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Distributive justice of housing in Amsterdam

Jonkman, A.R.

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Chapter 1
Introduction

1.1 Introduction

“We don’t exactly know who lives in our dwellings, they don’t send us a birth card.” This fascinating remark made by a professional of an Amsterdam-based housing association in 2013 is illustrative for the point of departure of this study. On the one hand, a public debate was taking place about the effective use of social housing and the large shares of households with yearly incomes above the entry boundary¹. On the other hand, housing associations have little influence on who lives in their houses. They have some influence on the filtering process in which available dwellings can be reserved for households with certain characteristics (e.g. minimum or maximum household size or income requirements). After moving in, a household may go through different life stages: a new partner may move in, a household member may pass away, a new job may be found, or a source of income may be lost. Landlords are often unaware of these changes occurring after the start of the lease, since eligibility is only tested at the moment of entry. Despite limited knowledge to base policies and strategies on and few possibilities to exert influence, local governments and landlords, try to steer on the match between households and housing units.

Regardless of the knowledge gap regarding the distribution of housing, its development over time and how policy and practice influence this distribution, governments and housing actors have proposed and implemented several new policies and strategies to improve the distributive outcomes of scarce means. Simultaneously, scholars have commented on the development of Amsterdam as a just city in international comparison. This is in part based on more general housing sector characteristics like the large share of social housing (e.g. Fainstein, 2010), while Amsterdam is also considered the most problematic housing markets in the country. This study was initiated to gain knowledge about ‘who gets what?’ and from this empirical base explore how the distribution of housing can be valued in terms of justice. The problem central in this dissertation concerns how the distributive justice as produced through housing can be better assessed making use of empirical evidence and explicit—rather than implicit—normative standards. This can provide a basis for evaluating how policy and other factors influence the socio-spatial distribution of housing. While the primary focus is on social housing as a crucial tenure to secure the provision of the basic good of housing for those most in need, the study is not completely confined to this sector as also private

¹ €34,229 in 2013, yearly indexed. Households with higher incomes are often referred to as *scheefwoners* (skewed tenants).

rented and owner-occupied housing play an increasingly important role in the provision of adequate and affordable housing to all. Especially the importance of private rented housing has increased as a result of new entry requirements (Elsinga & Lind, 2013), post-crisis tightened mortgage requirements and changing labor markets (e.g. an increase in temporary contracts).

Before further elaborating on the research aim and questions (1.4) and research design (1.5), the theoretical point of departure is described starting with social and distributive justice (1.1), before relating distributive justice literature to the field of housing (1.2) and considering how different factors shape the distributive justice of housing (1.3). The complex housing system in the Netherlands and the developing tenure structure and actor setting in Amsterdam are described in a separate chapter (chapter two), to be able to provide a more comprehensive overview.

1.2 Social and distributive justice

The search for social justice in contemporary societies has been omnipresent in urban studies literature since the early 1970s (e.g. Fainstein, 2010; Harvey, 1973; Soja, 2010b). The concept of justice itself is culture-dependent (Yung, 2007) and inherently normative in both the development of theoretical understanding and the pursuit of translating subsequent new insights in effective policy actions. Distributive justice—which concerns the allocation of goods and rights in society in a socially just way—can be regarded a subcategory of substantive justice (Boyne & Powell, 1991; Fainstein, 2005; Sen, 2009), although it may include (or require) elements of just procedures as well (Rawls, 1971; Sen, 2009).

Distributive justice approaches run through different ideological perspectives. Some scholars adopting liberal perspectives concentrate on identifying universal principles of justice (Laws, 1994), while others emphasize context-sensitivity (Young, 1990) or focus on more pragmatic relative improvements of unjust distributions and pursue equality in peoples' capabilities (Sen, 1980, 2009). Scholars building on Marxist theory have criticized liberal theories as being unable to address and evaluate class structures and class inequalities with their individualist approach (MacPherson, 1978; Simpson, 1980). Within the justice discourse, authors like Rawls (1971) and Fainstein (2010) argue that inequalities and the degree of justice should be judged based on the relative economic and social position of the most deprived in society. In the utilitarian view, inequalities are justified as long as the sum of utility increases

(Buchanan, 1990; Rawls, 1971; Sen, 1980; Storper, 2011). Rawls (1971) regards inequalities as acceptable as long as the result is increased welfare for the most deprived in absolute terms (Storper, 2011). Moreover, Frankfurt (1987) argues that inequality is of no moral concern at all, but that what matters instead is whether people have enough. Concerns about increasing inequality (e.g. Piketty, 2014; Stiglitz, 2013) are often also implicitly grounded in concerns for a growing group not having enough or for a subsequent increase in inequality of opportunity (Buitelaar, Weterings, & Ponds, 2017; de Vos, 2015; Frankfurt, 2015).

Distributive approaches to justice also have their limitations and have been criticised by Fraser (1995) for their limited perspective on socioeconomic injustice related to political and economic structures. Injustice related to a lack of recognition of certain individuals or groups (Fraser, 1995) and diversity (Fainstein, 2010; Young, 1990) can easily be overlooked. Furthermore, Sen (2009) argues that basic provisions which are often regarded (e.g. income and housing) are only instrumental to reach more fundamental ends like freedom and real opportunities for good living. Similarly, Nussbaum (2000) identifies ten central capabilities, while Doyal and Gough (1991) focus on physical health and autonomy as the primary ends. Not all individuals possess equal capabilities to transfer means into primary ends like freedom or happiness. However, addressing the distribution of a basic good—including its different qualities—from a justice perspective, instead of focusing on individuals' opportunities and capabilities, can help to better understand its distribution and the influence policy, contextual factors and actor have on it.

1.3 Distributive justice and Housing

As a consequence of the vast distributive inequality of various types of capital providing households with opportunities on the housing market (Boterman, 2012), (re)distributive effects of procedural justice will be limited. Without dismissing the importance of the procedural side, this dissertation is focused on the substantive side. Distributive justice—which is usually about the question 'who gets what?' in different forms and sometimes implicitly or explicitly including 'where?'—involves *recipients* who have a certain need and receive *recipient units* of a good, a *functional rule* based on which the good is distributed, and a *standard* by which the distribution is valued (Cohen, 1987).

Recipient units distributed over recipients through housing consist of a space to eat, sleep and live in; offering protection and privacy (Bratt, Stone, &

Hartman, 2013). It is a space one can use—without restrictions or interference of others—for “basic bodily functions” (Waldron, 1991). Beyond this most elementary level, different housing characteristics can have distinct impacts on one’s life. A vast amount of studies deal with the negative effects of overcrowding on the physical and mental health of inhabitants (see Office of the Deputy Prime Minister, 2004). The physical and social environment of a house also provides qualities (Stone, 1993) which result in (dis)advantages, for example its location in relation to jobs and services (Fincher & Iveson, 2008). Because housing is tied to space, mostly immovable and not ubiquitously available, spatial inequality is unavoidable and is not necessarily unjust. Soja (2010, 2011a, 2011b), however, advocates explicitly emphasizing the spatiality of justice and injustice. He stresses and stresses the importance of these concepts by stating “once spatial injustice is inscribed into the built environment, it is difficult to erase” (Soja, 2010b, p. 41). Furthermore, preferences for housing—and its surrounding—as a consumption good differ. Through housing, individuals can express their identity and provide information about their lifestyles and tastes (Hauge & Kolstad, 2007). People may also have a strong sense of where they belong in the urban space (Gram-Hanssen & Bech-Danielsen, 2004).

Functional rules concern how distribution of a good are determined and not only indicate something about the good and the recipient, but also describe the relationship between the recipient and the distributed good (Cohen, 1987). Most rules differentiate based on certain characteristics of the recipients. Not all allocate the same amount of the good. For example, equality of resources, equality of outcome and equality of opportunity are distinguished (Arneson, 1989; de Vos, 2015). Social housing is mostly distributed according to need and eligibility is determined based on household income (or other concepts related to income) as an indicator of need (Scanlon, Fernández Arrigoitia, & Whitehead, 2015). Units are allocated through different mechanisms, like waiting lists or rankings based on household characteristics (Scanlon et al., 2015). The determination of additional (rent) subsidies is often more complex, for example the household composition is taken into consideration or certain housing cost-to-income ratios are applied. This is for example the case for housing allowance in the Netherlands, which depends on a household’s income, age, composition, equity and the rent-level (Haffner & Heylen, 2016).

The outcome—i.e. the distribution—can be morally judged based on certain standards. In addition to justice, standards of beneficence, equality and

efficiency (Cohen, 1987) can be applied. Equity—while sometimes applied as a synonym for justice or synonymous for the distributive component of justice (e.g. Fainstein, 2010)—can also be regarded as a value, based on which a standard for justice can be formulated (Deutsch, 1975). Therefore, in this dissertation we use the concept of distributive justice in a broad sense encompassing the different possible standards based on which a distribution of housing may be evaluated. Storper (2011) asks whether distributions can simultaneously meet standards of efficiency and justice. He concludes that “there is no single theory capable of defining a single, ordinal scale that combines ‘first-best’ economic efficiency and justice over people and places” (Storper, 2011, p. 4). Depending on the understanding and operationalization of justice, efficient markets are not necessarily the most just and a just distributions may result from inefficient markets. The tension between what are perceived as ideal outcomes and the economic efficiency of (housing) markets producing these outcomes is part of a large body of economic literature on state intervention in markets (Gibb, 2009; Pereira, Schwanen, & Banister, 2017; Rosen, 1983). Analysing the nature of the distribution of an existing housing stock, however, opens up possibilities explore the degree to which households are provided with adequate housing, whilst effectively allocating means. If, however, investments over time are included, there is no first-best solution and it becomes a political valuation of the cost and benefits of investments in comparison to alternative uses of scarce (public) resources.

1.4 Drivers of change for distributive outcomes

Different households—depending on their characteristics and the degree to which they possess different kinds of capital (R. van Kempen, 2002) in combination with the supply of different tenures and distributive mechanisms in use—have different housing opportunities (see figure 1.1). Social housing opportunities depend on a household’s eligibility and position on the waiting list. Access to private rented and owner-occupied housing usually depends on a household’s income and employment status (PBL Netherlands Environmental Assessment Agency, 2014). For owner-occupied housing equity, income and employment status influence the necessity of and the access to mortgage lending. Different policies influence the access and distribution of different tenures amongst different groups of households. Such regulations can be regarded as applications of functional rules. They determine how the good is allocated and distributed. The National Mortgage Guarantee (NHG) is an example of a policy aiming to increase the access of lower income households to mortgages, by insuring mortgage lenders against residual debts in case of

foreclosure (e.g. due to unemployment or divorce) (Teye, Haan, & Elsinga, 2015). The distributive outcome of housing—understood as the distribution of the recipient units over recipients—is affected by the specific distribution of tenures over urban areas, the variety in housing units within tenures (e.g. size, building period, dwelling type, quality), and the match or mismatch between supply and demand. The sale of social housing in specific areas may, for example, limit opportunities for low-income households to gain access to these parts of the city, while high income households may see housing options increase for them. Imperfect allocative mechanisms and other market failures may further impede the efficient and adequate distribution of housing (van Ommeren & van der Vlist, 2016). For households, depending on access to different tenures, the available options—also in spatial terms—may be very limited. Household preferences may further restrict what households perceive as viable options. A lack of opportunity and choice may lead households that cannot afford to move (Stone, 1993) to (temporary) live too expensively (Haffner & Boumeester, 2010), overcrowded (Clark, Deurloo, & Dieleman, 2000; Soaita, 2014), or direct households to areas less in demand (Hochstenbach & Musterd, 2017). The socio-spatial distribution is the outcome of the input factors and process of action that can be judged based on standards of distributive justice.

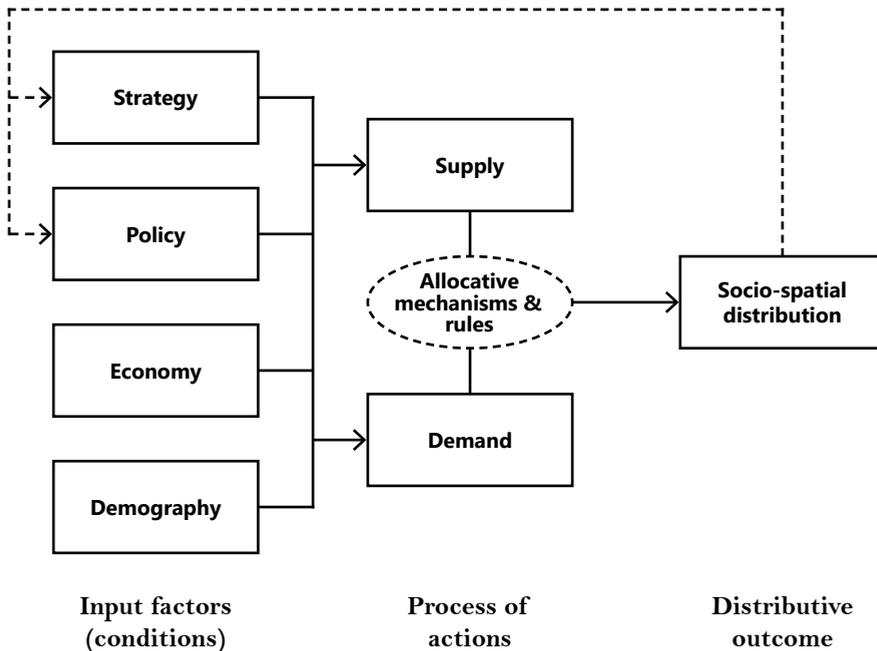


Figure 1.1 Conceptual model for the distribution of housing (Source: author)

Because different households have access to tenures to a different degree, the tenure structure (i.e. the distribution of housing of different quality and ownership over space) has a significant impact on the distributive outcome in spatial terms. Tenures differ in the way construction is financed and prices are determined (Kemeny, 1981). “The stock of housing in the long-run is the result of the accumulation of residential investment over time less depreciation of the existing housing stock” (Caldera Sánchez & Andrews, 2011, p. 22). In theory, a change in demand for a specific tenure will result in a change of prices and supply of that tenure. The investments in different tenures, together shape the tenure structure and are in turn depend on the relative attractiveness of different tenures. While housing itself is a necessary good—with for most people no valid alternatives—different tenures function as substitutes. What may be a good alternative for one household, may nevertheless be inaccessible or not a viable alternative for another. Consequently, demand can vary significantly for different types of dwellings within one tenure and for similar dwellings in different tenures. In the long run, prices depend on the ability of households to pay and thus connects housing to labor markets (Stone, 1993). Mortgage lending regulation—like the maximum allowed loan-to-income ratio—influences the possible leveraging and what households can finance. Tastes also influence demand. An example consists of the preference for homeownership in many Western countries (Krueckeberg, 1999), which has been reinforced by policy (S. Groot, Möhlmann, & Lejour, 2016; Ronald, 2008, p. 7; Vlak, Middelkoop, Schilder, & Eskinasi, 2017).

The supply of housing develops over time through investments in and transfers (e.g. the sale of social housing) between different tenures. The supply of housing is primarily determined by the costs of inputs (e.g. building materials, labor and land) and government regulation, which may result in additional costs. In theory, the quantity ‘produced’ depends on demand and prices. There are, however, substantial differences in responsiveness (Caldera Sánchez & Johansson, 2013). Supply responsiveness is relatively high in Nordic and North-American countries and notoriously low in many European countries, including Switzerland, the Netherlands, Austria and the United Kingdom. Demographic and geographic conditions, planning constraints, conservative behavior of construction companies, especially in case of limited competition, rent controls and limited public investments have all been identified as causes (Arnott, 1995; Barker, 2008; Bramley, 2007; Caldera Sánchez & Johansson, 2011). The influence of supply on house prices is lower in the short run than in the long run, because newly constructed dwellings usually only comprise

a small proportion of the total housing stock (Barker, 2008; Monk, Pearce, & Whitehead, 1996; Paciorek, 2013) and planning and construction processes can be lengthy.

Developments of supply, demand, and how these are brought together through allocative mechanisms—including markets and social housing allocation systems—together determine how the distribution of housing develops. It may, for example, shape the accessibility and affordability for different groups of housing to various parts of the city. Next to economic factors influencing supply and demand (e.g. through interest rate fluctuations), policy can favor or discourage certain housing investments or may make a specific tenure more attractive for certain groups. In addition, strategic decision-making of housing actors can shape supply and affect the relative position of groups on the housing market.

1.5 Research aim and questions

Housing has been acknowledged as a vital part of a just city (Fainstein, 2010) or an important good through which more fundamental aims can be achieved (Basta, 2016a). The extent to which housing systems (extending beyond social housing provision) produce just outcomes (e.g. Uitermark, 2009), how just outcomes in terms of housing can be understood (e.g. Basta, 2016a), and how justice in relation to housing can be assessed (Ferrari, 2012), have received little attention. Mostly, housing takes a modest position within broader perspectives on social justice, spatial justice and the just city. The production and distribution of housing is just one outcome of a broad set of planning practices (S. Campbell, 1996; Fainstein, 2010; Gilderbloom, Hanka, & Lasley, 2009; Soja, 2010a; Uitermark & Nicholls, 2015), or housing is one of several means for the realization of more fundamental ends (e.g. freedom) (Doyal & Gough, 1991; Nussbaum, 2011; Sen, 2009). Approaches to justice have been related to housing more directly by several authors. Scholars have discussed housing policies directly in relation to (inter)national formal rights (Hartman, 1998; King, 2000; Vols, Kiehl, & Sidoli del Ceno, 2015; Yung & Lee, 2012), the tension between property rights and the right to housing (Blomley, 2009; Waldron, 1990, 1991) and the tension stemming from housing as a necessary good and a market commodity (Bengtsson, 2001; Turner & Elsinga, 2005; Yung, 2007).

In this dissertation the path from the translation of general theoretical understandings of justice in terms of housing to how distributive justice in

regard to housing can be assessed and improved is explored. Where studies on the changing distribution of housing often focus on scalar levels ranging from the national to the regional (e.g. Janssen-Jansen & Schilder, 2015; Verbist & Grabka, 2016), the empirical exploration in this study is applied to a small scale at which socio-spatial injustice may manifest itself (Soja, 2010a). At a higher level of scale, inequalities—that may or may not be considered unjust—can be evened out. Moreover, because of large spatial differences due to the regional functioning of housing markets, more generic national policies run the risk of resulting in unwanted and unforeseen effects in specific regional contexts. Focusing on the neighborhood and housing estate level is made possible by the use of a large set of micro-data. In turn, this enables the assessment of socio-spatial differences and the development in parts of the city and explore the socio-spatial impact of changes within the city.

This dissertation concerns the translation and application of abstract ideals for the evaluation of housing market and policy outcomes. The main question is formulated as follows:

RQ **How does the socio-spatial distribution of housing—as the outcome of different input factors and processes of action, and assessed by standards of distributive justice—develop over time?**

The application of standards of distributive justice in the field of housing is explored, in particular in regard to its use for—*ex-ante* and *ex-post*—evaluation of policy. The mechanisms behind the production of distributive outcomes of housing are thought to depend on the interplay between input factors (strategic, policy, economic and demographic) and processes of action in which supply and demand are combined. These elements are incorporated in a study on the development of distributive justice over space and time. Three research questions reflect these intentions (see figure 1.2 for a schematic overview).

SQ1 **How do actors understand and apply normative ideals concerning the socio-spatial distribution of housing?**

The understanding and application of the normative ideal of the undivided city, which is shared among different local housing actors in Amsterdam, is studied in this chapter. The extent to which the ideals provide a starting point for the assessment of distributive justice of housing is explored. The first research question is studied in chapter three.

SQ2 To what extent do changes in the input factors of strategy, policy, economy, and demography, through processes of action, influence the distributive outcome of housing systems?

The second research question is primarily addressed in chapters four and five. In chapter four, the influence of policy change and change in allocative rules are studied on the housing opportunities of (lower) middle-income households. In chapter five, the effects of applying different rent increase strategies on the socio-spatial distribution of housing are assessed. Through the application of backwards forecasting, the influence of economic circumstances are also considered in this chapter. Although not the primary aim of chapter three, the feedback-loop from actors' understanding and judgement of the socio-spatial distribution of housing in terms of it being an undivided city to strategy and policy-making is considered. Thus, moving from right to left in the conceptual model depicted in figure 1.1.

SQ3 How can the distributive justice of the socio-spatial distribution of housing be conceptualized and assessed?

The third research question is the main focus of chapters six and seven, in which an analytical model for the normative assessment of the socio-spatial distribution of housing is developed. Since the normative judgement of the distribution depends on what is provided to different households, household-level micro-data are used. In addition to developing the model, an exploratory empirical assessment of the socio-spatial distribution of social housing in Amsterdam, the Netherlands is also considered in these chapters. While chapter six is limited to a 'snapshot' of a single moment in time, chapter seven considers the development over time against the background of policy change and OECD and IMF policy reform recommendations. The empirical groundwork for chapter six was laid by three reports written for three Amsterdam housing associations (Jonkman & Janssen-Jansen, 2015a, 2015c, 2015b) and a related article in Dutch (Jonkman, Janssen-Jansen, & Hoetjes, 2014). In chapter five, part of the evaluative model is already used for an *ex-ante* evaluation of the effects of possible rent increase strategies on the socio-spatial distributive outcomes.

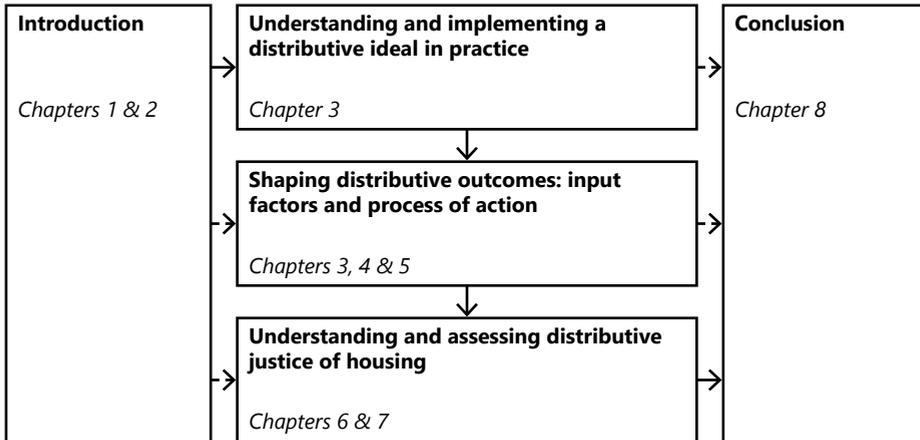


Figure 1.2 Schematic overview of the dissertation (Source: author)

Together, chapters three to seven provide input to answer the main research question. These chapters will address the main research question on two levels. First, the question can be answered in an empirical manner. The distribution of socio-spatial justice over time is assessed in different stages in the separate chapters. Second, the interaction and mechanisms between input factors, processes of action and distributive outcomes are studied by scrutinizing changes in input factors and processes of action and changes in the socio-spatial distribution of housing, as valued through different standards of justice.

1.6. Research design

For this dissertation a mixed methods approach is applied in which Amsterdam is studied as case in point from different perspectives and with varying units of analysis. This approach was selected because housing justice is produced in a complex interplay of contextual and behavioral factors. The phenomenon cannot be separated from its context (Flyvbjerg, 2006; Yin, 2009). A small-N study is preferred because of the focus on the development of a new approach on the evaluation of distributive justice in relation to housing, demanding prioritizing internal validity and insight in causal mechanisms over external validity and causal effects (Gerring, 2007). Depending on the purpose of the different sub-studies, the units of analysis differ, resulting in different numbers and types of respondents, observations, data (sources) and methods of analysis.

Given the practical motivation expressed in the first paragraph of this

introduction, Amsterdam is the investigated city in a case-study research. As discussed above an important aim of the study is to better understand the production of distributive justice in regards of housing. For this purpose, Amsterdam, serves as a case in point to which the developed evaluative framework is applied and tested.

Amsterdam as a case has is of interest because of the discrepancy between the city regarded as a competitive global city with a high degree of social justice and a relatively 'just' housing market (Fainstein, 2010; Gilderbloom et al., 2009) compared to the view of the city within the Netherlands as facing severe problems, especially in regards to affordability and accessibility for low and middle income groups. Amsterdam has a large share of social housing, but at the same time high real-estate prices in many parts of the city. There is a high diversity among neighborhoods, the housing market is changing and there is an ongoing concern about the accessibility of the city—or the lack thereof—for different types of households. Amsterdam as a case in point provides a dynamic context in which policy makers and housing actors have aimed to change the tenure structure and seek ways to improve the match between households and housing units and its spatial distribution. The city thus provides an important and challenging case to apply an evaluative framework to that aims to assess the socio-spatial distributive outcomes of housing.

Chapter three takes an institutional approach by analyzing the position of different actors—individually and within coalitions. Chapter four starts with an analysis on the level of the Netherlands. Next to the city-region of Amsterdam, the smaller city-regions of Alkmaar and Zwolle function as embedded cases. After assessing regional difference and the effects of generic national-level policy change, the chapter zooms in on the three city-regions. The remaining chapters, five, six and seven, are focused on the quantified distributive outcomes making use of household level micro-data.

Methods, data and dissertation structure

Key characteristics of the five sub-studies that make up this dissertation are presented in table 1.1. Chapter three presents a study focused on the understanding and application of a shared normative ideal by different housing actors. To conduct the study, policy documents were analyzed and members of the organizations were interviewed. Together with chapter four and five, different input factors and allocative mechanisms and rules and its

relations with the distribution of housing over space and time are explored. In the subsequent chapters six and seven the framework for the assessment of distributive justice is developed. In chapters four to seven the units of analysis are households. Household scores are aggregated to the housing estate, neighborhood and city district level. Besides, household types are compared. The high household density allowed in some instances for the presentation of findings on a sub-neighborhood level of scale. In chapter five housing units are analyzed.

A combination of different quantitative and qualitative methods is used in the subsequent chapters (see below). For chapter three, triangulation took place by combining interviews and qualitative content analysis. Because of the longitudinal approach, respondents were approached who have been active within the sector for a significant number of years. Several respondents worked at their current employer for the entire period observed (since 2004). For chapters four, interviews were conducted for the same purpose. For the two chapters in which the evaluative model is developed, chapters six and seven, workshops and presentations for professionals were used for triangulation. This proved especially valuable for deciding on the use of norms in regards to what is affordable and physically adequate and for the interpretation of the empirical outcomes, for example as the year of completion, former policy changes or conducted renovations may explain specific outcomes.

Desk research and literature study

Desk research and literature study are part of every all the upcoming chapters until the conclusion. Literature is especially studied for the development of the evaluation framework of distributive justice of housing (chapters six and seven). Theoretical studies on social and distributive justice and accounts of justice applied to housing are studied to explore the field and how theories of justice relate to the field of housing.

Qualitative content analysis

For the content analysis conducted of chapter six, policy documents, year reports and vision statements published by the City of Amsterdam, the AFWC, the Tenants' Union—alone or in cooperation—stemming from the 2004 to 2014 period, were selected. These reports were—in a similar fashion as the interviews conducted for this chapter—analyzed making use of a coding-list and Atlas Ti-software.

Ch.	Short title	Aim	Cases	Units of analysis	Housing sector	Methods
2	Introduction to housing policy	Sketching the policy context				Desk research
3	Housing investments and the undivided city	Studying the understanding and application of a normative ideal	Amsterdam	Organization, individual, professional	All tenures	Qualitative content analysis; semi-structured interviews
4	The 'squeezed middle'	Exploration of spatial effects	Embedded cases: Amsterdam, Alkmaar, Zwolle	Household	Middle-income private rental and owner-occupied	Spatial analysis; semi-structured interviews
5	Rent increase strategies	Framework application and prospective evaluation	Amsterdam	Household	Social	Forecasting
6	Identifying distributive injustice	Framework development and retrospective evaluation	Amsterdam	Household	Social	Literature study; spatial analysis; workshop
7	Patterns of distributive justice	Framework development and retrospective evaluation	Amsterdam	Household	Social	Literature study; spatial analysis; workshop

Table 1.1 Sub-study characteristics

Semi-structured interviews

For the chapters three and four semi-structured interviews are conducted making use of a topic list and a small number of prepared questions. In chapter four a very small number of five interviews with professionals from housing associations and municipalities are applied for triangulation. In these in-depth interviews, outcomes of the desk-research and qualitative analysis are verified.

In chapter three, interviews with twelve representatives from housing associations, the AFWC, the City of Amsterdam, and the Tenants' Union of Amsterdam are conducted next to a qualitative content analysis to explore the understanding and application of the *undivided city*-concept by individual actors and within the housing governance arena. The interviews were analyzed by coding the transcripts in Atlas Ti. Reports per code were used to analyze the position of different respondents in regards to different subjects.

Spatial analysis

For the analysis on the development of distributive justice in chapters two and three micro-data are used. A large set of micro-data is formed by combining housing unit data of all social housing units in Amsterdam with household data of all the tenants of these dwellings. The housing unit data are made available after permission of the housing associations in Amsterdam and provided by the Amsterdam Federation of Housing Associations (AFWC) and the Platform Woningcorporaties Noordvleugel Randstad (PNRW). These data comprise variables on the location, quality and rent of the units. It was the first time this database of the combined housing associations was made available for research. Privacy regulation and political sensitivity of information—i.e. housing associations and the City negotiate about performance requirements of housing associations—had so far resulted in housing associations being reluctant to provide data. The large data-set was checked for inconsistencies, especially in regards to address information, in order to maximize the number of units to be coupled successfully to other data. A new national address administration system will likely make this step obsolete now. The data was made available for every even year from 2004 to 2014. These data were coupled to household data in the secured environment of Statistics Netherlands (CBS). The data were anonymized available for analysis and results could only be used at an aggregate level to secure the privacy of households. At the beginning of the project, income data were not yet available for 2014. Therefore, chapter six looks at the data of 2012, while 2014 is added in chapters five and seven.

Aggregated to a minimum of 10 units development of the match between households and housing units are assessed for different geographical areas ranging from the city as a whole down to the housing estate-level. All output has been controlled by Statistics Netherlands on the risk of identification of individuals or households. Also distinction is made in regards to household type. Descriptive statistics on different scalar levels are mapped making use of ArcGIS.

For chapter four, exploring the housing opportunities of middle-income households is done by mining data from the market leading public housing offer website. The resulting data-set containing housing units on offer that are in reach of middle-income households is confronted with an open-source livability index per neighborhood. Again, ArcGIS is used. In this chapter, a stepped-approach is applied moving down from the national level to the neighborhood level for three selected municipalities.

Workshops

Two workshops with Amsterdam-based housing professionals (from the City, the Association for Housing Associations (AFWC) and different Amsterdam housing associations) were conducted, during which the parameters of the evaluative framework were debated and provisional output was discussed on its validity and explanation. In additions, provisional results were presented and discussed at different occasions at three different housing associations and at the AFWC.

Forecasting

For the study presented in the fifth chapter, results for different possible rent increase strategies are backwards forecasted. Instead of forecasting results from 2014 onwards, results of strategies that may be applied at the moment are forecasted for the years for the 2008 to 2014 period in order to be able to compare these forecasting results with the observed development under former circumstances. The basis for this exercise of backwards forecasting are the data described under *spatial analysis*.

Before the research questions are addressed in chapters three to seven, the next section will provide a sketch of the broad development of housing in Amsterdam and an overview of policy and regulation that influence the development of the tenure structure.