Total number of dwellings	% Housing associations of total stock	% Institutional investors of total stock	% Private individuals of total stock
Centre	7,401	32.0	4.4	15.8
Belcrum / Doornboslinie	3,147	40.7	2.5	4.9
Hoge Vucht	7,035	60.0	6.8	0.6
Brabantpark/Heusdenhout	6,791	41.8	2.1	3.5
Zandberg / Sportpark	3,450	5.2	0.9	9.4
Ginneken / Ypelaar / Blauwe Kei	8,977	17.4	4.9	4.9
Boeimeer / Ruitersbos	3,722	9.1	5.7	5.1
Tuinzicht / Westerpark	5,347	41.1	0.1	5.3
Princenhage / Heuvel	6,996	44.2	5.5	2.8
Haagse Beemden Southeast	3,833	23.4	8.7	0.1
Haagse Beemden Northwest	7,048	34.5	1.8	1.7
Bavel	2,060	26.2	0.4	1.5
Ulvenhout	1,895	19.5	0	3.5
Prinsenbeek	4,296	13.2	3.7	0.8
Teteringen	2,111	20.7	0	1.2
Buitengebied	2,183	0.1	0	8.0
<i>Breda</i>	76,292	30.6	3.6	4.6

Source: O&I Breda, 2010

Appendix 3: Overall index of deprivation in Coventry (2007)



Source: CCC, 2008