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Foundations of Home Ownership Policy - The Implementation of the Financing of Use as an Independent Finance Level

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Abstract

This paper identifies a financial level within the usage of a property. While traditional property finance is understood as the refinance of property income there is a fist financial level in the financing of the usage, being the renting of a property the dept financing and the ownership of a used property the equity financing of the usage. Applying theory of finance to the financing of the usage provides a variety of knowledge on housing markets as well as housing and especially home-ownership policy.

Keywords
home ownership, property finance, housing policy, theory of finance.

1 Introduction

The prevailing theoretical approach in the debate on the housing market is based on the goods market approach, and uses that approach's categories of supply and demand in the goods market to deal with the market for possibilities of residential space use.

The theory of the goods market as it appears in the literature on housing economics has been moulded by discussion of the filtering model. The concept of filtering was first developed by Ratcliff (1949). A good summary and standard exposition of the concept of filtering may be found in Lowry (1960). Sweeney (1974) develops a formal filtering model to explain how demand arises. This discrete model is further developed into a continuous model in Braid (1981) and Braid (1984). Arnott, Davidson and Pines (1983) extend the model by introducing the possibility of modernisation and other investments in existing stock. O'Flaherty (1995) uses the filtering model to explain the existence and

growth of homelessness. In Germany, the most important publications on the filtering approach are Eekhoff (1987) and Eekhoff (1993).

The theoretical approach based on the goods market treats the sale of space use like the sale of goods. In order for a possibility of space use to be handed over, the residential user must take possession of the space to be used. From a legal standpoint, this taking of possession can be carried out as a transfer on the basis of a sale or as a temporary surrender on the basis of rental of the space.

The goods market approach does not distinguish between these two forms of transaction and fails to recognise the differences and significance of the form adopted. While it is possible to formulate on a goods-market level the fact that an investor who builds or buys a property and then rents it out enters into and fulfils sales contracts with the tenant at regular intervals, it is at a financial level that the fact must be formulated that when an investor builds or buys a property and then rents it out, a credit relation, and thus a financial relationship, is established, in which the landlord corresponds to the creditor, the tenant to the borrower, the dwelling to the sum loaned and the rent to the annuity on the loan.

The goods-market approach is helpful for making statements about supply and demand. However, when dealing with other questions, it is first necessary to establish that the investor, as landlord, is *de facto* selling the possibility of using the property by renting, and thus surrendering, the investment object. The landlord hands over the capital (the property) and the tenant undertakes to service the loan (rent payments). As a seller of possibilities of use, the investor has to surrender the property to the tenant. When that occurs, in legal terms the tenant becomes the possessor of the property and in economic terms the party entitled to use it.

Part 2 of this paper surveys the literature on housing economics relevant to our topic, while in part 3 analyses rental in terms of financial economics. Part 4 introduces Williamson's financing postulate, which is then applied to housing market issues in part 5. In part 6, instruments of housing policy and recommendations for the design of a regulatory framework are formulated. In conclusion, part 7 contains a summary and outlook.

2 Aspects from the theory of finance as found in the literature

A rigorous and systematic interpretation of tenancy as a form of financing is relatively recent in the literature. This survey therefore refers to that literature on the economics of corporate finance, on the one hand, and housing economics, on the other, which covers those topics which the approach based on the theory of finance touches on but does not deal with.

A question which arises in discussion of housing economics is whether it is more advantageous to buy or to rent accommodation, and the related question of whether it makes more sense to subsidise owner-occupied or rented flats. How highly political discussion of this issue is can be seen, for example, from Mark Kleinmann's words:

„All three countries in this study have been committed for twenty years or more to promoting owner-occupation, albeit via different mechanisms and with different degrees of fervour. The most extreme case is Britain, where an entire politics of owner-occupation has arisen, based around the notion that to be a home owner is closer to a political right than to an informed consumer choice; that cheaper housing in the form of constant or falling house prices is not only undesirable, but actually a threat to economic growth and political stability; and that government, while it no longer has a duty to maintain full employment, or to meet housing needs, nevertheless has an obligation to promote house-price inflation.“[1]

Home ownership is recognised as both a political matter and a provider of identity. Gurney (1999) and Gurney (1996b) deal with sociological and political issues of owner-occupation. In a comparative study of Germany and the United States, Clark, Deurloo and Dielemann (1997) examine factors which supposedly promote owner-occupation. In doing so, they also consider the behaviour of threshold households (those almost able to afford homeownership) and young families, a constantly recurring topic. The preliminary work on this topic for the report of the German commission of experts was carried out by Homburg (1994), who in doing so fails to recognise the character of rental as financing. This was first done systematically by Sotelo (1996).

In developing a model to explain choice between renting and buying space, Jones (1995) sees the user’s expected income as a decisive determinant, an approach in the tradition of Friedman and his view of demand as based on given human capital, which fails to recognise the form of the transaction as a form of financing. In this, Jones is at one with Artle and Varaiya (1978), in particular, who likewise treat owner-occupation as a consumer good, demand for which is seen as dependent on the consumer’s life cycle. Henderson and Ioannides (1989) also emphasise the consumer’s stage of life as the primary determinant of the decision between renting and buying accommodation.

Elia Werczberger (1997) investigates the Swiss housing market as an example of a market, in one of the world’s richest economies, in which, despite rent controls, owner-occupation plays an extremely small part. Werczberger considers the main reason for this to be Switzerland’s treatment of housing as an investment good for tax purposes.

A further, relatively new theme in the literature is the attempt to introduce neo-institutional approaches into the debate as an analytical tool. Jaffe (1996) and Jaffe and Louziotis, Jr. (1996) are first steps in attempting to elucidate the relation between transactions-cost economics, on the one hand, and the property-rights approach and the housing and property markets, on the other; they formulate a corresponding programme of research. Benjamin, Lusht and Shilling (1998) investigate the issue of deposits required in leases in relation to the amount of the rent, assuming opportunistic behaviour on the part of landlords and asymmetrical distribution of knowledge of the risk which the tenant and the landlord, respectively, pose for the other party to the contract. Lastly, this paper already implicitly conceives rental as a credit relationship. Using neo-institutionalist concepts such as that of moral hazard, and taking the upkeep of premises as an example, Miceli (1992) develops a model for the formulation of a good legal regulatory framework for the market in rented accommodation. Homburg (1993), too, uses neo-institutionalist approaches to investigate German regulations on

[1] Kleinmann (1996, S. 4 f.).

the giving of notice. Sotelo (1997) applies neo-institutional considerations to German law on rented accommodation and Alemann and Sotelo (1997) do likewise for the corresponding Spanish law.

3 Analysis of transactions in possibilities of space use in terms of financial economics

The relationship between tenant and landlord can be viewed as a financial level preceding the actual financing of the property. In a further step, we show that the decision whether to rent or to buy space is not irrelevant; rather, renting, as the financing of use through debt, is *per se* more advantageous than purchase of space by the user (self-financing on the first level). This leads on to discussion of the question of why spaces are in fact sometimes sold and what criteria can be developed for deciding between debt and equity financing of space use. Theories of corporate finance dealing with the optimal capital structure of firms are employed.

3.1 Leases as credit agreements

Leases can be viewed as credit agreements in which the tenant is the creditor, the landlord is the borrower, the property is the item lent and the rent is the interest on the loan.

Credit agreements are standardised forms of debt financing. An act of financing can be regarded in the first instance as a stream of payments, beginning with receipt of a sum, followed by the disbursement of other sums.[2] This perspective provides the basis for the classical and neo-classical theories of finance. In addition, an act of financing can also be viewed as a (standardised) legal institution regulating rights to payment, to information and to governance.[3] This gives rise to the neo-institutional approach. For debt finance, the collateral provided to the creditor is of importance.[4] A credit agreement is a standardised form of financing usually specifying a fixed rate of interest and often providing for collateral.

It is true that from a legal viewpoint, the landlord, who, in selling space use, has to turn over possession of the space to the tenant, has a right to payment by the tenant for the use purchased and hence to rent payments. However, this is merely a right under the law of contract, which in economic terms is a claim which the tenant should meet, but which *per se* entails a credit risk for the landlord. After all, the tenant temporarily receives the good – space use per unit of time – even if he does not pay the rent. In addition to the risk associated with rent payment, the landlord also undergoes risk associated with the final return of the space. Thus, the tenant may treat the rented property in such a way that it suffers an excessive fall in value and that expenditure (on renovation and repairs) is necessary in order to restore its initial value.

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[2] Drukarcyk (1999, p. 1).
[3] Drukarcyk (1999, pp. 1 f.).
[4] Drukarcyk (1987, pp. 23 f.).

The credit aspects of renting are familiar from everyday experience: prior to signing of the contract, the tenant undergoes a credit check and has to providecollateral, interest, i.e. rent, is paid monthly rather than yearly in order to keep a better check on the tenant's willingness and ability to pay, etc. Nonetheless, the interpretation of leases as credit agreements is not trivial and has certainly received far too little attention so far in the literature on the housing market. This is particularly evident with respect to a further consequence of this approach which is discussed in the next section.

3.2 Two levels of financing: financing of use and of the returns on a property

Viewing a rental relationship as a credit relationship also implies regarding it as an act of financing. The treatment of property finance in the literature[5] always consists of discussion of the (re)financing of returns on properties, i.e. the financing of properties on the basis of existing returns. Of course, these returns only arise if and because use of a space provides demanders of the space with utility, for which they are willing and able to pay (the demand aspect) and, on the other hand, different users are competing with one another for a variety of spaces, among which they can substitute (the supply aspect).

For purposes of further analysis, financing of use must be distinguished from financing of the returns on use. These are two different levels of financing. When property finance is discussed in the literature, it is only financing of the returns on use that is meant.

Thus, a block of rented flats can be financed in different ways. A traditional type of financing would consist of recourse to debt in addition to the necessary equity. Debt finance can, for example, take the form of a loan secured by a mortgage. Open and closed funds are further forms of finance.

In all these types of financing, the property provides collateral; they are geared to the returns on use. The concept of financing based on the property's value is complemented by that of financing based on the borrower. In the latter, the creditor gears the loan to the borrower's creditworthiness, as occurs in the financing of firms or in private hire purchase. In financing a firm, a bank gears the loan to the entire firm which generates a cash flow.

In property-based financing, the creditor gears the loan primarily to the capacity of the property being financed to generate returns, as well as its marketability, collateral loans and closed funds being examples. Property-based financing means that in economic terms, the lender is investing in the property. The lender becomes a stakeholder in the investment, even if the agreed distribution of stakes means that he has a different risk-return structure than an individual investing his own capital.

The starting point of these forms of property financing differs from that of the forms involved in space rental. While the well-known types of property financing mentioned

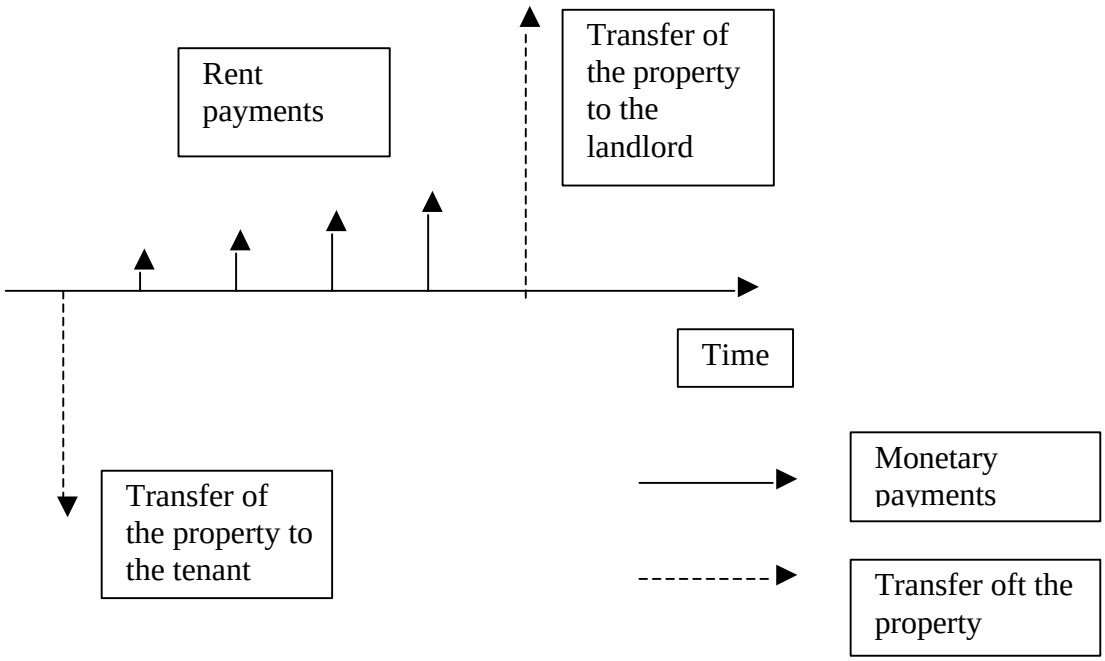
[5] In German, for example: Kühne-Büning and Heuer (eds.) (1994, p. 399), Schulte, Leopoldsberger, Schaubach, Vaassen and Walker (1998, pp. 449 ff.), Köpfer (1991, pp. 448 ff.). In English, Balchin, Isaac and Rhoden (1989, pp. 96 ff.) and Jaffe and Sirmanns (1995, pp. 217 ff.) are representative.

above are geared to the returns on use, and to that extent constitute a stake in the sums arising from those returns, renting is a form of financing situated, so to speak, one step further back, inasmuch as it does not finance the returns on use but use itself.

Financing of use can be well explained in terms of a stream of payments. To do so, we must refer back to the character of investment and financing as consisting of payments (neo-classical approach). From this perspective, an investment can be thought of as a sequence of payments, starting with the disbursement of a sum, followed by receipts, while an act of financing is the mirror image of this sequence, starting with the receipt of a sum, followed by the disbursement of other sums (Perridon and Steiner (1999, pp. 19 f.)).

When the rental of a space is viewed as an act of financing, then from the landlord's point of view the handing over of the property to the tenant corresponds to the paying out of a sum. I.e. the investment. This paying out by the landlord is followed by receipts in the form of rent payments. At the end of the financial relationship repayment (a receipt) ensues in the form of the return of the rented property to the landlord.

Diagram 1. Rental as financing: the stream of payments from the landlord's standpoint



Here, all the "payments" in the stream of payments are real, not nominal, in nature. The property transfers are not even monetary payments, and although the rent payments are monetary, their nominal size is not fixed in advance.

From the perspective of the theory of finance, the rental of space by a user can be conceived of as the debt financing of use by the landlord. We refer to this type of financing as first-level property financing. We shall henceforth refer to what is commonly thought of as property financing, namely the financing of returns, as second-level property financing (or simply second-level financing).

While rental of space has been designated first-level debt financing, purchase of a space by the user himself can be viewed as resembling a first-level equity financing of use. Once again, an example can serve to clarify the distinction between first-level and second-level financing: A tenant lives in furnished premises belonging to a private individual (the landlord), who has bought the property furnished, financing 60% of the purchase with a mortgage and 40% of it from his own funds. Then the landlord is providing 100% first-level debt financing of the tenant's use of the space, while the bank is providing the landlord with 60% second-level debt (re)financing. In this case, the space use is receiving 100% debt financing through the rental agreement, while the returns on use are 60% debt-financed and 40% equity-financed. Alternatively, let us suppose that a user has bought a furnished property, financing 60% of the purchase with a mortgage. Then, on the first level the user is financing himself 100% (equity finance), and on the second level is refinancing himself partly through debt (60%) and partly through equity (40%).

It would appear that on the first level, financing is always either 100% debt financing (when the space is rented) or 100% equity financing (when the user buys the space), but this impression is simply an error arising from the usual way of looking at financing on the second level. If we take account of the fact that the user of a property only derives utility from it when it is furnished and operational (serviced with electricity, water, etc.), then we see that the rented property by itself cannot provide utility, and to that extent renting the property will generally not constitute a 100% first-level debt financing of use. The tenant will make many investments in the property which are essential to making it usable, and which will be financed on the first level from the tenant's own resources, i.e. equity finance. Thus, if one regards the furnished and operational property as the object to be financed on the first level, it may be assumed that virtually no 100% first-level debt financing occurs, an interim conclusion which also restores plausibility, inasmuch as on the second level, too, genuine 100% debt financing with the property as collateral is rarely seen.

Since in first-level financing the capital is handed over in real form and no payments are observable, the share of first-level debt finance cannot be inferred from monetary payments, but rather corresponds to that part of the capital value necessary for use which is handed over by the landlord. The closer the property handed over by the landlord is to being in usable condition, the higher is the share of first-level debt financing of use. Landlords commonly let unfurnished properties, and from this circumstance alone it follows that debt financing of use is always far below 100%. But the question of whether the landlord completely renovates the property or hands it over to the tenant at a somewhat lower rent without carrying out any redecoration also turns out to be a question of the share of first-level debt finance. If the landlord lets the property in a renovated state, the share of debt financing of use is higher than if he lets it unrenovated. In that case, the interest payments demanded will be higher, in line with the higher volume of finance and the greater risks entailed by the additional sums involved.[6] Thus, it turns out that in first-level financing, just as in second-level financing, every conceivable combination of debt and equity is possible.

[6] The fact that the question of whether or not a property is renovated is a question of the share of first-level outside finance does not mean that other factors may not also affect this share. It may be presumed, for example, that the landlord will generally enjoy comparative advantages in carrying out renovation.

In similar fashion, establishment of a leasehold can be viewed as an instance of first-level debt finance, which, however, only constitutes a small share of the total volume of first-level finance involved, especially if, for example, undeveloped plots are in question on which building must be done prior to use. Leasehold illustrates the fact that there can be other forms of first-level finance. Thus, leasehold, too, is a form of finance with real magnitudes. Subletting, as well, can be viewed as another form of first-level finance. All these types of finance relate to real magnitudes and so belong to the group of first-level forms of finance. At the second level, too, further forms of finance are sometimes found. For example, when a mortgage bank refinances itself through the emission of bonds, this can be seen as another form of second-level finance.

Leasing is a special case, inasmuch as this form of property-secured finance occupies a mezzanine position between the two levels of financing. Thus, on the one hand, leasing has first-level aspects, inasmuch as the handing over of the space to the user constitutes financing in real form, but it possesses second-level aspects as well, in that payments of leasing instalments, for example, are purely nominal in character. Other real aspects, such as the question of who receives the non-pecuniary returns, are generally settled by means of purchase options or rights of tender in such a way that the lessee disposes of them in economic terms.

While the relative shares of equity and debt resources on the second level can be seen from the financing itself (nominal point of view), financing shares on the first level can be inferred by considering the property being financed in relation to the total value of the usable space (real point of view). First-level finance must not be thought of as exclusively nominal, but as always comprising real magnitudes as well.

The issue of the interchangeability of first- and second-level finance is of great importance for our argument. If first- and second-level finance were completely interchangeable, then making a conceptual distinction between the two levels of finance would be pointless, inasmuch as any type of finance whatsoever can be entirely represented by means of second-level refinancing. For example, it could be argued that financing by 100% debt capital on the first level and 100% equity on the second level should be equivalent to financing by 100% equity on the first level and 100% debt on the second level.

Although it is of course true that relationships exist between the financing levels, in that similar factors determine the maximal possible level of debt finance, there are nonetheless various reasons why interchangeability between first- and second-level finance is limited, making clear the relevant independence of the two levels.

One reason for this independence, and thus for the only partial interchangeability between first- and second-level finance, follows from the real character of finance on the first level, in contrast to the nominal terms of that on the second level. Thus, providers of second-level finance (typically banks) can only rely on nominal rent payments to service their loans. However, particularly in an inflationary environment, properties are frequently valued higher than the collateral value entailed by this perspective.

Apart from any risks relevant to the valuation of a property deriving from the market or the property itself, the difference between its current market value and its collateral

value[7] is primarily the result of the non-pecuniary returns[8] on it. Non-pecuniary returns can also be viewed as a premium to hedge the risk of changes in the rate of inflation. In order to eliminate risks due to possible changes in the rate of inflation, the owner wishes and is able to obtain, and thus refinance, the non-pecuniary returns; otherwise, corresponding aggregate market values would not be seen. The supplier of debt capital cannot refinance the non-pecuniary returns on the second level because only the owner, i.e. the second-level supplier of equity capital, is entitled to these returns. After all, on the basis of the agreed distribution of stakes it is he who receives any increase in the property's value arising from inflation. Thus, non-pecuniary returns influence the structure of finance on the second, but not on the first, level.

A second argument for a lack of interchangeabilty between first- and second-level finance derives from the economics of information. It may be assumed that landlords have more information about market rents than do second-level suppliers of finance. In order to evaluate a space, the latter need its observable rental returns. From this it follows that suppliers of finance prefer to finance returns rather than use, which in turn implies that first- and second-level finance are not interchangeable, so that the distinction is relevant.

A third argument follows on from the second. Second-level suppliers need observable rental returns not only due to limited market knowledge of the achievable rental returns and the property valuation those returns imply, but also because the rentability of a space also contains information about its asset-specificity characterisitics. For a bank providing second-level finance, this is vital information, which it does not obtain if it finances purchase of the space by the user himself.[9]

In the letting of property, as first-level financing, security is generally based on the property and not the tenant. While the landlord does hand over possession of the space, he remains its owner at all times. In letting, security is only based on the tenant to the extent of the sum required to recover possession of the property and restore it to its original state, as contractually stipulated. This sum is generally quite small relative to the total volume of finance, as the following example shows:

Assumptions:
?? Rental of a 60 m^2 @ DM 12 per m^2, net of running costs
?? Additional costs: DM 4 per m^2
?? Value of the property: 15 times the annual net rent
?? Time allowed to vacate property in case of rent arrears: 12 months
?? Maximum renovation costs: DM 150 per m^2

Volume of finance:
DM 129,600.- (60 m^2 x DM 12/m^2 x 12 x 15)

Maximum loss of rent (worst-case scenario):
DM 11,520.- ((DM 12/m^2 + DM 4/m^2) x 60 m^2 x 12)

[7] On the correct, and hence independent, determination of collateral values, see Kerl (1999), Kleiber (1996), Vogel (1992), Rüchardt (1996) and Sotelo (1995) and the literature referred to there.
[8] The concept of non-pecuniary returns according to Riese (1986, p. 23 and pp. 53 f.) and Riese (1989, pp. 11 f.).
[9] The significance of this third argument only emerges fully through the analysis in section 3.

Maxximaum deterioration of the property (worst-case scenario):
DM 9,000.- (DM 150/m^2 x 60 m^2)

In the worst-case scenario, the maximum loss incurred amounts to less than 20% of the total volume of finance. Although it is true that when letting a single property, a landlord will be unsure how the tenant will behave, landlords who operate professionally can form a statistical estimate of the expected loss, which will be quantitatively well below the value in the worst-case scenario.[10] Renting the property unrenovated would suffice by itself to almost halve the sum at risk for the landlord.

The letting of property, as first-level financing, is mainly secured by the property itself. In addition, a letting can also, on the basis of the property's characteristics, become a tenant-secured financing.

3.3 Renting or buying as a question of optimal first-level financing

Monitoring of the credit agreement by the landlord entails costs, but so does the signalling of creditworthiness and the provision of sureties by the tenant. Since rental of spaces is nonetheless observable in the market for space use, this form of transaction must have advantages which make up for these disadvantages. Benefits may take the form of cost savings.

For the user, the question of the optimal way to finance use is that of whether it is more advantageous to buy or to rent a property. This question is of the greatest relevance for issues of rent law, since in principle good rent law is only needed if there are advantages to this form of transaction. In addition, the question is of great significance for housing policy, inasmuch as almost all governmental supportive measures favour either home ownership or the rental of residential space, and are therefore not neutral with respect to first-level financing.

The filtering model is generally used to justify promotion of measures favouring homeownership, in that these provide threshold households, i.e. households that wish to move into a (new) self-owned property and are almost in a position to do so, with an incentive to buy, thus allegedly increasing the supply of properties, due to the filtering effects. In Germany, the purchase of owner-occupied accommodation is subsidised in order to promote homeownership. This contrasts with the discrimination against homeownership represented by the treatment of owner-occupied homes as consumer goods for tax purposes and the accompanying general absence of tax advantages found in Germany as well as many other countries.

The fact that concealed behind the question of the optimal form of transaction for the acquisition of possibilities of space use there lies the question of optimal first-level financing of use has the great advantage that we can make use of the wealth of theoretical approaches to issues of the optimal financing of enterprises to be found in the economics of corporate finance.

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[10] On the concepts of uncertainty and risk, see Perridon and Steiner (1999, p. 98).

It is a commonplace of all approaches to the theory of finance that debt finance is fundamentally more advantageous than equity finance. When transferred to the financing of use (first-level financing), this conclusion means that renting a space must be a more advantageous way of financing use than buying it. Furthermore, additional advantages may result from the avoidance of disadvantages which arise when properties are sold into individual ownership.

First of all, however, we shall consider the advantages and disadvantages associated with first-level financing from debt and from equity resources.

3.3.1 Advantages and disadvantages of renting and of buying properties

In what follows, we intend to show that the advantages of the letting of properties by an investor, as a way of selling space use, are cost advantages in a traditional sense, while neo-institutionalist approaches are required in order to demonstrate disadvantages to the sale of spaces into individual ownership as a way of selling space use. First of all, we consider the traditional cost advantages.

On the one hand, cost advantages arise through the second-level financing of the property. If the tenant were to buy the property instead of renting it, he would have to obtain refinancing from a bank, for example. It may be assumed that an investor, who regularly obtains refinancing through a bank, can obtain more favourable terms than the purchaser of an owner-occupied property. These better terms arise, on the one hand, from the larger size of the loans, and on the other, from the investor's[11] absolute and comparative advantages in valuing properties and in signalling his creditworthiness to the bank.

As already explained, a landlord will be able to obtain refinancing from the bank more cheaply if only because observable rent payments arise from the preceding first-level financing (letting), providing valuable information which the bank would not have in the case of owner-occupation, since in that case all the bank could observe would be the single payment of the purchase price. In fact, since first- and second-level finance are not interchangeable, the argument that debt finance is in principle more advantageous than equity finance as a source of finance suffices.

It may furthermore be assumed that many demanders of space use are sufficiently creditworthy to be able to rent space but not to finance its purchase price. Lastly, it may be assumed that credit markets display credit rationing in the sense of Stiglitz and Weiss (1981), and second-level debt financing would oblige the user to refinance, in addition, those values arising from the valuation of non-pecuniary returns.

[11] By "investor" we mean here a professional property owner. The arguments, in particular with respect to economies of scale, hold in relation to the buyer of an individual owner-occupied property. We leave open here the question of the extent of significant economies of scale among different professional property owners. There are strong grounds for believing that for firms operating in housing markets there are optimal sizes which are not particularly large, lying rather in the medium range.

Cost advantages in the operation of properties (light, water, etc.) constitute a further advantage of the letting of space by an investor as a way of selling of space use. Only operational properties are usable. For instance, an investor has great comparative advantages in managing and operating a property over an individual owner in a group of commonholders. Due to his greater information as well as to bigger job size, an investor will obtain maintenance at a better price (positive scale and synergy effects), for example. The user's monetary transaction costs, too, will be considerably lower when renting than when buying or selling (e.g. land transfer tax, notarial and court costs, etc.).

Thus, there are advantages to letting as a way of selling space use. In addition to the advantages mentioned, there are the disadvantages involved in selling space use via the sale of properties into individual ownership. In Germany, individual ownership is legally regulated as ownership of residential or of non-residential property by the Home Ownership Act (*Wohnungseigentumsgesetz*) (*WEG*). Let us now consider the costs of operating properties in accordance with the *WEG* from a neo-institutionalist standpoint.

In a group of commonholders, there are very high costs of delegation. The management represents the group in its relations with the outside world (*WEG* §§ 20 ff.). This gives rise to the set of problems discussed in the literature under the rubric of agency theory (Fama (1980) and Jensen and Meckling (1976)). The management can obtain financial advantages through opportunistic behaviour. In practice, this means over-billing, cronyism in awarding building work, and the like. Some of the more experienced home owners may notice this, but are unlikely to resist it very vigorously, as otherwise they will end up bearing the costs of observation and monitoring by themselves, although the other owners will also receive the benefit. Thus, in addition, a free rider problem[12] arises, curbing individual owners' initiative and increasing the delegation costs described in agency theory. The management can anticipate the free rider effect and set the level of its opportunistic behaviour correspondingly high, thus sharply increasing total delegation costs.

A further factor making for high delegation costs arises in connection with a regulation found in many countries (in Germany as *WEG* § 22) and providing that any structural changes must be unanimously approved by the whole group of commonholders. Up-to-date management entails making structural alterations as necessary in the light of changing market conditions, for example filtering up by modernising properties or optimising ground plans by merging flats. Each owner is in a position to block another owner's structural alterations until the latter is prepared, for example, to make certain special payments. A situation arises which is referred to in the literature (Cornell and Shapiro (1987)) as a holdup. Since all the owners are able to demand payments, but expectations regarding the amount of the payment usually vary, reaching agreement is difficult. In game-theoretic terms, the owners are caught in the prisoner's dilemma.

The free rider problem in conjunction with the agency situation, and the prisoner's dilemma within the owners' mutual holdup situation are what characterise a group of commonholders in neo-institutionalist terms. These delegation costs, which may assume considerable proportions, do not arise when a landlord lets a property.

[12] Jensen (1986), Grossmann and Hart (1980), Stigler (1974).

3.3.2 Reasons for avoiding leases

We have mentioned a number of advantages (including the elimination of disadvantages) of management of spaces by an investor and subsequent letting to users. Hence, the question arises as to why all spaces are not offered for rent, since this form of transaction clearly has great relative advantages. However, the fact that owner-occupied properties do in fact exist shows that there must be reasons weighing against the letting of properties as a form of transaction and in favour of the sale of possibilities of space use.

Taking as our starting point the thesis that the rental market should be viewed as a credit market, operations in the rental market can be interpreted analogously to possible operations in a credit market. In economies in which the level of interest rates is set by the state, there is always very strong credit rationing, a pronounced so-called informal credit sector, and hence the need for greater reliance on equity finance[13]. After all, interest rate regulations generally only affect the cost of debt capital, i.e. interest on credit, and not the cost of equity.
Analogously, in economies in which rents are state-regulated, rationing of housing and an informal housing market (black market) may be observed. The possibility of making increased use of equity finance in a credit market with regulated interest rates corresponds to the establishment of individual ownership of residential or other property by the user. If a landlord is unable to let a property at the market rent, he will demand the discounted value of future market rental payments as its selling price.

If prices in the rental market are regulated and those in the market for owner-occupied properties are not, then an arbitrage profit can be obtained by the establishment of owner-occupation. If demanders and suppliers of space use are subject to restrictions in the rental market, they shift to the market for owner-occupied properties. Intervention in price formation in the rental market, as well as other types of regulation of that market, can lead to its collapse and so to a shift to the market for owned properties.

Since financing from equity occurs even in capital markets in which interest rates are not regulated, it may be assumed that there are also sound reasons for this type of finance. Analogously, the fact that homeownership exists as a form of transaction in economies in which there is no (or virtually no) regulation of rents implies that there must likewise be grounds for this form of transaction.

4 Williamson's financing postulate

The issue of optimal financing of an investment, usually discussed in terms of the optimal capital structure of a firm, leads to a fundamental problem in the economics of corporate finance which we cannot discuss here as thoroughly as the topic merits.

Briefly, the development of thinking in this field led from the traditional golden rule of banking, a horizontal rule of financing according to which there should be congruence

[13] On the regulation of interest rates and capital markets in developing countries, see McKinnon (1986).

between the maturities of assets and liabilities, to the leverage theorem, which stated, on the basis of certain behavioural assumptions, that optimisation of the share of equity capital is possible, and finally to Modigliani and Miller's (1958) thesis of the irrelevance of capital structure. Following this milestone, there was a series of further developments, some of which increased the proposition's content by reducing the number of assumptions (Modigliani and Miller (1963), Stiglitz (1974), Miller (1977) and Fama (1978)), while others relativised its assumptions, in particular by the inclusion as transaction costs of the delegation costs of agency theory (for example Jensen and Meckling (1976), Meyers (1977) and Meyers and Majluf (1984)).

In parallel to the economics of corporate finance, and initially independently of it, there developed the theory of transaction costs. Williamson, together with Klein, Crawford and Alchian, is among the most important representatives of the economics of transactions costs, whose origin can be dated to 1937, when Coase's *The Nature of the Firm* was published.[14] The original question, which shaped the development of transaction costs economics, was that of selecting an optimal transaction when choosing between provision of goods and services from within a firm or via the market.[15]

According to Williamson, important determinants of the transaction are its factor specificity, uncertainty and frequency.[16] The specificity of a factor which a transaction participant wishes to offer means that the factor is of little use to third parties, so that a market transaction, particularly given the assumption of opportunistic behaviour, is very likely to involve costs. The supplier's anticipation of this situation results in high transaction costs. Factor specificity produces different levels of transaction costs in the context of different forms of transaction, so that the transaction form can be made functionally dependent on factor specificity.

Williamson's paper "Corporate Finance and Corporate Governance" applied considerations from the economics of transactions costs to the question of optimal capital structure by identifying the various forms of finance, especially those from equity capital and from debt capital, as forms of transaction or of governance. Williamson postulates that highly specific investment goods should be financed with equity and non-specific ones with debt, since, although with debt finance the transaction costs are in principle lower, with increasing specificity of the asset to be financed they become prohibitively high, so that in the end, using equity to finance highly specific assets entails lower transaction costs.[17]

Williamson's central thesis can be clarified by means of an example. If a manufacturer purchases a machine tailored to his particular needs, no bank will be willing to accept it as collateral when providing finance, since if the manufacturer were to go bankrupt, the financing bank would be left with a machine which no third party could use.

According to Williamson, the factor determining the proportion of debt capital is not risk (measured as the mean variation of the firm's cash flow), but the specificity of the assets. Comparison of the construction and pharmaceutical industries provides a relevant example. There are few, if any, industries which have to deal with such

[14] Brand (1990, p. 18).
[15] Coase (1937, p. 388).
[16] Williamson (1990, pp. 59 f.).
[17] Williamson (1988, pp. 579 ff.).

strongly pronounced cycles (and hence with risks in the form of mean variations of returns) as do construction and property development. Despite this, because of the lack of asset specificity, they can get by with only a very small proportion of equity capital, while the pharmaceutical industry faces quite stable demand, but nonetheless employs quite a high proportion of equity capital.

Though we cannot here reproduce in detail the debate on the optimal capital structure of firms, in what follows, Williamson's financing postulate will be accepted as reasonable, empirically relevant and theoretically consistent, and applied accordingly.

5 Application of the theory of finance to the question of optimal first-level financing

Williamson's financing postulate can now be applied to first-level financing, i.e. the financing of use. The letting of space is always the more advantageous procedure, inasmuch as it entails lower transaction costs and, furthermore, debt capital is always cheaper than equity capital. However, financing use through debt, and hence the letting of space, is not always a feasible course. If properties are too specific, asset-specificity characteristics pose an increased risk for the landlord. From his standpoint, this rules out letting as a transaction form. While renting a highly specific property is generally advantageous for the tenant, he will normally be unable to find a landlord who will offer him one.

A space with highly specific characteristics will usually be offered for sale but not for rent, although when letting *is* possible, it is always the more advantageous form of finance. The question remains as to what factors determine a property's specificity.

5.1 Specificity of the residential property being financed

A property is highly specific if it's third-party usability is low. Thus, the question of a property's specificity is primarily one of the structure of demand rather than of concrete supply. In particular, asset specificity be especially high if the property is only of potential interest to a limited set of users. Specificity of a property's asset characteristics is never total, because demand is price-elastic and substitution between properties with different characteristics is therefore possible.

The more specific a property, the smaller the number of possible users and thus of potential buyers. The smaller the number of potential buyers of a property, in view of its specific features, and the more they are really looking for other characteristics, the greater must be the compensation for the missing characteristics, or the tenants will only pay a low rent for the highly specific property on offer, in order to maintain the same level of utility they would obtain by renting a property fully consonant with their wishes.

These considerations acquire added relevance insofar as it may be assumed that the determinants of demand for residential space tend to combine multiplicatively rather than additively as the user's total budget for accommodation rises. The higher the total

amount which a user is prepared to spend on residential space, the less acceptable are individual property features perceived in negative terms likely to be. Conversely, the smaller the sum which a user wishes to spend on a property, the more likely are such negatively perceived features to be accepted.

For example, if a student seeking a room for the duration of his course has a very limited budget, he will be willing to take one with poor illumination if it is easily accessible to his university. By contrast, an employee on a high salary, looking for a high-quality flat for himself and his family, will not be prepared to accept a noisy environment, a poor layout, simple fittings, bad illumination or premises in a poor state of repair, for example. If he rates just one determinant poorly, his demand will fall sharply. This behaviour is observable in every housing market. It is a direct result of declining marginal utility, and has many consequences.[18]

It is precisely because of the tendency for the determinants of demand to combine multiplicatively as the accommodation budget rises that highly specific properties are to be found especially among the more expensive properties. Villas are an extremely specific form of residence. Their specificity does not derive primarily from the features and characteristics of the space itself, but from the fact that they are types of residence requiring quite a high total accommodation budget, so that those potential buyers who, because of their subjective preferences, rate certain characteristics negatively, are led by the multiplicative combination of their demand determinants to reject the whole space, which is therefore perceived as highly specific. Since, at the same time, the number of variants of property characteristics rises with the total budget, the specificity of properties increases more rapidly than the budget required for their purchase.[19]

These considerations also accord with everyday experience, villas generally being sold, while one-room flats are usually let. While for a tenant it would be advantageous to rent a villa, he will usually find no landlord willing to build a highly specific villa for purposes of letting. When villas are rented, they are usually second-hand ones whose former first users, who initially commissioned their construction, can no longer capitalise a considerable portion of the highly specific investments involved by using the property themselves.

The most important conclusion to emerge from these considerations is, firstly, that it cannot be stated categorically that in selling possibilities of space use, one form of transaction is more advantageous than the other, and secondly, that the optimal transaction form for such sales depends on the specificity of the property in question. This is the result which emerges from our synthesis as a postulated approach, based on the theory of finance, to the form of transacting the sale of spaces.

5.2 The optimal form of transaction for possibilities of space use

[18] For example, this is also the reason why projects for residential developments in very good locations are considerably more risky for developers than projects sited in poorer or middling locations.

[19] Since no rationale for the transaction form in terms of financial economics has yet appeared in the literature, no empirical investigations exist of the demand for residential spaces in relation to their specificity. There is a great need for empirical work to fill this gap.

It is only the formulation of substantial statements on the optimal financing of firms, which Williamson's approach (unlike the MM theorem) permits, that now enables us, by applying these results to first-level finance, to answer the question of whether it makes more sense to rent or to buy residential properties.

An initial conclusion is that in principle it is more advantageous to rent than to buy a property, inasmuch as financing use through debt is always less expensive than financing it from equity. This means that, particularly in developed economies, the letting of properties is a sensible form of transaction from an overall economic standpoint. However, there are properties whose specificity makes them difficult or impossible to finance on the first level, inasmuch as nobody (no landlord) is willing to finance them in this way. Such properties must be financed on the first level with equity capital, i.e. must be purchased by the user.

Economic history shows that the level of debt financing of economic activities increases as national income rises.[20] Thus, the gearing ratio of corporations (debt capital/total assets) in the German Federal Republic was only about 69% in 1967, but by 1999 was about 82%.[21] On the other hand, studies of credit markets in developing countries, in particular, show that a functioning credit market is a precondition for positive economic development.[22] High levels of debt finance and of prosperity clearly go hand in hand.

Applying this experience to the question of optimal first-level financing, we should find that in high-income economies there is a higher proportion of rented accommodation and a correspondingly lower proportion of owner-occupied properties. Table 1 gives the relevant figures for the EU countries.

Table 1: Rate of ownership relative to per capita income

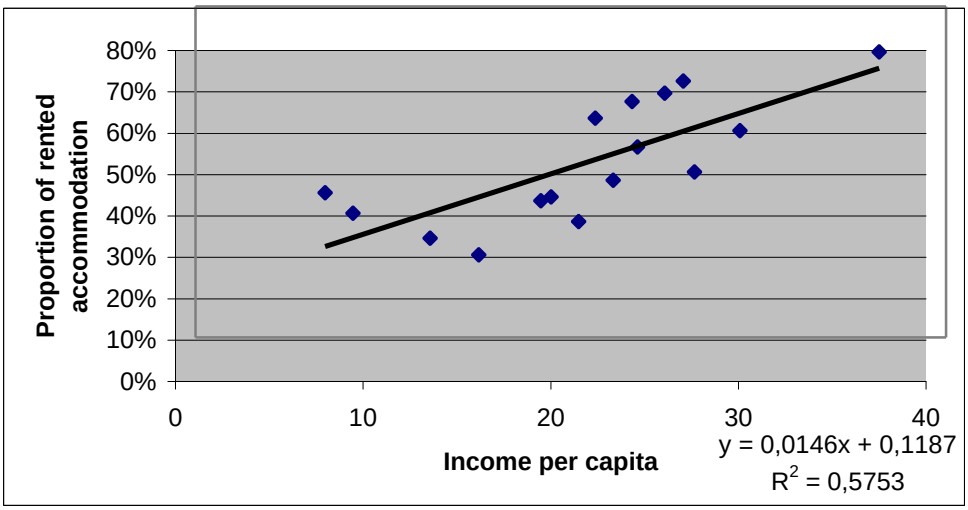
Country	**GDP per capita (in $10,000)**	**Proportion of rented accommodation**
Switzerland	36,43	69 %
Germany	26	62 %
Belgium	22,26	38 %
Netherlands	21,3	53 %
Austria	25,01	59 %
Sweden	23,27	57 %
Denmark	29,01	50 %
France	23,55	46 %
Ireland	15,1	20 %
Spain	12,5	24 %
Finland	20,41	28 %
Greece	8,4	30 %
Italy	18,4	33 %
United Kingdom	18,95	34 %
Portugal	6,9	35 %
Norway	26,59	40 %

[20] See, *inter alia*, Franke and Hax (1999, p. 495).
[21] Franke and Hax (1999, p. 495).
[22] World Bank, World Development Report (1989, pp. 31 ff.).

Source: CECODHAS (European Liaison Committee for Social Housing) (1995), Economist Publications (1994), The World in 1995, according to Balchin, Introduction, p. 11.

Diagram 2 shows the data from Table 1 together with the estimated linear function, including the correlation.

Diagram 2: Rate of ownership relative to income per capita



Source: CECODHAS (European Liaison Committee for Social Housing) (1995), Economist Publications (1994), The World in 1995, according to Balchin, Introduction, p. 11.

The statistics show clearly that the proportion of rented properties in an economy does indeed rise significantly with increasing income. Income accounts for 57% of the mean variation.

We now not only know that the proportion of rented properties rises as national income increases, but also are able to explain this phenomenon in causal terms. Letting corresponds to debt financing of use, which, where possible, is the more advantageous form of first-level finance.

6 Recommendations for housing policy

A variety of recommendations for housing policy can be derived from the approach based on financial economics. First and foremost, these concern the fostering of living space. On the basis of the recognition of debt financing of use in the form of letting as an especially advantageous transaction form in terms of cost, it makes sense to formulate rent law regulations in such a way as to maximise turnover in the rental market, without adversely affecting the homeownership market.

Although, on the one hand, residential properties are discriminated against in many countries, including Germany, by treating them as consumer goods for tax purposes, at the same time home ownership has up to now always been fostered through tax

measures, as well as receiving support in the form of subsidies. This orientation of housing policy has essentially been justified in terms of the filtering process: if threshold households can attain ownership with the help of subsidies, rented accommodation becomes available for lower-income households.

We can use the analytical apparatus developed above to critically assess this line of argument. We must first distinguish two cases: the fostering of ownership of non-specific and of highly specific properties.

a) Fostering of ownership of non-specific properties:

Fostering owner-occupation of non-specific properties forces users into a suboptimal form of first-level financing, inasmuch as debt first-level financing, i.e. letting, is optimal for non-specific properties. The economic costs of fostering non-specific properties are equal to the advantages of letting relative to owner-occupation, for the case of non-specific properties. Thus, from an economic standpoint, the promotion of owner-occupation of non-specific housing results in wealth destruction.

b) Promotion of ownership of highly specific properties:

Government fostering of ownership of highly specific properties at least does not press users into suboptimal first-level financing. Although there is no destruction of wealth through the forced adoption of an inefficient form of transaction, nonetheless, unnecessarily high costs are subsidised and public funds thus squandered. Since equity capital is costlier than debt capital, it will always be more expensive to finance a highly specific property than a non-specific one. Furthermore, in addition to the finance, the supply of non-specific accommodation also generally involves lower costs.

True, it is a valid argument that the filtering process results in lower-income households obtaining easier access to the properties of those who have become owner-occupiers, but housing policy could achieve a similar effect at lower cost by subsidising non-specific properties. Fostering highly specific properties in order to alleviate a “housing shortage” via the filtering process turns out to be costlier than direct financial assistance to lower-income households for the rental of non-specific properties or corresponding assistance to landlords building accommodation to offer to such households.

Fostering owner-occupation of non-specific properties destroys wealth via unnecessarily high transaction costs, while fostering owner-occupation of highly specific properties involves subsidising the unnecessarily high costs of such properties. In either case, the fostering of home ownership thus appears a rather dubious housing policy measure. The recognition that, for non-specific properties at any rate, the letting of space is the more advantageous form of transaction both economically and (taxes and subsidies aside) from the financial standpoint of the individual, provides at least some good reasons for demanding that home ownership measures not be subsidised.

At this point the results of the approach based on financial economics conflicts with the demands of that based on the goods market. While the effects of filtering processes imply that it is properties in the highest quality range that should be fostered, there now appears the danger that, due to demand factors, this may involve highly specific properties which will be financed on the first level with equity, making such fostering

especially costly and therefore inadvisable. While almost all fostering measures favour either the market for rented accommodation or that for owner-occupied properties, some basic tax regulations discriminate against one or the other form of first-level finance. For example, the land transfer tax discriminates against owner-occupation, as does Germany's treatment of owner-occupied properties as consumer goods for tax purposes. Since the optimal form of financing depends on a property's specificity, neutrality of fostering measures with respect to first-level financing is imperative in order to minimise waste of public funds.

The demand for neutrality of fostering measures with respect to first-level financing does not mean that special fostering of particular sectors may not be legitimate and appropriate.

With respect to rent law, examination of Table 1 shows that in those countries whose rent laws are very favourable to either tenants or landlords, the proportion of owner-occupied properties is relatively high. This connection is not very easy to capture statistically, since no measure exists for the characteristics of rent law in question and, at the same time, in many countries rent law is liable to change very quickly as a function of the prevailing cyclical phase of the housing market in conjunction with the political hue of the current parliamentary majority, while the proportion of owner-occupied properties, on the other hand, changes only slowly. For example, under Franco, Spanish rent law[23] was highly favourable to tenants while, in order to promote political stability, housing construction policy was oriented towards owner-occupation; then, under the socialist González government, at first a rent law[24] highly favourable to landlords was passed within the context of general economic liberalisation, and finally, with the rent law 29/1994 of 24 November, a middle way was adopted, partially following in the footsteps of German rent law.[25] It will turn out that both these orientations of rent law, that markedly favourable to tenants as well as that markedly favourable to landlords, can be a hindrance to the letting of properties. Development of a good rent law that maximises rental market volume is now a worthwhile task. Such a law for Germany and Spain is outlined in Sotelo (1997) and Aleman and Sotelo (1997).

The abstract policy recommendation emerging from the approach based on the theory of finance is neutrality of promotional measures and regulations with respect to the financing of use as first-level financing.

7 Summary and outlook

We started by introducing the conceptual distinction between first-level financing as the financing of use and second-level financing as the financing of the returns on use. In doing so, purchase of space use via letting was viewed as debt financing, and purchase of space by the user was viewed as resembling equity financing.

Just as debt capital is fundamentally more advantageous than equity capital, so the financing of use via letting is more advantageous than financing via purchase of a

[23] Ley de Arrendamientos Urbanos de 1964.
[24] Decreto-Ley 2/1985 del 20 de abril, "Decreto Boyer".
[25] Sotelo and Aleman (1997, pp. 2 f.).

property. In addition, management of owner-occupied accommodation gives rise to considerable costs in the form of delegation costs and problems of coordination. Direct monetary transaction costs are also generally higher for owner-occupied properties than for rented ones.

Application of Williamson's (1988) financing postulate yields a horizontal rule of financing which applies when security is provided by the property itself, and which states that highly specific investments should be financed with equity capital and non-specific investments with debt capital secured by the property. Applying this rule to first-level financing then yielded the result that letting a property is always more advantageous than selling it, but is not always feasible.

The approach based on the theory of finance yielded a variety of recommendations for housing policy. Firstly, letting was identified as an effective and economical way to finance the use of non-specific properties. A further consequence of this approach was shown to be that all fostering measures should be neutral with respect to first-level financing, since suboptimal financing of use, induced by a fostering measure, entails costs which would be avoided if the measure were neutral. This conclusion implies that owner-occupied residential properties should be treated as investment goods for tax purposes, while targeted measures to foster owner-occupation should be scrapped.

A further conclusion was the need to develop good rent law. Rent law can be called "good" if it maximises market volume, given free participation in the market. Rent law must therefore be viewed as an institution for maximising market volume, not as a corrective social policy measure. All government interventions, fostering measures and regulatory frameworks should be neutral with respect to first-level financing.

Viewing letting as the financing of use through debt and, derived from this, identification of a first, real level of financing as a financial level preceding refinancing of the returns on use, provides research on real estate economics with a theoretical approach which should prove fruitful, both because it enables a variety of questions to be answered with the degree of theoretical rigour which they deserve and because it makes possible the application of classical and neo-classical, as well as neo-institutionalist, financial theories. This warrants the expectation of new insights, as well as (no less important) enabling a greater integration of research on housing and real estate economics into economics generally, an integration which should lead to mutual enrichment.

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