Planning initiative: Promoting development by the use of options in Amsterdam

Korthals Altes, Willem K.

DOI
10.1016/j.landusepol.2019.01.025

Publication date
2019

Document Version
Final published version

Published in
Land Use Policy

Land Use Policy 83 (2019) 13–21

Contents lists available at ScienceDirect

Land Use Policy

journal homepage: www.elsevier.com/locate/landusepol

Planning initiative: Promoting development by the use of options in Amsterdam

Willem K. Korthals Altes

TU Delft, Faculty of Architecture and the Built Environment, Department OTB - Research for the Built Environment, Julianalaan 134, 2628, BL, Delft, Netherlands

ARTICLE INFO

Keywords:
Land development
Real options
Urban governance
Amsterdam
Land assembly

ABSTRACT

The development of existing urban areas is needed to prevent urban sprawl. Several factors, including land assembly holdouts and the option value of land, contribute to landowners' lack of initiative to develop designated sites. Urban governance measures, however, may provide the necessary solutions. By implementing policies that promote inner-city development, i.e. by providing serviced plots for building development, urban expansion can be controlled to ensure that it does not result in a higher scarcity of land. This paper presents the case of Amsterdam, where policies ensure the timely securing of land appropriate for building and the use of option contracts to promote development. The results are discussed and their relevance to other contexts demonstrated.

1. Introduction

Urban sprawl has a number of environmental effects. It threatens biodiversity by the loss or fragmentation of habitats (Seto et al., 2011), and may result in extinction of endangered species (McDonald et al., 2008). Urban sprawl has, furthermore, negative impact on issues as social equity, i.e., urban areas with compact development show lower income inequality than urban regions that combine fast growth with sprawl (Lee, 2011), and transportation by causing congestion and extra costs of infrastructure provision (Brueckner, 2000). Sprawl is a complex phenomenon affecting the density of urban areas, the continuity of development, the concentration, clustering, centrality and nuclearity of development, mixed use of urban areas versus separation of functions and the proximity within an area (Galster et al., 2001). The policy relevance of these dimensions of sprawl differ by context of development (Angel et al., 2011). The idea that development taxes are a 'simple remedy' (Brueckner, 2000) to the loss of open spaces, have been refuted as the value of open space is too complex and too diverge to be captured by a single tax measure and planning measures are necessary to supplement a tax (Korthals Altes, 2009).

Planning policies may, e.g., through the use of urban containment policies, address urban sprawl (Halleux et al., 2012). Planning is potentially effective in two ways. Firstly, planning allows for the implementation of land use regulations to prevent urban development from taking place on locations that are not preferred, such as, sites outside urban containment areas. Secondly, planning may have a role in promoting development in urban containment areas, for example, on brownfield sites (Beames et al., 2018). A combined planning strategy may prove to be most effective. Stringent urban containment land use regulations in rural areas without policies to unlock development potential inside the urban containment areas may not only result in social and economic issues relating to housing shortages, but also in a public opinion – and policies – to lift bans on urban sprawl to release the pressure. Planning policies that balance the prevention of sprawl and the promotion of inner-urban development may yield other outcomes. After all, a large part of the population may support planning policies to curb urban sprawl in principle (Pleger, 2017; Romano et al., 2017; Whittemore and BenDor, 2018). People may not appreciate the loss of authentic landscapes as a result of new developments, especially if there are potential alternatives to provide sufficient space for housing and economic development. However, literature has primarily focused on "defining and measuring planning restriction" (Gurran and Bramley, 2017b, 102), suggesting that this is essentially what planning does. Issuing growth controls, as Anthony (2017) indicates, could result in higher development costs due to a higher scarcity of land, higher costs of development, extra costs to meet regulations, and less building quota. Moreover, if less sprawl results in a higher environmental quality, this extra amenity may boost demand, making housing less affordable (Anthony, 2017). Therefore, if positive planning policies for inner city areas aim to fully compensate for these effects, they must adhere to the following agenda: release land for development, ascertain affordability in relation to development costs and regulatory costs, ensure that enough building takes place and, finally, cater for even more development if planning results in a higher quality of the

E-mail address: w.k.korthalsaltes@tudelft.nl.

https://doi.org/10.1016/j.landusepol.2019.01.025
Received 24 April 2018; Received in revised form 20 December 2018; Accepted 22 January 2019
Available online 28 January 2019

environment due to the attractiveness of the city. Thus, by following this agenda, positive planning within urban areas can overcome land use regulations that curb urban sprawl if positive planning boosts supply to such an extent that it compensates the negative effects on supply by planning regulations and the demand it creates by extra amenity.

This agenda, however, may prove more complex to organize than just prohibiting development at certain sites. Prohibition merely involves the establishment and enforcing of a rule. Provision, on the other hand, requires a complex mix of development initiative, investment, building capacity, infrastructure provision and allocation of developed sites, all of which involve considerable transaction costs (Alexander, 2001). In a real-world context, the political priority of having ample and affordable housing and commercial spaces is likely to be higher than the need to contain urban sprawl. Therefore, if governance fails to compensate for the negative effects of urban containment policies through positive measures to promote ample space for concentrated development, lifting development bans and allowing sprawl might be the most convenient choices (Gurran and Phibbs, 2013). Therefore, policies to tackle urban sprawl may be far more complex than just prohibiting unwanted development. The aim of this paper is to present and learn from a case that appears to take positive steps towards providing development opportunities in a concerted way. The paper especially discusses whether the use of options as instrument to promote development can be an addition to the toolkit local authorities may use to stimulate development on sites designated for development.

The idea that a concerted approach of promoting and preventing planning policies is necessary has a long tradition in planning thinking. As follow-up to Ebenezer Howard's introduction of the concept of garden cities (Howard, 1902), both ideas of new towns and green belts were formulated and put into practice (Millward, 2006). A "crucial performance criterion" for urban containment policies is "the tightness of growth boundaries or greenbelts and the resulting amount of developable land inside the contained area" (Siedentop et al., 2016, 73). Land that is suitable for development depends not only on the size of the land, but also on the organizational and governance structures that enable its use. Within and beyond urban areas, urban sprawl can go hand in hand with the abandonment of properties, vacant land and inactivity in the regeneration of brownfields. There is a considerable amount of German literature on the building land paradox (Davy, 1996) which states that while, on the one hand, more and more land is zoned for building, less building takes place as landowners hoard their building land (Hengstermann and Gerber, 2015). This hoarding fits to the analysis of land as option, which shows that more land use restrictions "may lead to an increase in building activity" (Titman, 1985, 506), "because the gains that come from waiting to build at a higher density are lower where there is a fixed density limit" (Murray, 2018, 5). Government policies often do not follow this logic. Government responds to stagnation in building by lifting planning regulations that restrict building even more, which in return results in even lower building production. Different policy responses have been sought to overcome the building land paradox. One of these responses seeks to prevent permissive legislation without obligations and to link the classification of building land with an obligation to build (Hengstermann, 2017). A notorious example of this is the Spanish case prior to the Global Financial Crisis (GFC). Firstly, in this case, congruent with existing ideas on the building land paradox (Davy, 1996), planning policies were deregulated, allowing for development (Roca Cladera and Burns, 2000). Secondly, land development regulations were changed, allowing for the parcellation and servicing of land without landowners' consent (Muñoz Gielen and Korthals Altes, 2007), resulting in a massive sprawl and zombie developments after the GFC hit (Laitos and Martin, 2015). Furthermore, enforcement is an issue. Formally, enforcement entails either the loss of the right to build (i.e. planning polices will not be implemented), or the expropriation of land (Hengstermann and Gerber, 2017) which requires initiative by the local authority. This initiative can take the form of an active land policy (Hengstermann and Gerber, 2015) which governs (sometimes compulsory) purchasing (Korthals Altes, 2014) of land from landowners who are not willing to implement the building plans.

This paper presents the case of the city of Amsterdam, where there seems to be a certain success in creating development opportunities inside the already built-up areas of the city, and considers whether these activities relate to addressing underlying mechanisms that prevent concentrated development. The advantage of studying existent practices is the insight they provide to what can be achieved in a certain context. Such a study is thus more grounded in practice than studies focusing on promising, or even revolutionary, innovative instruments. In relation to these innovations, the theory may be simple but putting the theory into practice might "face some significant challenges" (Posner and Weyl, 2017, 70). Real existing cases are put into practice. The disadvantage, however, is that it is difficult to unravel the contributions of various instruments and the specific contexts of the case. Moreover, real existing practice is never utopian, so the merits of the approach can also be debated.

In what follows, urban governance and underlying mechanisms are introduced, followed by the presentation of the Amsterdam case study and the two aspects under investigation, i.e. the land development practices and the use of option contracts. Finally, the results are discussed.

2. Underlying mechanisms and urban governance

2.1. Underlying mechanisms

Several underlying mechanisms may explain mismatches between the politically envisaged and the actual provision of functions within an area. One of these mechanisms is that market power and political power may be in different hands. In a democratic society, political power rests, ultimately, with the citizens of the state. Market power, however, may not be divided equally amongst citizens. Additionally, some power may rest in the hands of absentee landowners who possess no formal political powers at all. This may result in a considerable portion of the population not having the economic power/means to acquire property in priority locations. Their needs are not transferred to demand as defined by the market, but may result in political pressure. After all, people without economic powers possess political powers, which may prevent the enforcement of development bans allowing the further existence and development of informal settlements (Potsiou, 2014; Auerbach et al., 2018). Alternatively, some people may have an economic demand for property, for example having a pied-à-terre in many cities worldwide, which, politically, may not be considered a need. The strength of market powers may result in an undersupply of politically-defined, needed properties. A further political concern is that there may be issues in transferring politically-defined needs at a city level to the political decisions allowing development at certain sites. The legal and governance system may afford more political power to direct neighbours opposing development than to planning and development policies that favour development (Schleicher, 2013). In some cases, this can be seen as a compensatory mechanism for the lack of rights and even the prospect of residents being displaced if redevelopment takes place (Bang Shin, 2008). Moreover, a lack of development at the city level may boost housing prices (Glaeser et al., 2005) and, consequently, result in gentrification (Mangin, 2014). The improvement of the rights and prospects of residents in cases of redevelopment at the project level could provide political support to redevelopment and help release gentrification pressures on urban housing markets (Korthals Altes, 2016), and thus ensure that redevelopment projects provide more decent housing conditions than staying put (Hartman, 2002/1984).

Although Smith (1791) proposed that an 'invisible hand' ensures that promoting individual interests will automatically align with political interests, there are several processes that may result in a failure of

alignment. In the contexts of land, property markets and planning there are several factors contributing to this failure of alignment. These include the limited supply of land, the limitations in substitutability, the use of land as an investment asset, and the public interests connected to land and transaction costs (Alexander, 2014). These issues result in holdouts. For effective use of the land, it is often necessary to assemble different property rights, which results in synergistic value or marriage value (Sim et al., 2002; Kien Hwa, 2008; Boydell and Baya, 2011). This synergistic value becomes available only once the last right is assembled, and thus may lead to situations in which the initiative does not pay. On the contrary, it may be worthwhile to wait until many of the rights are assembled to access a larger part of this synergistic value. Indeed, the last right being assembled may, according to game theoretical experiments (Goswami et al., 2017), receive half of the development gains. This holdout issue may consequently fuel suburbanization (Miceli and Sirmans, 2007; Isaac et al., 2016). A second concern is that this process of land development can be seen as exercising a call option (Womack, 2015; Murray, 2018), i.e., "real options theory provides the core basis of land economics" (Murray, 2018, 2). Vacant land" … derives its value from the fact that it gives its owner the right, without obligation, to erect a rent-producing structure upon the payment of the construction cost necessary to develop the property." (Geltner et al., 1996, 21) An option is priced, resulting in an extra economic hurdle between supply and demand. The size of the premium differs. Quigg (1993) found a premium of 1% to 30% (medium 6%) of the theoretical land value; later studies came to comparable results (Womack, 2015; Razak et al., 2018). The development of land destroys this option value. Option prices are generally higher in contexts of uncertainty (Titman, 1985) or high volatility (Cunningham, 2006), i.e. in areas where price developments are unstable. Volatility is higher in urban areas with good access to local amenities (Beracha et al., 2016), i.e. in attractive urban areas. Therefore, in addition to the demand for uses there is an urban demand for speculation that may contribute to a mismatch between need and the demand for development. For a developer the character of land as option makes that there is an incentive to delay (Murray, 2018). Developers often differ according to their willingness to exercise development options (Dong and Sing, 2017). Therefore, who controls the land is relevant for whether development occurs. This means that the allocation of land for development does not necessarily or immediately result in private initiative to develop the area, i.e. "…in practice many long-term landowners do not have a particular incentive to bring it forward now, rather than at some future date" (Gurran and Bramley, 2017a, 370). Similarly, Gut et al. indicate that "land remains underutilized because revenues can be generated without building on the land" (Gul et al., 2018, 82) Urban governance could address this issue.

2.2. Urban governance

In a market economy, demand plays an important role in the allocation of properties like housing. In addition, there is a politically and legally defined need for housing, for example the human right to shelter (Kenna, 2016, 1 st ed. 2014) and, in many contexts (Oren et al., 2016 1 st ed. 2014), a constitutional right to housing. Both national governance, which controls welfare provision and taxation systems (Ong, 2017), and local governance play a role in ensuring the alignment of needs and demand so that needs are met.

There are political differences between systems in which only the social minimum is a matter of government intervention (Kenna, 2016, 1 st ed. 2014), systems in which wider needs are addressed, such as those of key workers including teachers, nurses and police officials (Raco, 2008), and more general governance systems based on the idea of a social-market economy grounded in the view that markets, although efficient in resource allocation, do not deliver morally just outcomes (Müller-Armack, 1978). These outcomes may also not be sustainable and may contribute to urban sprawl (Turner, 2017). Regulations often play a role in these governance arrangements, and could, for example, prohibit the withdrawal of housing from residential use, or prescribe provision of a certain percentage of affordable housing in any new development (De Kam et al., 2014). Because regulations do not force development (Valtonen et al., 2018), however, it is necessary to address needs to implement solutions to initiate development at preferred locations.

Previous literature has established that there are large differences between governance systems. Many authorities use public powers to address the mismatch between need and demand. Some of these actions tend to intensify the complexities of condensed urban development, like large lot zoning or building regulations that do not allow for the use of cheaper building methods and which could drive the housing need to illegal alternatives (Patel et al., 2018). However, several systems address the issue of affordable housing. Well-known are the S106 agreements for affordable housing provision in England (Morrison and Burgess, 2014) in which public law regulations that do not allow as-of-right development are used to oblige a minimum share of affordable housing. In some cases, though, there are no policies to address urban sprawl (Stan and Sanchez-Azofeifa, 2017) or policies are insufficient to break through "path dependency in land development that reinforces sprawl" (Turner, 2017, 9). However, differences in sprawl can be attributed to differences in governance and spatial planning (Pagliarin, 2018). Therefore, specifics of planning policies matter for patterns of sprawl. It is essential to break through holdouts by bringing necessary holders of property rights together and by creating windows of opportunity that make the option to wait less attractive. This paper focuses on a governance context that is more likely to be able to address these issues. This paper thus provides insight into the potential mechanisms by which governance may chase private initiative.

3. Introduction to the Amsterdam case study

The focus of this case study is the land development policies used in Amsterdam. Amsterdam has been described as "grounded utopian actual city" (Fainstein, 2005, 127) and forms part of the greater Netherlands' context, which is "admired internationally for its striking capacity to create and manage a built and natural environment through well-coordinated public investment, arising from political processes that have sought consensus among different segments of Dutch society" (Healey, 2007, 37). This context assumes the following: (1) that the national governance context has already established a relatively low difference between income groups by provision of social services and a centralized tax system; (2) that urban authorities are provided with legal powers which they use to address the mismatch between need and demand; (3) that policies are used to create initiative for urban development and redevelopment; and (4) that policies create windows of opportunities to make it less interesting to wait. Amsterdam is thus a context in which "market forces, cultural movements and government interventions intermingle in much more complex ways" (Healey, 2007, 73) than traditional planners imagined. Karadimitriou et al. (2013) also conclude that the Amsterdam case study is "more successful" based on a comparative analysis of mixed-use urban regeneration cases in France, the Netherlands and the UK, i.e.

"…the main lesson to be drawn from the cases is that, paradoxically, effective delivery of policy outcomes through private development and market mechanisms does not equal a lesser role for the state or smaller risk for the public sector. On the contrary, it requires a strong and active public sector, willing to take its fair share of the right risks and uncertainties, namely those that can be best managed through a long-term strategic perspective." (Karadimitriou et al., 2013, 328)

This paper focuses on the use of two instruments by the city of Amsterdam. The first is the policy of timely public land assembly based on strategic planning. According to this policy, planning is not just zoning, prohibiting development, but is also a powerful active involvement tool for the City in providing redevelopment space. The

second is the option instrument that the City has introduced to ascertain timely development of land being disposed to developers. This instrument is an alternative to a land disposal agreement with an obligation to acquire the land. Together these instruments address the issues of holdouts and of land as options that may encourage landowners to wait and not develop.

The case study is based on publicly available sources on land development in Amsterdam. These sources include studies, reports and letters of the Executive to the City Council and material published in tenders, which usually include many detailed annexures to projects for market operators interested in offering a position in land development. The paper is not based on internal confidential sources. Preparations on market transactions are the exception to open government requirements as market operators could use this information to weaken the bargaining position of the local authority (Kang and Korthals Altes, 2015a). Matters of financial interest to the local authority, however, are shared (Kang and Korthals Altes, 2015b), which means that information about the use of land policy instruments is often best accessible in the financial domain in specific rules and regulations which govern the provision of information on land development and their public discussion in the council.

4. Land development policies

Amsterdam has an established tradition of strategic planning in which the provision of ample locations for development is key. In a dense city like Amsterdam, the provision of adequate and affordable housing is an ongoing issue on the political agenda. Strategic planning policies have been studied for decades by planning scholars, providing an overview of its development, starting in the 19th century (Postuma et al., 1989), their relation to national planning policies (Van der Heiden and Wallagh, 1991), the interorganizational coordination necessary to develop an idea of metropolitan regional planning (Alexander, 2002) and the development of the city region as a voluntary policy network (Levelt and Janssen-Jansen, 2013). Amsterdam has adopted a ground lease policy in 1896 (Van Veen, 2005), which implicates that the City has not only a long tradition of active land policy (Savini et al., 2016) by acquiring raw building land, servicing it and disposing it as ground lease to developers and housing associations, but also that it owns a large part of urban land (Gautier and Van Vuuren, 2017). The provision of sufficient housing in the city region is a continuing issue of regional and municipal strategic planning (Fig. 1). Since the adoption of a compact city policy in the 1980s, the issue of adequate production in the city itself is on the agenda. Unlike the rhetoric Savini (2016; 2017) analysed (see also Savini et al., 2016), which was a response to the GFC, the practice of Amsterdam planning has focused primarily on taking the initiative to commence development by an active land policy. The announced shift to an organic approach in which a central steering role of the local authority will be replaced by 'creating opportunities for incremental urban development that build upon a series of civic initiatives' (Rauws, 2016, 351), to avoid the risk of active involvement, has not yet been enacted due to the pressure on Amsterdam property markets being answered by a political decision to be actively involved in providing land for development. This active involvement includes that the local authority acquires property rights, services the land and disposes the land based on ground leases (Ploeger and Bounjouh, 2017) to developers, end users and housing associations.

The City of Amsterdam (Gemeente Amsterdam, 2016c) developed a "Koers 2025" (Course 2025) as a development strategy to build 50,000 dwellings between 2016 and 2025. This is not a dormant strategy, i.e. one that 'waits and sees' what comes from society, but focuses on chasing existing projects to build housing and developing new plans and projects to add to a project portfolio. The portfolio's size is determined by the project's timeframe (acknowledging that some projects will be delayed), and thus it is necessary to have extra capacity to ensure that development takes place in good time. Remarkably, these ambitions seem to have been met, at least in the first years of this programme (Fig. 1; Table 1). Most of these dwellings have been built in districts along the major ring road or at the northern shore of the IJ (Table 1; Fig. 2).

The speedy success in the first years of the programme was aided by the City's shelving of several projects during the GFC, and the activation of these before publication of the *Koers 2025* programme. Also, very helpful was that the GFC had no structural crisis impact in Amsterdam. Population grew by 14% between 2007 and 2017, and further growth is anticipated in the coming decade (CBS, 2018b). Similarly, job growth increased by 16% between 2008 and 2016 (CBS, 2018b), and housing transaction prices have also grown considerably. The Amsterdam housing market is 'booming' (Boelhouwer, 2017, 601) since 2015. The 2017 median transaction prices are approximately a third higher than the 2007 prices (NVM, 2018). These prices began increasing only in 2013 when the transaction prices were 10% below those of 2007. Looking at this relatively low dip in the price does no justice to the magnitude of the GFC effects on the Amsterdam housing market. The largest effect was on the quantity of housing transactions (Fig. 3). Sellers were hesitant to lower their offering price and preferred to wait until prices increased.

In the *Koers 2025*, in addition to the 30,000 dwellings in current projects and 15,000 accelerating projects, 17 areas were identified as future housing locations in which approximately 50,000 houses were to be developed (Gemeente Amsterdam, 2016c). Except for IJburg 2 with 9500 dwellings to be built on 163 ha of reclaimed land (Kinder, 2011; Steenbergen and van Bemmelen, 2011), all identified locations are on previously developed land within the city, including densified

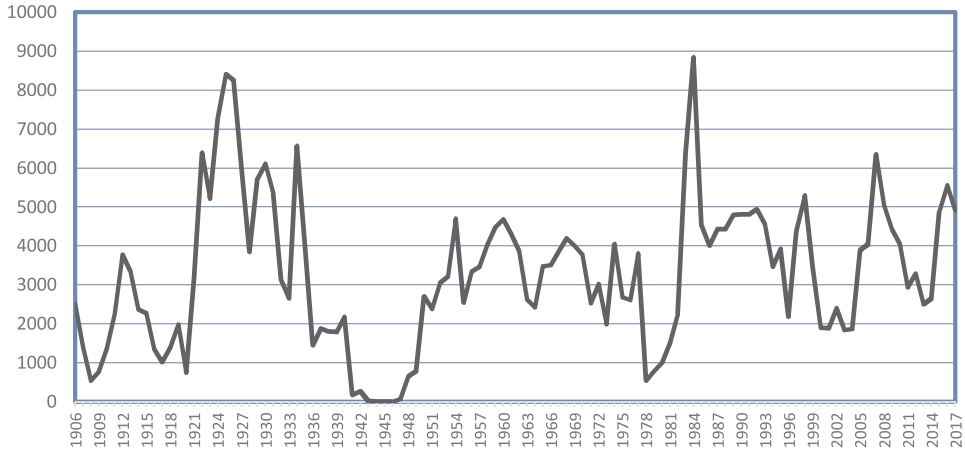

Fig. 1. Number of dwellings produced on plots of land in Amsterdam between 1906 and 2017 (OIS Amsterdam, 2018).

Table 1
Dwellings completed 2016–2017, tenure, form and amounts of dwellings replaced by these projects per district (Gemeente Amsterdam, 2018b).

District	Dwellings completed	Tenure				Form		Dwellings replaced
		social-rent	mid-price rent	high-price rent	sale	Houses	Apartments	
DX01 Centrum-West	111	0%	0%	6%	94%	0%	100%	19
DX02 Centrum-Oost	291	7%	0%	17%	76%	3%	97%	1
DX03 Westerpark	394	0%	0%	6%	94%	1%	99%	44
DX04 Bos en Lommer	858	61%	9%	9%	21%	3%	97%	176
DX05 Oud-West/De Baarsjes	215	47%	0%	35%	18%	0%	100%	1
DX06 Geuzenveld/Slotermeer	307	42%	4%	0%	54%	78%	22%	24
DX07 Osdorp	219	38%	32%	0%	30%	30%	70%	62
DX08 De Aker/Nieuw Sloten	48	75%	0%	0%	25%	25%	75%	1
DX09 Slotervaart	2860	68%	16%	4%	12%	3%	97%	487
DX10 Oud-Zuid	150	26%	1%	49%	24%	3%	97%	3
DX11 Buitenveldert/Zuidas	963	6%	43%	19%	32%	0%	100%	2
DX12 De Pijp/Rivierenbuurt	336	0%	62%	4%	34%	0%	100%	26
DX13 Oud-Oost	683	52%	28%	0%	20%	8%	92%	81
DX14 Indische Buurt/Oostelijk Havengebied	523	36%	10%	37%	16%	0%	100%	380
DX15 Watergraafsmeer	423	0%	74%	6%	21%	2%	98%	40
DX16 IJburg/Zeeburgereiland	1895	40%	6%	10%	44%	10%	90%	0
DX17 Noord-West	261	28%	0%	0%	72%	84%	16%	4
DX18 Oud-Noord	1565	51%	7%	24%	19%	2%	98%	1
DX19 Noord-Oost	308	30%	0%	21%	49%	38%	62%	0
DX20 Bijlmer-Centrum	80	46%	0%	0%	54%	44%	56%	0
DX21 Bijlmer-Oost	275	2%	50%	0%	48%	98%	2%	62
DX22 Gaasperdam/Driemond	25	64%	36%	0%	0%	0%	100%	0
Overall relative	100%	41%	17%	12%	31%	11%	89%	11%
Sum absolute	12790	5243	2153	1476	3918	1364	11426	1414

outmoded office areas, redeveloped harbour areas and former locations of public facilities. Also in regional perspective, the process of urban de-concentration has been brought to a halt (Table 2).

The City follows an active strategy to promote this extra building. The strong upward movement of house prices allows the city of Amsterdam, by far the largest landowner of the city, to reap extra benefits from the leasing of ground. These proceeds can be used to invest in planning, allowing for the financing of new developments. In

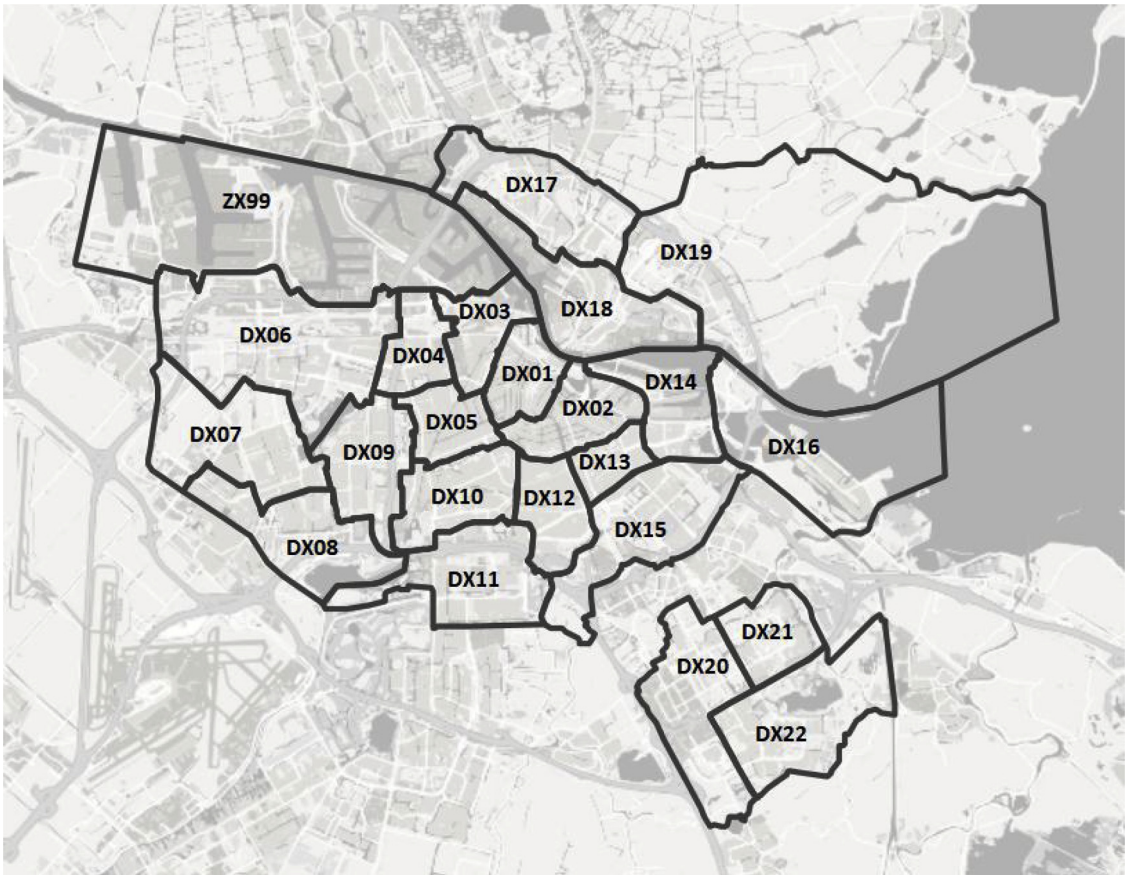

Fig. 2. Districts and district codes in Amsterdam (Gemeente Amsterdam, 2016b).

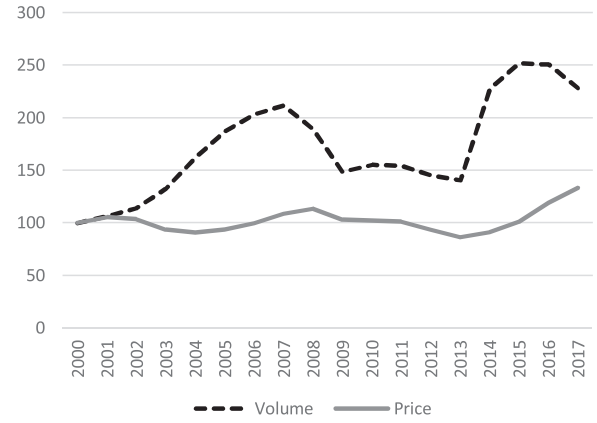

Fig. 3. Development of transaction volume and real transaction prices of housing in Amsterdam (2000 = 100) (CBS, 2018a; CBS and Kadaster, 2018).

Table 2
Development of housing stock in Metropolitan Region Amsterdam (MRA) versus development in the City of Amsterdam (CBS, 2018b).

End of year	MRA	City of Amsterdam		MRA without Amsterdam	
	dwellings	dwellings	share in MRA	dwellings	share in MRA
2012	1,109,168	411,127	37.1%	698,041	62.9%
2013	1,121,033	413,697	36.9%	707,336	63.1%
2014	1,128,847	416,966	36.9%	711,881	63.1%
2015	1,138,133	424,390	37.3%	713,743	62.7%
2016	1,144,719	428,035	37.4%	716,684	62.6%
2017	1,155,294	432,715	37.5%	722,579	62.5%

MRA includes NUTS 3 areas of Groot-Amsterdam, Zaanstreek, IJmond, Agglomeratie Haarlem, Het Gooi en Vechtstreek and local authorities of Almere and Lelystad.

these policies, there is a large emphasis on building affordable housing. The current municipal policy is to develop 40% social rented housing, 40% affordable housing and only 20% free market housing (Gemeente Amsterdam, 2017b). The idea underpinning *Koers 2025* is that the local authority will lead in terms of quantity and timing, and quality and finances. In the financial context, rising prices are considered a positive development, as the local authority sees it as providing a boost to its land portfolio value, but also because the market is eager to accommodate a growth of new dwellings. The designation of a location in *Koers 2025* does not provide a change in legal land use status. Planning procedures, including processes of public participation, may result in some locations not being developed in the short term. It is important to note that if a location is designated for building in this formal sense, the local authority will take the initiative to promote development. The City will take steps to service the land to produce buildable parcels, including specific terms and conditions for the building to be developed on this parcel. The local authority, however, does not accept responsibility to commission the buildings (except for public buildings like primary schools) itself and therefore transfers the plot to the market. Here the land is disposed in a ground lease system (Ploeger and Bounjouh, 2017) in which one of the conditions is that the land must be used according to its designated use. Tenants have shifted from choosing a payment of the full land value in 89% of the cases in 2010, towards a preference of annual rent payments in 83% of the cases in 2017, which has resulted in concerns regarding the City's debt levels. This debt is, according to the Executive, tenable, due to measures taken to reduce debt (Gemeente Amsterdam, 2018a). It may be, however, a future concern.

5. Options

In October 2012 the city of Amsterdam launched a pilot to use option agreements to dispose of building land (Gemeente Amsterdam, 2012). An option provides a developer the right to establish and realize a plan, providing that the city approves the plan and all requirements and conditions are met, and that this all happens within the timeframe set in the option. To obtain this right to purchase, the developer pays a price over and above the land price. This land price is a market price based on the residual value of the land and is set in the request for proposals leaving uncertainty about its later development. If developers do not meet the conditions and do not purchase the land, they lose the option price paid. If they do develop, the price paid is not deducted from the land value. Therefore, it is additional to the land price. The way the system usually works is that the City publishes a request for proposals in which land price is fixed. Furthermore, the local land use plan has been amended to allow development and there are strict guidelines on the programme including affordable housing and onsite parking that must be realized. The economic operators compete on option prices (this has a weight of up to 70% of the award criteria), on energy performance (this must be at least 30% according to policies set by the Council (Gemeente Amsterdam, 2016d)), and sometimes on other criteria relating to the quality of the proposal.

The City has published an evaluation of its policies which indicates that building contractors who were also developer were offering high option prices (Gemeente Amsterdam, 2016a). In response to concerns about whether these high prices would discourage less solvent companies to bid for proposals, the Executive indicated, without proving evidence, that high land prices could have a moderating effect on option prices. Based on the evaluation the City decided to use this instrument as standard practice (Gemeente Amsterdam, 2016d).

For the local authority, these option premiums are additional proceeds that, in 2016, amounted to €98 million, which comprises 25% of the total proceeds (€386 million) of land development for this year (Gemeente Amsterdam, 2017a). This amounts to one third of the land value.

In the previous system these option premiums were not paid. Economic operators had to pay a deposit and had a duty to purchase the land. During the GFC, many developers were not purchasing land. However, it was not so easy to end contractual relationships due to breach of contract (Gemeente Amsterdam, 2012; 2016a). Developers preferred to maintain their positions in building land and would defend it in breach of contract proceedings by, for example, pleading that the GFC was a force majeure, which would indemnify the developer from breach of contract. Whether the courts decided in favour of such a plea was not the main point according to the City. Even if a court case resulted in a success, it would have been time consuming to get the land due to lengthy proceedings. During this time, the public-development aims were not met. In an option contract, however, the situation is different. Terminating the option forms part of the contract itself and there is no breach of contract or legal proceedings. It is part of the agreement between the City and the economic operator and the City can issue a new request for proposals, which is open to all parties. The economic operator only chooses to step into an opportunity. The evaluation, by the City itself, also revealed that developers liked this business approach as it is congruent with what they expect from a deal (Gemeente Amsterdam, 2016a). Whether developers like it or not, they offer high premiums resulting in extra proceeds for development activities that were not part the budgetary prognoses of the City. The City can use these extra proceeds to invest in other projects to ensure the timely development. This is done by a revolving fund (*vereveningsfonds)* that is fed by proceeds of land development projects and is used to finance new land development projects (Savini, 2017). At the end of 2016 the reserve in this fund was € 356 million (Gemeente Amsterdam, 2017a). Most importantly, the option contracts encourage developers to undertake the project swiftly, resulting in that they quicker produce

building plans for review by the municipality to ensure their conformity with set requirements for the necessary construction permits. After the approval of the building plan, the City transfers the land to the economic operator with a duty to build and to pay a monetary fine for every month that development is behind schedule (Gerechtshof Amsterdam, 2016).

The evaluation provides some insight into how this instrument has been used. It works well if the land price is fixed, if companies compete based on option price and in a tender situation, but it does not work well in one-to-one negotiations, as it is difficult to attain an established price. According to the evaluation, professionals within the local authority view the clarity about the date by which the option must be executed as a real advantage.

"The initiative to exercise the option rests with the market party. The municipality does not have to enforce compliance. Therefore, the market party has a large interest in progress, which is not always the case with the classic ways of working." (Gemeente Amsterdam, 2016a, p. 12–13; *translation by author*)

It is crucial not only that the option prompts market operators to be swift in producing building plans, but also that the local authority keep the terms of reviewing the building plan. It is therefore necessary to have a fully established public law framework, e.g., a local land use plan that allows development, to review the building application.

6. Discussion and conclusion

Amsterdam appears to make a good effort to address the agenda presented in the introduction. The City makes land available for development, formulates a housing programme to ascertain affordability and covers many regulatory costs before it offers land to developers. Option contracts encourage building to take place and the programme takes into account the steadily increasing population growth (because of the attractiveness of the City) as the basis for the housing programme. It is important to note that Amsterdam is no utopia and the scarcity of land due to the attractiveness of the City, especially, is a major factor that results in further issues of affordability.

The Amsterdam case shows that taking initiative may help develop a concerted approach to planning and development. On the one hand, stringent planning controls do not allow development in many green areas around the city, and developments must meet very specific requirements regarding design and housing programmes. On the other hand, the city uses its land portfolio and organizational powers to service land for development and to bring land to the market. Recent experiences in Amsterdam reveal that developers tend to be slow in taking initiative, as the development option may be more expensive than developing the land. To counter this, the municipality has since introduced an option instrument. This issue of slow building is also elsewhere an issue and have resulted in the establishment of a Review of Build-Out Rates in the UK (Letwin, 2018).

A yearly income of €98 million (revenue received by Amsterdam received from its land development options in 2016) seems not to be very realistic for options in most other contexts as it is necessary that the local authority owns a large land portfolio. The specific character of land involves that the authority cannot reasonably go short on such an option. It cannot provide the developer with just a plot of land located somewhere in the city, but must provide the specific plot of land that is addressed by the option and for which the developer has prepared a building plan based on the option acquired and it is therefore necessary to be able to provide this plot. However, the revenue highlights the fact that the incentive to delay development, provided by option value, is a real issue that needs to be addressed to ensure the swift uptake of plans if this is considered necessary for spatial development. A time-limited option has a value that goes beyond the residual value of a building plot, and may be even higher if the option is perpetual, i.e. if a landowner is completely free to decide when to develop a plot of land. Furthermore, it shows that the right to develop (without obligation) has a certain value that goes beyond the value that can be gained by developing the land now.

Ensuring the swift production of building plots, the speedy drawing up of building plans and development on these plots are important features necessary to break the building land paradox of a combination of land use plans and regulations allowing more room for building and less housing production. A paradox that can be explained by the option character of building land (Titman, 1985; Murray, 2018). On the contrary, by using option contracts to dispose building land, the assignment of land for building purposes results in actual building on the land. This allows for less land to be assigned for building purposes, which may result in more housing production, which is the inverse of the traditional building land paradox. Necessary for this is that planning becomes more than just assigning land for specific purposes and involves a process of chasing the land and related parties to ensure that land will be put to use. Because other parties cannot be forced to invest in building on these properties and may be unwilling to sell properties voluntarily, it may also involve a willingness to use compulsory purchase powers.

In the Amsterdam context, planning policies seem to support the idea that planning can create extra amenities (Anthony, 2017), which boosts demand and further counters sprawl. However, it may also result in issues of affordability. In the Amsterdam context, these are addressed by building housing in a mix of affordable and expensive housing. Building housing in this mix may not be sufficient to ensure adequate affordable housing in the City, as there are also developments in the existing housing stock. Although the rent of sitting tenants is generally well protected, new tenants in the private rental sector often have to pay higher rents, resulting in fewer options for affordable housing in the existing housing stock.

The question then is how much of this experience is transferrable to other contexts. There is a distinction between technical and political transferability. Many legal systems allow a larger role for authorities in taking initiative in development. Moreover, in several contexts, local authorities previously tended to fulfil a larger role before they were influenced by neo-liberal ideals. There may be no political willingness to take these actions. As indicated in the introduction, previous literature (Pleger, 2017; Romano et al., 2017; Whittemore and BenDor, 2018) suggests that there is in principle often public support for policies that prevent authentic landscapes being unnecessarily destroyed by new developments. Developing policies that expand inner city development including building affordable housing may result in widespread societal support, as it resembles a specific form of an urban growth machine (Molotch, 1976). Using this terminology also indicates that promoting inner city growth has, in addition to promising perspectives to provide an alternative for urban sprawl, potential negative impacts in terms of gentrification and other issues arising from developing investment opportunities in areas where people live and may be displaced by these processes. An important aspect to consider are the rights of current dwellers in terms of new developments (Korthals Altes, 2016) and whether or not policies are indeed guided by the idea of providing affordable housing. If this is not the case, a situation can occur in which the city centres become islands for the affluent elite and the suburban peripheries becomes areas for the poor. This situation does not only occur in cities in the global South (Home, 2014; Siame, 2016; Watson, 2016; Shen, 2017). It may also reflect historically developed urbanization patterns elsewhere, such as in Belgium (De Decker, 2011), and more novel developments of the suburbanization of poverty in many urban areas (Randolph and Tice, 2014; Cooke and Denton, 2015; Bailey and Minton, 2017) including Amsterdam (Hochstenbach and Musterd, 2018). This also suggests that taking the initiative may help to ensure that planning will be undertaken and land will not be left idle, but it is no panacea.

Finally, government initiative may only work to limit urban sprawl if the authorities consider the limitation of sprawl to be important. Landowners may successfully lobby to allow development on their sites

(Murray and Frijters, 2016). Alternatively, land-based financed local authorities may promote the acceleration of sprawl if they provide extra funding (Liu et al., 2018). This is generally an issue as local authorities may also be tempted by the idea that inner-city redevelopment is more costly than greenfield development, without considering the many external effects of sprawl, which do not form part of development costs.

References

Alexander, E.R., 2001. A transaction-cost theory of land use planning and development control toward the institutional analysis of public planning. Town Plan. Rev. 72 (1), 45–75.

Alexander, E.R., 2002. Metropolitan regional planning in Amsterdam: a case study. Town Plan. Rev. 73 (1), 17–40.

Alexander, E.R., 2014. Land-property markets and planning: a special case. Land Use Policy 41 (0), 533–540.

Angel, S., Parent, J., Civco, D.L., Blei, A., Potere, D., 2011. The dimensions of global urban expansion: Estimates and projections for all countries, 2000-2050. Prog. Plann. 75 (2), 53–107.

Anthony, J., 2017. Housing price effects of growth regulations: a concise taxonomy. Int. J. Hous. Policy 17 (4), 569–590.

Auerbach, A.M., LeBas, A., Post, A.E., Weitz-Shapiro, R., 2018. State, society, and informality in cities of the global south. Stud. Comp. Int. Dev. 53 (3), 261–280.

Bailey, N., Minton, J., 2017. The suburbanisation of poverty in British cities, 2004-16: extent, processes and nature. Urban Geogr. 1–24.

Bang Shin, H., 2008. Living on the edge: Financing post-displacement housing in urban redevelopment projects in Seoul. Environ. Urban. 20 (2), 411–426.

Beames, A., Broekx, S., Schneidewind, U., Landuyt, D., van der Meulen, M., Heijungs, R., Seuntjens, P., 2018. Amenity proximity analysis for sustainable brownfield redevelopment planning. Landsc. Urban Plan. 171, 68–79.

Beracha, E., Gilbert, B.T., Kjorstad, T., Womack, K., 2016. On the relation between local amenities and house price dynamics. Real Estate Econ.

Boelhouwer, P., 2017. The role of government and financial institutions during a housing market crisis: a case study of the Netherlands. Int. J. Hous. Policy 17 (4), 591–602.

Boydell, S., Baya, U., 2011. Formulating an equitable pro-development compensation model - lessons from the pacific. COBRA 2011 - Proceedings of RICS Construction and Property Conference. pp. 1523–1543.

Brueckner, J.K., 2000. Urban Sprawl: diagnosis and remedies. Int. Reg. Sci. Rev. 23 (2), 160–171.

CBS, 2018a. Jaarmutatie consumentenprijsindex, Centraal Bureau voor de Statistiek, Voorburg/Heerlen. (date accessed 29/03/2018). https://opendata.cbs.nl/statline/#/CBS/nl/dataset/70936NED.

CBS, 2018b. Regionale Kerncijfers Nederland, Statistics Netherlands. (date accessed 14/12/2018). http://statline.cbs.nl.

CBS, Kadaster, 2018. Bestaande koopwoningen; regio; verkoopprijzen, Centraal Bureau voor de Statistiek, Voorburg/Heerlen. (date accessed 29/03/2018). https://opendata.cbs.nl/statline/#/CBS/nl/dataset/81885NED.

Cooke, T.J., Denton, C., 2015. The suburbanization of poverty? An alternative perspective. Urban Geogr. 36 (2), 300–313.

Cunningham, C.R., 2006. House price uncertainty, timing of development, and vacant land prices: evidence for real options in Seattle. J. Urban Econ. 59 (1), 1–31.

Davy, B., 1996. Baulandsicherung: Ursache oder Lösung eines raumordnungspolitischen Paradoxons? [Building land provision: Cause or Solution of a planning policy paradox?]. ZfV Zeitschrift für Verwaltung 21 (2), 193–208.

De Decker, P., 2011. Understanding housing sprawl: The case of Flanders, Belgium. Environ. Plan. A 43 (7), 1634–1654.

De Kam, G., Needham, B., Buitelaar, E., 2014. The embeddedness of inclusionary housing in planning and housing systems: insights from an international comparison. J. Hous. Built Environ. 29 (3), 389–402.

Dong, Z., Sing, T.F., 2017. Developers' heterogeneity and real estate development timing options. J. Prop. Invest. Financ. 35 (5), 472–488.

Fainstein, S.S., 2005. Planning theory and the city. J. Plan. Educ. Res. 25 (2), 121–130.

Galster, G., Hanson, R., Ratcliffe, M.R., Wolman, H., Coleman, S., Freihage, J., 2001. Wrestling Sprawl to the Ground: defining and measuring an elusive concept. Hous. Policy Debate 12 (4), 681–717.

Gautier, P.A., Van Vuuren, A., 2017. The Effect of Land Lease on House Prices, University of Gothenburg, School of Business, Economics and Law, Gothenburg. (date accessed 08/05/2018). https://gupea.ub.gu.se/bitstream/2077/51240/1/gupea_2077_51240_1.pdf.

Geltner, D., Riddiough, T., Stojanovic, S., 1996. Insights on the effect of land use choice: the perpetual option on the best of two underlying assets. J. Urban Econ. 39 (1), 20–50.

Gemeente Amsterdam, 2012. Pilot met overeenkomsten met een afnamerecht van de grond in erfpacht voor een vooraf bepaalde periode (in plaats van afnameplicht zoals nu gebruikelijk) [Pilot with contracts with a right to purchase ground lease land within a pre-determined time limit (instead of a duty to purchase as is currently usual)]. College van Burgemeester en Wethouders, Amsterdam (date accessed 24/04/2018). https://amsterdam.raadsinformatie.nl/document/3177199/1/document.

Gemeente Amsterdam, 2016a. Evaluatie Pilot Optiecontract: Evaluatie en aanbevelingen van contracten met een afnamerecht in plaats van een afnameplicht [Evaluation Pilot Option Contract: Evaluation and Recommandations of Contracts With Purchase Right Instead of Purchade Duty]. Deaprtment Grond en Ontwikkeling, Amsterdam (date accessed 24/04/2018). https://amsterdam.raadsinformatie.nl/document/3177198/1/document.

Gemeente Amsterdam, 2016b. Gebieden22. Onderzoek, Informatie en Statistiek, Amsterdam (date accessed 26/11/2018). https://maps.amsterdam.nl/gebiedsindeling/?LANG=en.

Gemeente Amsterdam, 2016c. Koers 2025: Ruimte voor de stad [Course 2025: Space for the City], Amsterdam. (date accessed 15/02/2018). https://www.amsterdam.nl/publish/pages/754969/koers_2025_-_ruimte_voor_de_stad_versie_april_2016.pdf.

Gemeente Amsterdam, 2016d. Notitie Herijking beleidsregels over selectieprocessen voor gronduitgifte in gebiedsontwikkeling 2016 [Memorandum Re-evaluation Policy Rules on Selection Proceedings for Land Disposal and Land Development 2016]. Gemeenteblad, Amsterdam (date accessed 24/04/2018). https://zoek.officielebekendmakingen.nl/gmb-2016-139536.pdf.

Gemeente Amsterdam, 2017a. Eindejaarsrapportage Fondsen 2016 [Year-end Report Funds 2016], Department Grond en Ontwikkeling, Amsterdam. (date accessed 24/04/2018). https://repository.officiele-overheidspublicaties.nl/externebijlagen/exb-2017-21096/1/bijlage/exb-2017-21096.pdf.

Gemeente Amsterdam, 2017b. Spelregels voor woningbouwprogrammering [Rules for the Programming of Housing Construction]. (date accessed 16/02/2018). https://amsterdam.raadsinformatie.nl/document/5502910/1/09012f9782091b0a.

Gemeente Amsterdam, 2018a. Raadsbrief: Informatie stadsschuld Amsterdam 2017, Amsterdam. (date accessed 29/03/2018). https://amsterdam.raadsinformatie.nl/document/6215579/1/09012f978231aa97.

Gemeente Amsterdam, 2018b. Woningbouwlannen, Grond en Ontwikkeling, Amsterdam. (date accessed 21/11/2018). https://maps.amsterdam.nl/open_geodata/excel.php?KAARTLAAG=WONINGBOUWPLANNEN&THEMA=woningbouwplannen.

Gerechtshof Amsterdam, 2016. Hoger beroep, Gerechtshof Amsterdam. 01/11/2016, (date accessed 10/04/2018). http://deeplink.rechtspraak.nl/uitspraak?id=ECLI:NL:GHAMS:2016:4314.

Glaeser, E.L., Gyourko, J., Saks, R.E., 2005. Why is Manhattan so expensive? Regulation and the rise in housing prices. J. Law Econ. 48 (2), 331–369.

Goswami, G., Noe, T., Wang, J., 2017. Buying up the block: an experimental investigation of capturing economic rents through sequential negotiations. J. Law Econ. Organ. 33 (1), 139–172.

Gul, A., Nawaz, M., Basheer, M.A., Tariq, F., Raheel Shah, S.A., 2018. Built houses as a tool to control residential land speculation - A case study of Bahria Town, Lahore. Habitat Int. 71, 81–87.

Gurran, N., Bramley, G., 2017a. Conclusion: reuniting planning and housing policy. Urban Planning and the Housing Market: International Perspectives for Policy and Practice. Palgrave Macmillan, UK, London, pp. 363–385.

Gurran, N., Bramley, G., 2017b. Relationships between planning and the housing Market. Urban Planning and the Housing Market: International Perspectives for Policy and Practice. Palgrave Macmillan, UK, London, pp. 85–120.

Gurran, N., Phibbs, P., 2013. Housing supply and urban planning reform: the recent Australian experience, 2003–2012. Int. J. Hous. Policy 13 (4), 381–407.

Halleux, J.-M., Marcinczak, S., van der Krabben, E., 2012. The adaptive efficiency of land use planning measured by the control of urban sprawl. The cases of the Netherlands, Belgium and Poland. Land Use Policy 29 (4), 887–898.

Hartman, C., 2002/1984. The right to stay put. In: Hartman, C. (Ed.), Between Eminence and Notoriety. CUPR Press, New Brunswick (NJ), pp. 120–133.

Healey, P., 2007. Urban Complexity and Spatial Strategies: Towards a Relational Planning for Our Times. Routledge, London/New York.

Hengstermann, A., 2017. Baugebot und Bauverpflichtung – Vergleich der Regelungen im deutschsprachigen Planungsrecht [Obligation to build – Comparison of regulations in German-speaking planning laws]. fub - Flächenmanagement und Bodenordnung 79 (4), 153–159.

Hengstermann, A., Gerber, J.-D., 2015. Aktive Bodenpolitik - Eine Auseinandersetzung vor dem Hintergrund der Revision des eidgenössischen Raumplanungsgesetzes [Towards active land policy - the new Swiss Spatial Planning Act]. fub - Flächenmanagement und Bodenordnung 77 (6), 241–250.

Hengstermann, A., Gerber, J.-D., 2017. Die faktische und explizite Bauverpflichtung - eine Rezension des bodenpolitischen Instruments in Recht und Praxis [The actual and explicit obligation to build a review of a land policy instrument in law and action]. UPR - Umwelt- und Planungsrecht 37 (1), 16–23.

Hochstenbach, C., Musterd, S., 2018. Gentrification and the suburbanization of poverty: changing urban geographies through boom and bust periods. Urban Geogr. 39 (1), 26–53.

Home, R., 2014. Shaping cities of the global south: legal histories of planning and colonialism. In: Parnell, S., Oldfield, S. (Eds.), The Routledge Handbook on Cities of the Global South. Routledge, Abingdon, pp. 75–85.

Howard, E., 1902. Garden Cities of To-Morrow. Swan Sonnenschein & Co, London.

Isaac, R.M., Kitchens, C., Portillo, J.E., 2016. Can buyer "mobility" reduce aggregation failures in land-assembly? J. Urban Econ. 95, 16–30.

Kang, V., Korthals Altes, W.K., 2015a. Flexibility and public accountability in public land development projects in progress. Eur. Plan. Stud. 23 (8), 1609–1626.

Kang, V., Korthals Altes, W.K., 2015b. Public accountability in planning for new housing areas. Proceedings of the Institution of Civil Engineers - Municipal Engineer 168 (4), 235–243.

Karadimitriou, N., De Magalhães, C., Verhage, R., 2013. Housing delivery through mixed-use urban regeneration schemes: a European comparison. In: Leary, M.E., McCarthy, J. (Eds.), The Routledge Companion to Urban Regeneration. Routledge, London, New York, pp. 320–329.

Kenna, P., 2016. 2014) introduction. In: Kenna, P. (Ed.), Contemporary Housing Issues in a Globalized World, 1st ed. Routledge, Abingdon, pp. 1–35.

Kien Hwa, T., 2008. Sources of net present value gains in the acquisitions of corporate real estate. J. Corp. Real Estate 10 (2), 121–129.

Kinder, K., 2011. Planning by intermediaries: making cities make nature in Amsterdam.

Environ. Plan. A 43 (10), 2435–2451.
Korthals Altes, W.K., 2009. Taxing land for urban containment: reflections on a Dutch debate. Land Use Policy 26 (2), 233–241.
Korthals Altes, W.K., 2014. Taking planning seriously: compulsory purchase for urban planning in the Netherlands. Cities 41 (A), 71–80.
Korthals Altes, W.K., 2016. Forced relocation and tenancy law in Europe. Cities 52, 79–85.
Laitos, J.G., Martin, R., 2015. Zombie subdivisions in the United States and ghost developments in Europe: lessons for local governments. Wash. J. Environ. Law Policy 4 (2), 314–357.
Lee, S., 2011. Metropolitan growth patterns and socio-economic disparity in six US metropolitan areas 1970-2000. Int. J. Urban Reg. Res. 35 (5), 988–1011.
Letwin, O., 2018. *Independent Review of Build Out Rates: Draft Analysis*, Ministry of Housing. Communities and Local Government, London (date accessed 14/12/2018). https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718878/Build_Out_Review_Draft_Analysis.pdf.
Levelt, M., Janssen-Jansen, L., 2013. The Amsterdam metropolitan area challenge: opportunities for inclusive coproduction in city-region governance. Environ. Plann. C Gov. Policy 31 (3), 540–555.
Liu, Y., Fan, P., Yue, W., Song, Y., 2018. Impacts of land finance on urban sprawl in China: the case of Chongqing. Land Use Policy 72, 420–432.
Mangin, J., 2014. The New Exclusionary Zoning. Stanford Law Pol. Rev. 25 (1), 91–120.
McDonald, R.I., Kareiva, P., Forman, R.T.T., 2008. The implications of current and future urbanization for global protected areas and biodiversity conservation. Biol. Conserv. 141 (6), 1695–1703.
Miceli, T.J., Sirmans, C.F., 2007. The holdout problem, urban sprawl, and eminent domain. J. Hous. Econ. 16 (3-4), 309–319.
Millward, H., 2006. Urban containment strategies: A case-study appraisal of plans and policies in Japanese, British, and Canadian cities. Land Use Policy 23 (4), 473–485.
Molotch, H., 1976. The City as a Growth Machine: Toward a Political Economy of Place. Am. J. Sociol. 82 (2), 309–332.
Morrison, N., Burgess, G., 2014. Inclusionary housing policy in England: the impact of the downturn on the delivery of affordable housing through Section 106. J. Hous. Built Environ. 29 (3), 423–438.
Müller-Armack, A., 1978. The social market economy as an economic and social order. Rev. Soc. Econ. 36 (3), 325–331.
Muñoz Gielen, D., Korthals Altes, W.K., 2007. Lessons from Valencia: separating infrastructure provision from land ownership. Town Plan. Rev. 78 (1), 61–79.
Murray, C.K., 2018. Developers pay developer charges. Cities 74, 1–6.
Murray, C.K., Frijters, P., 2016. Clean money, dirty system: connected landowners capture beneficial land rezoning. J. Urban Econ. 93, 99–114.
NVM, 2018. Marktinformatie Koopwoningmarkt, Nederlandse Vereniging van Makelaars en Taxateurs in onroerende goederen, Nieuwegein. (date accessed 15/02/2018). https://www.nvm.nl/marktinformatie/marktinformatie.
OIS Amsterdam, 2018. Amsterdam in Cijfers, Onderzoek, Informatie en Statistiek gemeente Amsterdam. (date accessed 16/02/2018). https://www.ois.amsterdam.nl/publicaties/#.
Ong, C.B., 2017. Tipping points in Dutch big city neighbourhoods. Urban Stud. 54 (4), 1016–1037.
Oren, M., Alterman, R., Zilbershatz, Y., 2016. 2014) housing rights in constitutional legislation: a conceptual classification. In: Kenna, P. (Ed.), Contemporary Housing Issues in a Globalized World, 1st ed. Routledge, Abingdon, pp. 141–158.
Pagliarin, S., 2018. Linking Processes and Patterns: Spatial Planning, Governance and Urban Sprawl in the Barcelona and Milan Metropolitan Regions. *Urban Studies* in presshttps://doi.org/10.1177/0042098017743668).
Patel, B., Byahut, S., Bhatha, B., 2018. Building regulations are a barrier to affordable housing in Indian cities: the case of Ahmedabad. J. Hous. Built Environ. 33 (1), 175–195.
Pleger, L.E., 2017. Voters' acceptance of land use policy measures: a two-level analysis. Land Use Policy 63, 501–513.
Ploeger, H., Bounjouh, H., 2017. The Dutch urban ground lease: A valuable tool for land policy? Land Use Policy 63, 78–85.
Posner, E.A., Weyl, E.G., 2017. Property is only another name for monopoly. J. Leg. Anal. 9 (1), 51–123.
Postuma, R., Van Der Valk, A., Wallagh, G., 1989. Planning for rule and order in Amsterdam. Built Environ. 15 (1), 17–27.
Potsiou, C., 2014. Policies for formalization of informal development: recent experience from southeastern Europe. Land Use Policy 36, 33–46.
Quigg, L., 1993. Empirical testing of real option-pricing models. J. Finance 48 (2), 621–640.
Raco, M., 2008. Key worker housing, welfare reform and the new spatial policy in England. Reg. Stud. 42 (5), 737–751.
Randolph, B., Tice, A., 2014. Suburbanizing Disadvantage in Australian Cities: Sociospatial Change in an Era of Neoliberalism. J. Urban Aff. 36 (sup1), 384–399.
Rauws, W., 2016. Civic initiatives in urban development: Self-governance versus self-organisation in planning practice. Town Plan. Rev. 87 (3), 339–361.
Razak, M.Z., Khalid, H., Mohamad, A., 2018. Speculative behavior in vacant land development: evidence for real options in Malaysia. Dev. Econ. 56 (4), 245–266.
Roca Cladera, J., Burns, M.C., 2000. The liberalization of the land market in Spain: The 1998 reform of urban planning legislation. Eur. Plan. Stud. 8 (5), 547–564.
Romano, B., Zullo, F., Fiorini, L., Marucci, A., Ciabò, S., 2017. Land transformation of Italy due to half a century of urbanization. Land Use Policy 67, 387–400.
Savini, F., 2016. Self-organization and urban development: disaggregating the city-region, deconstructing urbanity in Amsterdam. Int. J. Urban Reg. Res. 40 (6), 1152–1169.
Savini, F., 2017. Planning, uncertainty and risk: the neoliberal logics of Amsterdam urbanism. Environ. Plan. A 49 (4), 857–875.
Savini, F., Boterman, W.R., van Gent, W.P.C., Majoor, S., 2016. Amsterdam in the 21st century: geography, housing, spatial development and politics. Cities 52, 103–113.
Schleicher, D., 2013. City unplanning. Yale Law J. 122 (7), 1670–1737.
Seto, K.C., Fragkias, M., Güneralp, B., Reilly, M.K., 2011. A meta-analysis of global urban land expansion. PLoS One 6 (8).
Shen, J., 2017. Stuck in the suburbs? Socio-spatial exclusion of migrants in Shanghai. Cities 60, 428–435.
Siame, G., 2016. The value and dynamics of community-based studio projects in planning education in the global south. Berkeley Planning Journal 28 (1), 40–67.
Siedentop, S., Fina, S., Krehl, A., 2016. Greenbelts in Germany's regional plans—An effective growth management policy? Landsc. Urban Plan. 145, 71–82.
Sim, L.-L., Lum, S.-K., Malone-Lee, L.C., 2002. Property rights, collective sales and government intervention: averting a tragedy of the anticommons. Habitat Int. 26 (4), 457–470.
Smith, A., 1791. An Inquiry Into the Nature and Causes of the Wealth of Nations. J.J. Tourneisen & J.L. Legrand, Basil.
Stan, K.D., Sanchez-Azofeifa, A., 2017. The Edmonton-Calgary corridor: simulating future land cover change under potential government intervention. Land Use Policy 63, 356–368.
Steenbergen, J.J.M., van Bemmelen, R.J., 2011. Land. If you don't have it, create it. The case of IJburg. Amsterdam, Irrigation and Drainage 60 (SUPPL. 1), 4–10.
Titman, S., 1985. Urban Land Prices Under Uncertainty. Am. Econ. Rev. 75 (3), 505–514.
Turner, V.K., 2017. Obstacles to developing sustainable cities: the real estate rigidity trap. Ecol. Soc. 22 (2), 1–14.
Valtonen, E., Falkenbach, H., Viitanen, K., 2018. Securing public objectives in large-scale urban development: comparison of public and private land development. Land Use Policy 78, 481–492.
Van der Heiden, N., Wallagh, G., 1991. How the Republic of Amsterdam got the Kingdom of the Netherlands to play its game. Built Environ. 17 (1), 34–42.
Van Veen, I., 2005. Public Ground Lease in Amsterdam and the Effects on Housing. Housing & Urban Research Institute, Seoul (date accessed 08/05/2018). http://www.tink-iris.nl/downloads/public-ground-lease-and-the-effects-on-housing.pdf.
Watson, V., 2016. Planning mono-culture or planning difference? Plan. Theory Pract. 17 (4), 663–667.
Whittemore, A.H., BenDor, T.K., 2018. Talking about density: an empirical investigation of framing. Land Use Policy 72, 181–191.
Womack, K.S., 2015. Real options and urban land values:a review of the literature. J. Real Estate Lit. 23 (1), 53–63.