



Sustainable housing: A ground lease partnership model



Dirk Löhr

Trier University of Applied Sciences, Environmental Campus Birkenfeld, P.O. Box 1380, 55761 Birkenfeld, Germany

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ABSTRACT

Against the background of strained housing markets, economic, social and ecological targets (e.g. energy-based modernization) may conflict with each other. Against this backdrop, municipal leasehold approaches appear to be interesting. Considering the case of Germany, the legislator designed leasehold rights as an instrument to tackle a variety of targets. However, compliance with the Tinbergen rule suggests that municipalities should focus on economic targets while using leasehold approaches. Nonetheless, they should waive any exploitation of their monopolistic position in the local land market in favor of ground leases that are in line with the capital market. In doing so, public leasehold approaches may create an added value which may help to ease the conflicts between social and ecological targets. In this context, social and ecological targets shouldn't be pursued by the municipality itself, but in cooperation with suitable partners not looking to maximize their risk/return requirements. However, a number of obstacles have to be removed before leasehold rights can be used in this way.

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1. Introduction

Particularly in the agglomerations of booming countries, affordable housing is becoming a growing problem. Moreover, a rising number of governments recognize that successful tackling of climate change isn't possible without energy-efficient housing. However, energy-based modernization often leads to significant rental increases, which often purposely result in a change of tenants, as the area gentrifies. Thus a conflict between ecological and social targets emerges. Although measures such as caps on rents can contribute to achieving the social targets, such governmental intervention in market mechanisms may have a boomerang effect and increase the scarcity problems in the housing markets, at least in the long run. Another way to push social and ecological targets is public housing programs or subsidies. However, this is expensive, and the public budget is limited.

This article intends to demonstrate that public ground leases may contribute to a resolution of such or similar conflicts. In general, ground leases (or: heritable building leases) allow the land of other persons to be used in order to erect a building. This way the ownership of land and buildings are separated. To use the land, the owner of the building normally has to pay an annual leasehold fee to the owner of the site. As an equivalent to full real property, the leasehold right can be sold or inherited.

This article mainly refers to Germany. Legal details are regulated in the German Law on Ground Leases (Erbbaurechtsgesetz – Erbbaurechtsgesetz) dated January 15, 1919 and last amended October 1, 2013. Although, except for some limiting legal restrictions, the basic features of the German ground lease right are similar to those in other countries. Since municipalities are one of the most important public issuers of ground leases, the subsequent text only refers to the municipal level.

2. The concept: a ground lease partnership model (GLP)

The successful use of public ground leases for tackling social and ecological targets hinges on having an elaborated concept. So far, there is broad agreement that public ground leases may serve as instruments to tackle several targets at the same time. For instance, the German Law on Ground Leases intends to contribute to affordable housing and to tackle land speculation (von Oefe and Winkler, 2012, p. 15), as well as generating public funds. Tackling land speculation requires a leasehold fee which is high enough to divert the ground rent to the lessor. Affordable housing in agglomerations, however, is only possible if the leasehold fee is significantly below the ground rents. In which case, the public budget would suffer an opportunity cost. These examples show that using ground leases for the pursuit of a variety of independent goals violates the Tinbergen rule (Tinbergen, 1952). According to this rule, a certain number of independent goals cannot be achieved if policy makers use fewer instruments than independent targets. Successful policy needs at least as many instruments as indepen-

E-mail address: d.loehr@umwelt-campus.de

dent goals. In this respect, according to [Mundell \(1968\)](#), the most effective instruments should be used to achieve the various objectives. This is why subsequently the traditional perception of ground leases is rejected in favor of a concept based on the Tinbergen rule. According to this concept, a municipality as land owner and issuer of the ground leases should give precedence to the financial and economic aspects – similar to commercial business concepts of ground lease. According to this perception, the municipality as lessor should focus on the targets of communal asset management (“public value”) and land market efficiency. These two targets are inseparably linked with each other: The best land use (in line with the land use plans) allows the generation of correspondingly high public revenues ([Pfannschmidt, 1990](#)).

However, in a systemic view, stressing the economic targets neither means exaggeration of some nor complete negligence of other targets ([Bossel, 1998](#)). Instead, the economic optimization has to consider constraints. Often municipalities have the power to exploit a monopolistic position on the local land market – in strained land markets, the question arises whether or not a house can be built, not under which terms this is possible. However, such ground leases geared toward maximum prices can hardly be traded on the market. Moreover, as with public land sales, social targets can often not be achieved. Ecological targets may also be endangered when the building owners run into financial stress. This is why the municipality should waive the opportunity to skim off the willingness to pay by open auction. Subsequently we will show that, without disregarding social and ecological targets, a municipality can achieve a financial performance which is comparable to public land sales at highest bids, by issuing public leases which are in line with the condition of the capital markets. This waiver of the exploitation of monopolistic power can be considered as the municipality’s contribution within a public private partnership concept (PPP), which we call the “ground lease partnership model” (GLP model).

3. Theoretical foundations of the GLP model

Even if a municipality doesn’t exploit its monopolistic situation, ground leases can be quite attractive from a financial point of view. In particular, such ground leases can be superior to public land sales at market values. The reason for this surprising effect is the structure of yields and risks of ground leases. First, against the background of the present low-interest rate, the returns from ground leases are significantly higher than those of governmental bonds. Second, due to possible value adjustments the cash flows from the ground lease is a good inflation hedge. Third, and most important, crucial risks are shifted upon the lessee. The lessee has to pay the leasehold fees, irrespective of whether she is performing well or not. Thus, depending on the level of the leasehold fees she bears a certain operating leverage risk, concerning her yields as well as her cash position. In case of default, the building might be reverted to the owner of the site (who has to take the mortgage, as well). In case of a foreclosure sale, the title for the leasehold fee remains unaffected ([von Oefele and Winkler, 2012, p. 15](#)). Indeed, in Germany, the formal first rank position of the land owner in the land register (§ 10 of the German Law on Ground Leases) is compromised to a certain degree in practice, in favor of the lending banks. Nonetheless, compared with other investments, due to the rules of reversion, foreclosure and the registration in the land register as a first-rank guarantee, the ground leases may be considered “over-collateralized”, at least according to the German legislation. In fact, the returns on ground leases are almost as secure as those on governmental bonds. For instance, [Fitch Ratings \(2008\)](#) rated the sale securitisation of ground rent portfolios originated by Vivacon AG (German Ground Lease Finance III S.A.) in Germany

with “AAA”.¹ Due to the risk-shift onto the lessee, the risk premiums and therefore the return requirements of the land owner are significantly lower, compared with the yield rate of full property (German: “Liegenschaftszinssatz”). Thus the cash flows of the ground lease can be discounted at a lower rate than the returns from the share of land within real estate in full private property. Basically, the return requirements at least of a debt-free municipality should be guided by the rate for long-term governmental bonds ([Rodgers, 1989](#)). Since the cash flows of ground rents have a minimally higher risk of default, but a lower inflation risk than governmental bonds, the ground lease rate should be adjusted correspondingly. This holds also true in respect to other features such as the termination, buying options etc. Being discounted with such a low rate, the cash flows from ground leases have a significantly higher market value than the cash flows of the land share of the full property real estate ([Fründt and Strohdach, 2002; pp. 74–77](#)).

However, ground leases are only in line with the market, if the risk/return position of the commercially oriented lessee does not get worse, compared with full property. This could be measured for instance by using the Sharpe ratio ([Sharpe, 1966, 1994](#)). The Sharpe ratio is the average return which is earned in excess of the risk-free rate per unit of risk (measured by volatility). Again: within full property, the volatility of the returns (in absolute terms) has to be related on the whole real estate – whereas within a ground lease, the lessee’s risk has to be calculated by relating the same volatility substantially only on the value of the building. Moreover, because leasehold fees are fixed costs, the operating leverage risk is higher than within full property. Thus, from the perspective of the lessee, the risk of a ground lease is significantly higher than that of full property real estate. A rational lessee only accepts the higher risk, the loss of value capture opportunities on land and other disadvantages (e.g. restrictive covenants), if she gets an adequate compensation for waiving the advantages of full property real estate. This is why the return requirements of the lessee (building owner) are higher, compared with full property.

However, the overall value of the real estate (land plus improvements) stays the same, no matter whether full property or a ground lease is considered. Only the distribution of the value between lessor and lessee may change. In this regard, the abovementioned value surplus in the hands of the lessor is of crucial importance. This surplus can be transferred to the lessee, in order to compensate her disadvantages. By this means, the lessee can reduce her building costs and achieve the required higher level of rate of returns. Hence, in order to bring the ground lease in line with the market, the land owner has to “subsidize” the profitability of the lessee – within the commercial ground lease model.

However, this perception of ground leases is not in line with the common valuation standards, at least in Germany. Here, the revenues of ground leases are usually discounted with same yield rate, which is applied within full property real estate ([Kleiber 2014; pp. 2889–2891](#)). Thus the shift of the risk/return position between land owner and lessee is not taken into consideration. However, in practice, the ground lease rate is often below the yield rate of full property. One reason for that might be the regulations of § 9a of the German Law on Ground Leases, which stipulates a cap on the increase of ground lease rates. For simplification purposes, this issue has not been taken explicitly into account in this paper. Another reason, which is not considered in the literature so far, might be the abovementioned “subsidy”, which is required by the market. Due to a lack of recognition of this effect and research on this field the relative weight of these two aspects is not yet clear. However, these shifts in value are supposed to increase the value

¹ However, Vivacon fell victim to the financial crisis 2008 and its after-effects ([N.N., 2009](#)).

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