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Four Dutch products in international perspectives**

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Financial implications of affordable home ownership products: four Dutch products in international perspective

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Abstract Many governments encourage home ownership and try to find ways to make this tenure more affordable for lower income groups. Well-known examples are Shared ownership and Home buy in the UK and Land Community Trust and Shared Equity Home Ownership in the USA. In the Netherlands, these types of products are popular among housing associations, which are private non-profit organisations. With the Dutch housing market in crisis, affordable home ownership products have gained popularity among house-seekers and social housing suppliers. This has resulted in a range of mostly complex products with different features which are not easy to compare. This paper aims to compare the financial performance of the various products under different economic conditions. This paper firstly puts the Dutch products into an international perspective by providing a typology based on an overview of the literature. Subsequently, each product is described in more detail and its financial consequences from a consumer as well as an investor perspective are calculated for three different economic scenarios. Finally, the paper reflects on how the Dutch products compare to the well-known products in the UK and the USA.

Keywords Affordable home ownership · Intermediate housing tenures · Shared equity · User costs

1 Introduction

Many governments encourage home ownership and try to find ways to make this tenure more affordable for lower income groups. Well-known examples are Shared ownership and Home buy in the UK and Community Land Trusts (CLT) and Shared Equity Home Ownership (SEH) in the USA. Such products are invented because they allow home ownership for lower income groups without high costs for the government. These products

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are cheaper for the government than straight forward subsidies for affordability since they entail a payback construction. The key principle is that they provide homeowners with lower housing expenses at the start of their housing career. However, home owners have to pay back for this advantage in some way later on in their housing career. This can, for example, be a loan that is paid back later or an intermediate housing tenure in which equity is shared (Monk and Whitehead 2010). The distinguishing feature of intermediate tenures is that the property rights differ from those of conventional renting and home ownership. Intermediate tenures lie somewhere on the continuum between the two (see Whitehead and Yates 2010). This does not apply to the financial products that aim to stimulate affordable home ownership. In principle, these products do not affect the property rights of a home owner. There is a whole range of “affordable home ownership products” serving different policy aims and target groups. Moreover, there is variation over countries since all products need to fit in the country context in which they are applied; property laws, tax laws and the strategies of lenders are important for the details of the product.

The Netherlands has a long tradition of affordable housing. The majority of Dutch affordable housing is located in the social rental sector, where the rents are below market level. Nowadays, Dutch housing associations are trying to sell part of their social rental dwelling stock to lower income homeowners. Intermediate tenures or financial products are used to enhance the sale of these dwellings and to make them more affordable for the target group. To get a clear picture of the Dutch situation, one needs to understand that the housing associations are financially independent and that the sale of dwellings is an integral part of their portfolio management. Secondly, one needs to be aware of the workings of the Dutch income tax system in relation to home ownership. Interest paid on a mortgage is 100 % deductible from taxable income at a marginal rate. Eligibility for this tax relief is therefore a key requirement in Dutch affordable home ownership.

The paper provides an evaluation of the most important Dutch “affordable home ownership products”. It starts by providing an overview and a typology of the different types of products, thus putting the Dutch products in an international perspective. Next, we analyse the financial consequences of these products for the homeowners. The housing expenses (the consumer perspective) and also the user costs (the investor perspective) are calculated for three different economic scenarios. The paper finalises with a reflection on the pros and cons of each of the four products.

2 Types of affordable home ownership

Policies to promote affordable housing have traditionally been associated with subsidies for homeowners or for tenants. These can be supply subsidies or demand subsidies. One classic dilemma in such policies concerns the difference between home ownership and renting. Renting equates to being a housing consumer, and subsidies reduce the cost of consumption. Owner occupation, on the other hand, implies investment as well as consumption. Subsidies for home ownership, therefore, are a consumption and investment subsidy at one and the same time. In home ownership the regular expenses are normally higher since the owners not only pay for consumption, but also for the investment, which generates a return at a later date. However, compared to renting the expenses of a home owner hardly increase over time. Many governments and consumers prefer home ownership, but not all households can afford the high housing expenses especially in the first years after the purchase of the dwelling. Therefore, many attempts in many different parts of the world have been made to find a solution for this accessibility and affordability

problem. In the remainder of this Section, we will describe these different solutions with the help of a typology.

There are different ways in which the housing expenses of homeowners can be reduced in the first years after the purchase of the dwelling. A first way is to provide a subsidy to a home owner as presented in Table 1. This is straight forward way to make housing affordable, and the only drawback is that it costs money. This is the reason why such generic subsidy policies are often criticised for efficiency and fairness. After all, the problem was the frontloading that created unaffordability, but in the longer run the costs for a home owner are more stable than those of a tenant. It is therefore a more efficient option to ask the subsidy, or it last part of it, back at a later point in time. This is an issue discussed all over the world (Whitehead and Yates 2010). There are different ways to organise a payback construction. The first one is the anti-speculation regulation for housing and land; a home owner has to pay back (part of the subsidy) when he sells the dwelling within a certain period. Such regulation normally implies: the sooner you move, the higher the amount of money you have to pay back to the provider.

Secondly, there is a whole range of “affordable home ownership products” in which the home owner receives a “subsidy” which needs to be paid back later on. These products are the focus in the remainder of this paper. We distinguish three types of products: special loans, shared equity and intermediate tenures.

A first group of products involves special loans that solve the frontloading problem with the help of a lower interest rate in the earlier period that is paid back later on. Subprime loans are a commercial and extreme example of this principle (Munro et al. 2005). A French social example is the former Prêt à Taux Zéro (PTZ), a zero interest loan that covered up to 20 % of the value of the dwelling. The first PTZ loan repayments could be made after the main mortgage was repaid (Gobillon and Le Blanc 2008). The current PTZ+ is targeted more towards newly built dwellings with high energy efficiency, but can also be used by social housing tenants who want to buy their dwelling (website Notaires France 2014).

A second group of products is “shared equity”. “Shared equity finance” is a method of housing finance, in which an unrelated third party puts up money against a property that is mostly owner occupied, and in which the obligation of the home owner to this third party depends on the open market value of the property in question, rising and falling with the sale price of the home (Caplin 2012). This implies that there is a co-investor, who is not a

Table 1 Typology of ways to make home ownership affordable

Payback or not	Subsidy	Special loan	Shared equity	Intermediate tenure
No	Supply or demand subsidy			
Stay or pay	Anti-speculation regulation			
Payback:				
Free transfer of house		PTZ (Fr)	Home buy (UK)	Shared ownership (UK)
Conditional transfer of house				CLT (US), SEH (US), protected home ownership (Sp)

co-owner. A social UK example that is used to encourage low income home ownership is Home buy, in which the home owner buys only part of the equity and becomes a full home owner (Scanlon 2010). Home buy provides an interest-free loan of 25 % of the value of the property purchased under the scheme (within maximum price limits). The loan is repayable when the property is sold (the amount repaid is 25 % of the value at the time of sale). In the UK, housing associations and local authorities provide many different types of Home buy: new Built Home buy, Open market Home buy, Social Home buy, My Choice Home buy and Home buy direct (Monk and Whitehead 2010).

A third category are the intermediate housing tenures, products in which the property rights of homeowners are different from those of conventional homeowners. A first product mostly provided by social housing associations is Shared ownership in the UK in which the home owner buys part of the dwelling and rents the other part at a social rent. The partly owner however has the opportunity to staircase, by buying a larger share in the dwelling, to full home ownership (Monk and Whitehead 2010; Wallice 2010). This means that it is an intermediate tenure that may be, or is meant to be, temporary and ends into full ownership.

Finally, there is a group of intermediate tenures that are permanent. This implies that this tenure product is affordable in perpetuity, which limits the rights for resale. In the case of community land trust (CLT) in the USA, the home owner owns the house and leases the land. The land lease increases affordability because the land is provided by a trust at a “social price”. Moreover, leasing in instead of buying is also a way to reduce the burden of frontloading (Saegart and Benites 2005). Another type of a social affordable housing tenure by perpetuity is shared equity home ownership (SEH) in the USA. This implies shared equity plus limited property rights compared to home ownership; the dwelling cannot be sold in the open market (Thaden et al. 2013). A last example is subsidised home ownership in Spain: housing is bought by the home owner at a below market price and the home owner is obliged to sell it back at a below market price (Hoekstra et al. 2009). An overview of the different types of products is presented in Table 1.

A first issue that appears in evaluations of these products is the question of whether these products are fair: Is the payback later on fair compared to the subsidy in the early years (Thaden et al. 2013; Monk and Whitehead 2010)? Moreover, evaluations raise the issue of complexity and, therefore reluctance among consumers as well as lenders. Finally, several evaluations note that the future movement in the housing market is a topic of concern. In particular, evaluations of Shared ownership point out that since homeowners build less equity than conventional homeowners; it is more difficult for them to make a next step in the owner occupied market (Wallice 2010).

Finally, there is discussion about the perpetuity: Is the money invested only beneficial for the first homeowners or does it also make home ownership affordable for the next generations? Table 2 demonstrates that PTZ, Home buy and Shared ownership all focus on the home owner becoming a full homeowner in the end. There is no obligation to sell the dwelling back to the initial provider; the dwelling can be transferred in the open market (see Table 2). Shared ownership is mainly seen as a temporary stage on the way to full ownership. In the USA, CLT and SEH are mainly seen by buyers as a better alternative for renting (Thaden et al. 2013). The protected homeowners in Spain are obliged to pay back the dwelling to the provider at a below market price. The providers focus on the efficiency of the provision of these products.

The question now is how do Dutch products compare to these better known and more researched products in the UK and the USA?

Table 2 Rights and financial implications for homeowners

	Intermediate tenure	Shared equity	Special loan	
	<i>KoopGarant</i> (buying with Guarantee)	<i>Kopen naar Wens</i> (buying as you wish)	<i>Starterslening</i> (starters loan)	<i>Starters renteregeling</i> (starters interest scheme)
Reduction on house price	25 % market price	25 % market price	Interest-free loan	Lower interest
Free transfer	No	Yes (condition)	Yes	Yes
Control over maintenance	Yes	No	No	No
Free choice of lender	Yes	No	Yes	No
Right to gains	Shared: 62.5 %	Shared: 75 %	100 %	100 %, share in case of losses or limited growth
Tax relief (for which % of the market value)	75 %	75 %	Less in first years, later 100 %	98.55 % on the advances that are paid by the housing association, 100 % on the rest of the loan

Based on Monk and Whitehead (2010), Elsinga (2005) and Dol et al. (2012)

3 Position of Dutch products

As stated before, the Netherlands has a tradition in providing affordable housing in the social rental sector. This social rental sector, however, is in transition and it is common practice for social housing providers to sell part of the social rental stock. Many of them aim to sell to lower and middle income households and are therefore interested in products of affordable home ownership. Several products are available in the market and the market share of these products is growing. In this paper, we focus on four Dutch products with a growing market share, which provide prospective homeowners with additional financial means that have to be repaid eventually, but which can help households get a foot on the housing ladder.

3.1 The four Dutch affordable home ownership products: main features

Table 1 provides a first impression of the main features of the four affordable home ownership products discussed in this paper. There are two “special loans” that do not change the property rights of the home owner: the *Starterslening* and the *Starters Renteregeling*. There is one shared equity product: *Kopen naar Wens* and one permanent intermediate tenure: *Koopgarant*.

All four products reduce the monthly expenses for the home owner (Table 1) in the first years after the purchase of the dwelling, thus enhancing the accessibility of home ownership. In the case of *KoopGarant* and *Kopen naar Wens*, the home owner gets a 25 % reduction on the market price. In the case of the *Starterslening*, the home owner gets an interest-free loan, but with repayments in the end. In the case of the *Starters Renteregeling*, the owner gets an interest reduction of around 20 %.

There is free right of transfer in two of the four schemes (*Starterslening* and *Starters Renteregeling*). That implies that the dwellings bought under these schemes will end up in the open market. There is almost right of free transfer in the case of *Kopen naar Wens*, for

this product there is a condition; the home owner first has to offer the dwelling to the housing association that was the original owner of the dwelling. There is no free right of transfer for *KoopGarant* since the owner is obliged to sell the dwelling back to the provider and to share the value change.

In the case of *KoopGarant* and the *Starterslening*, the home owner is free to choose the lender; in the case of *Kopen naar Wens* and the *Startersrenteregeling*, only a selected number of lenders will provide a mortgage. This is due to the fact that the share of these products is smaller and they are less known in the financial sector. In *KoopGarant* and *Kopen naar Wens*, the home owner is obliged to “share the capital gains”. In the *Starters Renteregeling*, all capital gains are for the home owner, while losses are shared. In the case of *Starterslening*, the whole value change is for the home owner. All four products are eligible for tax relief. Each product is discussed in more detail in the next section.

3.2 The four affordable home ownership products: more detail

The four selected products have different backgrounds, market shares and peculiarities, which will be described in this section.

3.2.1 *KoopGarant*

KoopGarant is the archetype of Dutch intermediate tenures. It is designed to facilitate access to home ownership and reduce the risk of a residual debt after the sale of the dwelling. With *KoopGarant*, housing associations put houses up for sale below the market value, i.e. at a price that is usually reduced by around 25 %, but sometimes as much as 50 %. If the owner moves house, he/she is contractually obliged to offer to sell the dwelling back to the housing association, and the housing association is contractually obliged to repurchase the dwelling within 3 months. The valuation of the dwelling is carried out by an independent real estate appraiser and improvements of the dwelling by the home owner are taken into account in the valuation process. This “buy-back” obligation creates a very interesting situation for prospective homeowners in a slack housing market, as it guarantees a sale within 3 months. In the meantime, it gives housing associations an opportunity to keep *KoopGarant* dwellings within reach: the dwelling can be resold as a *KoopGarant* dwelling or added to the social rental stock.

In *KoopGarant* tenures, the housing association and the owner share the difference in the value of the dwelling through a legally prescribed formula. The housing association’s share is a maximum of 1.5 times the *discount* percentage, i.e. if the original *discount* on the purchase price was 25 %, the housing association will take no more than 37.5 % of the difference in value. This legislation, called “Fair Value Conditional Sales”, was introduced by the Ministry of Finance in 2002. Eligibility for tax relief on mortgage interest is dependent on compliance with this legislation. Table 2 provides two examples of how differences in value are shared.

The difference in value can be positive or negative. If it is negative, the principle of value-sharing reduces the risk for the owner, but the resale procedure can prove laborious. First of all, the house has to be valued on a consistent basis. Then any additional work on the dwelling by the owner, such as new kitchens, bathrooms or loft conversions, also needs to be valued. This can lead to conflicting opinions that have to be resolved. *KoopGarant* applies a formal procedure for such conflicts.

An interesting detail is that, initially, *KoopGarant* was provided only by housing associations, but since 2011, it is also provided by a number of commercial project

developers, who use it to sell dwellings which have proven hard to sell at the market price in the current economic crisis.

3.2.2 *Kopen naar Wens*

Kopen naar Wens was introduced as a more “market like” alternative to homeowners. It includes a reduced purchase price but no formal sharing of differences in value comparable to *Koopgarant*. It involves a sale below market value, whereby the difference between the market value and the purchase price is regarded as a “delayed payment”. If the owner moves, he/she must settle this delayed payment and compensate the housing association for “lost returns”. The compensation is equivalent to the local regional house price change. Table 3 shows an example of *Kopen naar Wens* in two economic scenarios.

Often the prospective buyer can choose the percentage of delayed repayment until a legal maximum of 50 %. The housing association can place a limit on this; a percentage of 25 % is common. If a home owner wants to sell the house he/she is obliged to first offer it to the housing association. If the housing association does not repurchase the dwelling, the owner can sell it on the open market as long as the delayed payment (with compensation) is settled. A well-maintained or renovated house often works in the owner’s favour, as the price difference may be above the regional average. Poor maintenance can translate into a disadvantage. Thus, the risk of maintenance with *Kopen naar Wens* is for the home owner.

3.2.3 *Starterslening*

The *Starterslening* was introduced some decades ago by local governments and is targeted at first-time buyers. The *Starterslening* is an extra loan provided by a special fund—the SVn (public housing stimulation fund)—which is financed by contributions from participating municipalities and housing associations. The general idea is that households take out a loan at a commercial bank with an additional starter’s loan from the SVn: the *Starterslening*. Interest on the *Starterslening* is charged at the normal market rate, with no special discounts. In the first 3 years after purchasing the house, however, the home owner

Table 3 Examples *KoopGarant* (Conditional Sales legislation, 2012)

Example 1: Increase in value of dwelling	
Market value at purchase	€170,000
Discount 25 %	€42,500
Housing association sells at:	€127,500
Market value at resale +20 %	€204,000
Change in market value	€34,000
Share of value difference for owner (62.5 %)	€21,250
Housing association buys back at	€148,750
Example 2: Decline in value of dwelling	
Market value at purchase	€170,000
Discount 25 %	€42,500
Housing association sells at >	€127,500
Market value at resale –10 %	€153,000
Change in market value	–€17,000
Share of value difference for owner (62.5 %)	–€10,625
Housing association buys back at	€116,875

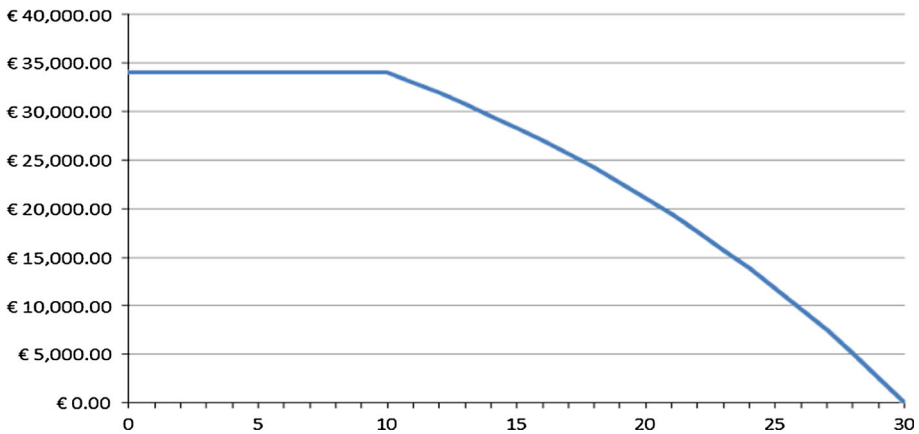


Fig. 1 Outstanding debt of the starter's loan, middle scenario for a median income household

pays no interest on the starter's loan. This can be seen as a subsidy that does not have to be paid back by the home owner. Subsequently, a means test is performed every subsequent 3 years to establish whether the home owner can afford interest payments and repayments. There are several conceivable scenarios, but under normal income conditions, the starter's loan will be repaid in 30 years. The repayment works as a normal annuity.

In the case of normal income development, the home buyer starts to pay interest on the starters loan after 3 years and, after another 3 years, he/she starts repaying the starter's loan as well. The graph in Fig. 1 gives an impression of the outstanding debt of the starter's loan in this scenario. If the home owner's income shows a very favourable development, he/she will start paying both interest and repayments on the starter's loan after 3 years. If, however, his/her income does not increase at all, he/she does not have to pay any interest on the starter's loan during the stay in the house. This does imply a loss for the provider SVn, who had expected some income from the interest on the loan. However, under all circumstances, the principal has to be fully repaid when the owner moves to another house or upon the expiry of the 30-year mortgage term, even if house prices have declined.

3.2.4 Starters Renteregeling

The *Startersrenteregeling* was introduced as an efficient alternative to the other affordable home ownership products. It is a product that benefits to a maximum of the mortgage interest deduction policy, that is targeted at first-time buyers and that is provided by housing associations. The *Starters Renteregeling* provides monthly advances that reduce the mortgage interest payments and enable first-time buyers to acquire a dwelling they would not normally have been able to afford. These advances equal 20 % of the total mortgage interest that is paid. Since the buyer pays less mortgage interest, he/she can take out a higher loan. The advances continue for 10 years and are directly paid to the mortgage provider. If the borrower's income is still insufficient to pay 100 % of the mortgage interest after this period, a five-year extension can be granted. A household with a gross annual income of around € 33,000 (Dutch median) is entitled to a maximum monthly advance of around € 150. All monthly advances add up to a total debt that has to be settled when the recipient moves to another house or upon the expiry of the thirty-year mortgage term. After 10, 15, 20 or 25 years (depending on the

income development), compensation (interest) is charged on the outstanding debt (see graph in Fig. 2, in this graph the compensation starts after year 10). This compensation is in line with the consumer price index (inflation) of the previous year and is therefore relatively low, which implies that some implicit subsidisation is involved. The consumer is allowed to pay back the outstanding debt any time he/she likes.

The monthly advances are paid to the mortgage provider through a management fund called “Social Finance”. The housing associations that participate in this scheme pay lump sums into the fund for every customer. The fund then directly transfers this money to the mortgage provider so that this provider can give a 20 % reduction on the mortgage interest that has to be paid for a period of 10 years. Officially, the customer has to repay the entire outstanding debt to Social Finance when he/she moves house, but there is a catch. Dutch law states that home ownership only exists when at least fifty per cent of the risks and profits of house value developments are borne by the “owner”. This means that Social Finance cannot charge more than 50 % of the increase in the value of the house. In the case, for example, of a median income household with accumulated advances amounting to around €18,000 after 10 years (Fig. 2), the increase in house price must be at least €36,000 if Social Finance is to recoup the entire sum. It is something of an understatement to say that the *Starters Renteregeling* was primarily designed for favourable housing markets.

Table 4 shows the market history, the licence holder, the number of providers and the market share of the four products. *Koopgarant* has the longest history and the largest market share. The *Starterslening* also has a long history and a sizeable market share. The other two products are relatively new and have a limited but growing market share.

4 Financial implications: methodology

Extensive attention has been paid to the financial implications of intermediate housing tenures. The affordability of these tenures has been the subject of several studies, all dealing with the accompanying housing expenses and affordability levels (Monk and Whitehead 2010; Bramley and Morgan 1998; Bramley and Karley 2005; Martin 2001; Barlindhaug and Astrup 2010). The evaluation of financial consequences mainly focussed

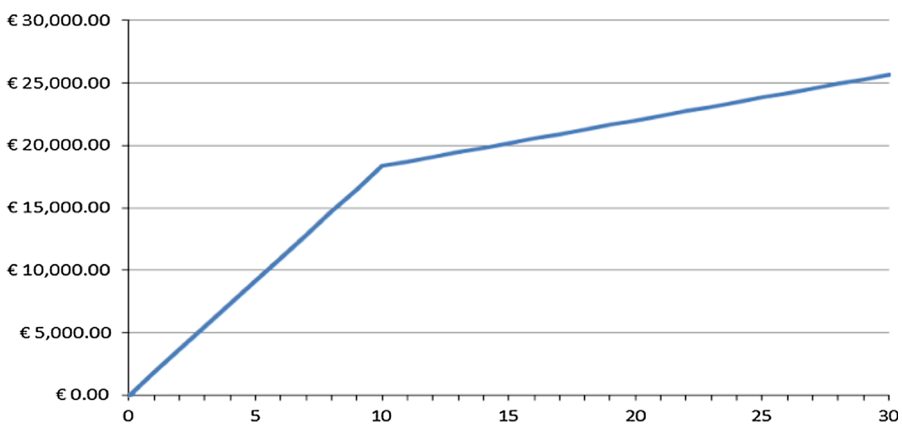


Fig. 2 Accumulated debt through Starters Renteregeling’s advances for 10 years and compensation (set at 2 % annually) after 10 years (example for median income household)

Table 4 Examples *Kopen naar Wens*

Example 1: Increase in value	
Market value at purchase	€170,000
Purchase price 75 %	€127,500
Delayed payment 25 %	€42,500
<i>Regional price difference after 10 years + 20 %</i>	
Market value	€204,000
Delayed payment with index (+20 %)	€51,000
Net proceeds for owner after sale	€153,000
Example 2: Decline in value	
Market value at purchase	€170,000
Purchase price 75 %	€127,500
Delayed payment 25 %	€42,500
<i>Regional price difference after 10 years minus 10 %</i>	
Market value	€153,000
Delayed payment with index (-10 %)	€38,250
Net proceeds for owner after sale	€114,750

on the expenses for homeowners, thus on the consumer perspective. Less attention is paid to the investor perspective. This is remarkable because after all a home owner is an investor and gets a return on his investment. In the case of affordable home ownership products, this return on investment depends on the conditions attached to the product. For the four Dutch affordable home ownership products, this paper takes a consumers' as well as an investors' perspective. The latter is in particular relevant to evaluate the performance of these products under different economic conditions. As far as this is concerned, three different economic scenarios are included in our calculations.

The concept of user costs takes account of both the costs and the revenues of home ownership and therefore is a useful method for comparing the economic effects of the four selected products. It provides insight into the financial consequences from the investment point of view. After all, a home owner is not only a consumer but also an investor. The user cost approach is a broadly applied method for comparing housing costs and housing revenues between countries and between homeowners and tenants (Haffner 2000). User costs refer to the costs of "having the house and using it". We consider the concept of user cost as an appropriate way to calculate the financial results from the investor perspective. This enables us to compare the financial consequences of the four selected products with each other and with conventional home ownership. Although certainly interesting, a comparison with the rental market is beyond the scope of this paper.

Table 5 shows the components that make up the expenses and user costs as applied in our analysis. Various components are the same for both, such as the interest on the mortgage and the costs of maintenance and tax. The key difference between expenses and user costs is that the latter focuses on investment. This implies, for example, that the revenues from increases in the house price are also taken into account. The costs of equity are not part of the expenses, but the user cost approach does take account of opportunity costs. After all, if the money had not been invested in the house, it would have generated a return.

All calculations will be executed for a typical household with a typical mortgage. All analyses were carried out for three different economic scenarios (Table 6) and cover a period of 15 years. Important parameters of this model situation are shown in Table 7. The rationale behind the parameters that were chosen in the model situation is as follows:

Table 5 Providers and market share of the four types of Dutch affordable home ownership, January 2012

	<i>KoopGarant</i>	<i>Kopen naar Wens</i>	<i>Starterslening</i>	<i>Starters Renteregeling</i>
Since	Current form since 2004 but an earlier form started in the 1980s	Current form 2011, after experiments since 2007	Current form 2007 but started in 1990s	Since 2010
Allowed for	Housing associations and commercial housing developers	Housing associations	Municipal and provincial authorities and housing associations	Housing associations
Providers	160 housing associations and 10 commercial housing developers	10 housing associations	162 municipal authorities, 7 housing associations and 2 provincial authorities	40 housing associations
Number of sales under the product (since the start of the product)	±25,000	±500	±14,000	± 600
Licence holder	OpMaat (non-profit)	Woonlab Company (profit)	Stimuleringsfonds Volkshuisvesting (SVn) (non-profit)	Social finance company (profit)

Table 6 Components of expenses and user costs

	Expenses	User costs
Interest on mortgage	+	+
Opportunity cost of equity	0	+
House price increase (minus in case of decrease)	0	-
Mortgage repayments	+	0
Depreciation	0	+
Property tax	+	+
Cost of maintenance	+	+
Tax relief income tax	-	-
Tax imputed rent	+	+
+ add to total		
- deduct from total		
0 not relevant		

Table 7 Three economic scenarios

	Development of nominal house prices (%)	Development of nominal incomes (%)
Growth	5	4
Middle	2	2
Stagnation	-1	-1

- An income of 35,000 € is close to the average household income in the Netherlands.
- The market value of the dwelling is set at €170,000. Given the mortgage norms of 2011, this implies that a household with a taxable household income of €35,000 needs an intermediate tenure or a financial product to be able to afford such a dwelling.
- The interest rate for mortgages is set at 5 %, which was the standard mortgage rate in 2011 when this research was carried out.
- With regard to the user cost calculations, we have assumed that the prospective homeowners buy the house without investing own equity.
- We have calculated with a full deduction of mortgage interest against the marginal income tax rate (42 %) and a “taxation of the imputed rent” that was 0.55 % of the market value of the dwelling. These were the tax conditions in 2011.
- We have calculated with mortgages that are for 50 % amortised in a period of 30 years; this was most used type of mortgage in 2011. We have calculated with a transfer tax of 6 %, which was the transfer tax rate in the beginning of 2011 (since June 15, 2011, it has been lowered to 2 %). The transfer tax only applies to existing dwellings and is a one-time payment that has to be done when the dwelling is purchased.
- We have calculated with mortgage costs that equal about 1 % of the market value of the dwellings. These are one-time costs that have to be paid when the dwelling is bought.
- The costs for local taxes are set at 0.25 % of the market value of the dwelling, whereas the costs for maintenance are set 0.7 % of the market value of the dwelling.¹ This corresponds to annual costs that equal 0.95 % of the market value of the dwelling.
- The reduction on the market value of the dwelling that comes with *KoopGarant* and *Kopen naar Wens* is 25 %. This was a common reduction in 2011.
- We calculate with a percentage of value-sharing of 37.5 % for *KoopGarant* (1.5 times the reduction percentage). Maximal 37.5 % value-sharing is a condition described as a requirement to be able to deduct mortgage interest for income tax. The percentage of 37.5 % is the result of years-long discussion in the Netherlands on whether the affordable housing products are fair value or not.

5 Financial implications: the outcomes

5.1 Housing expenses

The annual housing expenses of conventional owner occupiers consist of net mortgage payments and amortisations (corrected for fiscal arrangements such as imputed rent and mortgage interest deduction), local taxes and maintenance costs. Dividing these costs by 12 shows the monthly housing expenses.

The factors that influence the housing expenses of conventional owner occupation also apply to *KoopGarant* and *Kopen naar Wens*, although the monthly housing expenses are lower because of the 25 % reduction on house price (this results in a lower mortgage interest, a lower mortgage amortisation and lower expenses on aspects that are related to the sale price of the dwelling, see Table 8). For the *Starterslening*, the housing expenses from year four and onwards consist of all the aforementioned elements, plus the interest

¹ This is based on information from the Dutch home owners association (*Vereniging Eigen Huis*).

and amortisation payments that are connected with this loan (if the income has increased sufficiently to make these payments).

In the *Starters Renteregeling*, a debt is formed. However, it does not influence the monthly housing expenses since it only needs to be repaid after the sale of the dwelling or upon the expiry of the mortgage term of 30 years. Figures 3, 4 and 5 provide insight into the monthly housing expenses of the different forms of affordable ownership in the three economic scenarios.

5.1.1 Stagnation scenario

In this scenario, the monthly housing expenses of the four selected products are clearly lower than those of conventional owner occupation. In all variants, the monthly housing expenses decrease slightly over time. This is due to the fact that the imputed rent, the local taxes and the maintenance costs are all based on a market value that declines in the course of time. Since incomes are declining as well, the *Starterslening* remains interest- and amortisation-free. The reduction in interest payment that comes with the *Starters Renteregeling* applies to the whole period of 15 years.

5.1.2 Middle scenario

In this scenario, the housing expenses are relatively low for *KoopGarant* and *Kopen naar Wens*. This is due to the 25 % price reduction (relative to the market value of the dwelling) that comes with these products. As a result, mortgage payments (interest payments and amortisation) are lower than those of conventional owner occupation.

Table 8 Model situation as starting point for the comparison of housing expenses and user costs

Variable	Chosen parameter
Taxable household income	€35,000 a year (one person earner)
Market value dwelling	€170,000
Interest rate for mortgages	5 %
Own equity of the household	0
Fiscal aspects	Mortgage interest deduction (annual) and taxation of 'imputed rent' (% of the market value of the dwelling, annual payment)
Amortisation of mortgage	50 % in 30 years ^a
Transfer tax	6 % of market value dwelling (one-time payment) ^b
Administration costs of mortgage	1 % of the total amount of mortgage (one-time payment)
Local taxes and maintenance	0.95 % of market value dwelling (annual payment)
Reduction on market value for <i>KoopGarant</i> , and <i>Kopen naar Wens</i>	25 %
Percentage of value-sharing when the dwelling is sold	37.5 % for <i>KoopGarant</i> to housing association 25 % for <i>Kopen naar Wens</i> to housing association

^a This works through a savings account (*Spaarhypotheek*) in which amortisations are "stored" on a tax-free basis and interest is paid on them (the interest rate is the same as the interest rate on the mortgage). At the end of the mortgage term, or after the sale of the dwelling, the money from the savings account is used to amortise the mortgage, or part of it, at once. The idea is to benefit as much as possible from the mortgage interest deduction

^b For *KoopGarant*, the transfer tax is paid over the purchase price of the dwelling

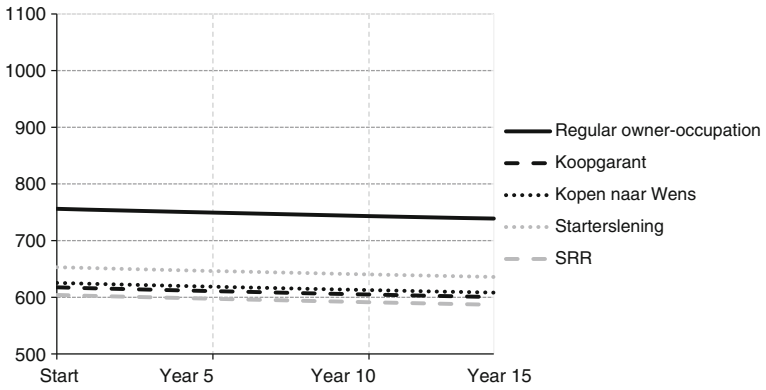


Fig. 3 Monthly housing expenses, stagnation scenario

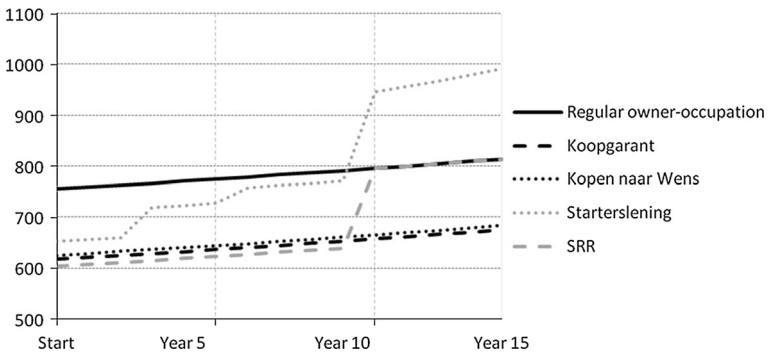


Fig. 4 Monthly housing expenses, middle scenario

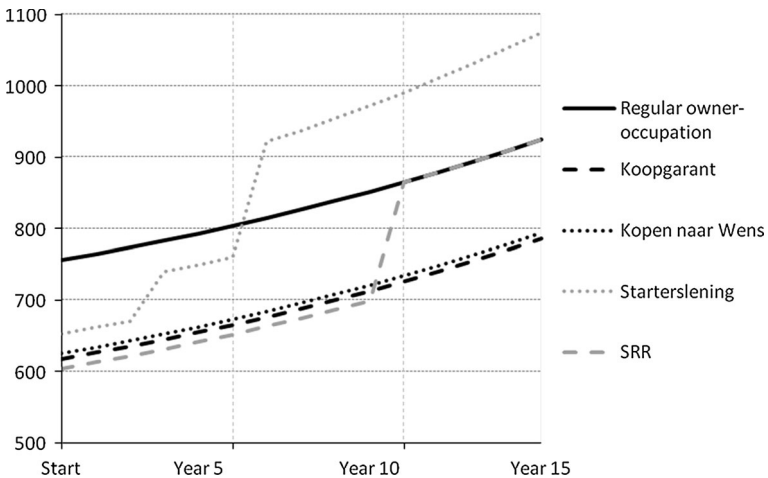


Fig. 5 Monthly housing expenses, growth scenario

In the *Startersrenteregeling*, monthly housing expenses are relatively low as well thanks to the 20 % reduction on the interest payments in the first 10 years after the purchase of the dwelling. After year ten, when the household income has supposedly increased, this reduction disappears. From that moment, the monthly housing expenses of participants in the *Starters Renteregeling* are the same as those of conventional owner occupiers, although it should be borne in mind that the former remain with a debt that has to be paid off sometime (when the dwelling is sold or the mortgage term has expired).

With the *Starterslening*, monthly housing expenses are clearly lower at first than in conventional owner occupation. However, in the course of time these costs increase along with the household income. This increase in household income implies that the owner occupier starts to pay interest on his *Starterslening*. After year ten, the income should have increased so much that the household also starts with the amortisation of the *Starterslening*.

5.1.3 Growth scenario

This scenario is comparable with the middle scenario, although the monthly housing expenses are on a higher level as a result of the higher market value of the dwelling. Since the income increase is greater than in the middle scenario, owner occupiers with a *Starterslening* start the amortisation of this loan in year six.

5.2 User costs

This section focuses on the investment perspective and presents the results of the user cost calculations in Figs. 6, 7 and 8.

5.2.1 Stagnation scenario

In this scenario, the user costs are relatively high since house prices are declining and resulting in negative equity. The effect is somewhat less for the products that include “value-sharing”, *KoopGarant* and *Kopen naar Wens*, since for these products the loss is shared between the home owner and the housing association, the initial provider.

The *Starters Renteregeling* also does rather well in this scenario. Participants in this scheme, who experience a decline in income, receive a reduction of 20 % in their interest payments during the whole 15-year period. Moreover, as a result of the negative trend in house prices, they do not have to pay back this money.

A negative development in income development in this scenario also means that the *Starterslening* remains interest- and amortisation-free during the entire fifteen-year period. Consequently, in this scenario, the user costs in the *Starterslening* are also lower than conventional owner occupation.

5.2.2 Middle scenario

In the middle scenario, the *Starterslening* has the lowest user costs in the first 15 years. This is due to the fact that the loan is interest-free in the first 3 years. This interest “subsidy” does not have to be paid back. The *Starters Renteregeling* similarly provides an interest “subsidy” (advance in interest payments so that 20 % less interest is paid in the first 10 years), but in this scenario the home owner does have a repayment obligation (after 30 years or when the dwelling is sold). We have included this repayment obligation in our

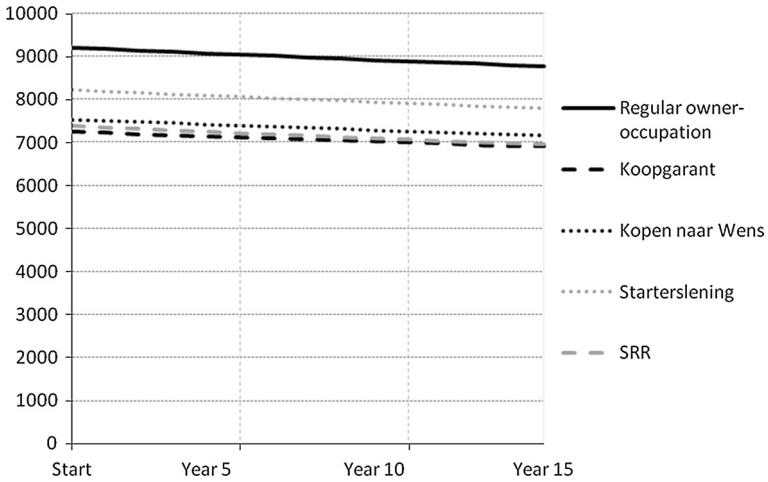


Fig. 6 User costs in the stagnation scenario

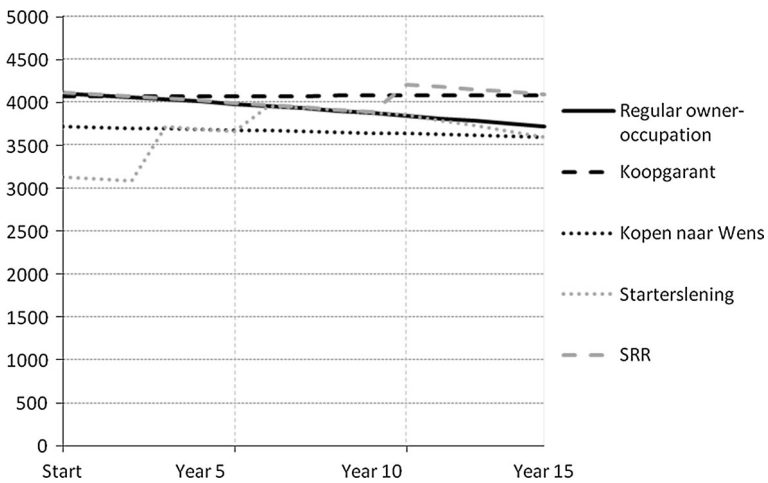


Fig. 7 User costs in the middle scenario

yearly user cost calculations, even though this obligation does not affect the yearly housing expenses. Therefore, the user costs of the interest in the *Starters Renteregeling* are equal to those of conventional owner occupation in the first 10 years after purchase of the dwelling. After year ten, they are even a bit higher, because from that moment, interest (albeit at a low rate) is calculated over the advance. Finally, we observe that the user costs of *Kopen naar Wens* are lower than those of *KoopGarant*. This is due to the fact that the percentage of value-sharing for *Kopen naar Wens* (25 % for the housing association, 75 % for the owner occupier) is lower than the percentage of value-sharing for *KoopGarant* (37.5 % for the owner occupier, 62.5 % for the housing association).

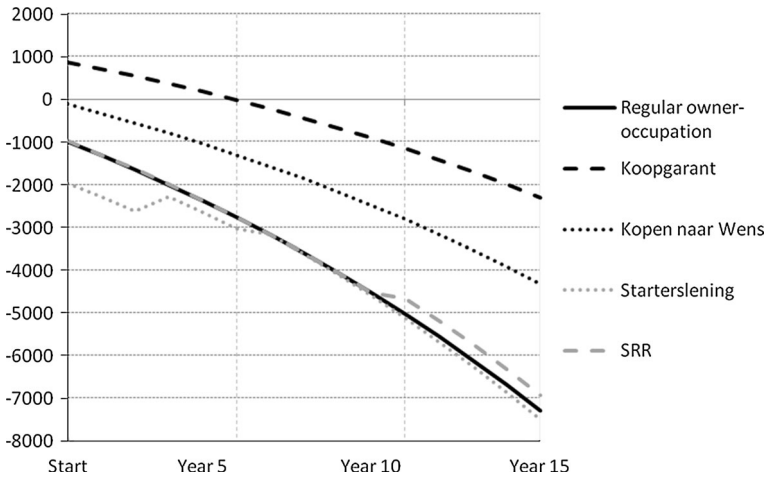


Fig. 8 User costs in the growth scenario

5.2.3 Growth scenario

In this scenario, house prices have developed so strongly that the user costs become negative in the course of time. Conventional owner occupation, the *Starterslening* and the *Starters Renteregeling*, have the lowest user costs, since none of them work with value-sharing.

5.3 A comparison

To summarise the figures that were discussed in the Sects. 5.1 and 5.2 we present an overall comparison in Table 9.

The first conclusion is that, in each scenario, all four selected products make home ownership more affordable than conventional owner occupation. In all cases, the housing expenses are lower in the first years after the purchase. So all products succeed in their aim to make home ownership more accessible for lower income groups. In the stagnation

Table 9 A comparison of financial outcomes

Economic scenario	<i>KoopGarant</i>	<i>Kopen naar Wens</i>	<i>Starterslening</i>	<i>Starters Renteregeling</i>
Expenses, stagnation	Lower than conventional	Lower than conventional	Lower than conventional	Lower than conventional
Expenses, middle/growth	Lower than conventional	Lower than conventional	First lower, later higher	First lower, later equal to conventional
User costs, stagnation	Lower than conventional	Lower than conventional	Lower than conventional	Lower than conventional
User costs, middle	First equal, then higher	Lower than conventional	First lower, later higher	First equal, then higher
User costs, growth	Higher	Higher	First lower, later equal	About equal

scenario, the four products all have lower expenses than conventional home ownership. In the middle and growth scenario, the financial products *Starterslening* and *Startersrenteregeling* result in housing expenses are lower in the initial years, but higher than conventional home ownership later on. These products thus solve the frontloading problem by shifting expenses to the future.

In the stagnation scenario, the user costs of all four products are lower than those of conventional home ownership. The middle scenario produces a mixed picture, whereas the growth scenario demonstrates that the user costs of the two financial products are later on equal to home ownership, whereas the user costs of the two intermediate tenures are higher over all the period.

6 Conclusions

Ample research has been conducted on the affordability of “affordable home ownership products”, especially in the United Kingdom and the United States. However, Dutch products are not often included in the international comparisons. This paper intends to fill this gap by presenting the results of an evaluation of four Dutch products, using both a consumers’ (housing expenses) and an investors’ (user costs) perspective. Our analyses showed that there are two main types of solutions for the frontloading problem. The financial products compensate the “subsidy” in early years by higher expenses in later years, while the intermediate tenures compensate the “subsidy” by “equity sharing”. In other words, the home owner that uses such products ends up with substantial less equity than the conventional home owner.

6.1 Dutch products in international perspective

How do the Dutch products compare to products in the USA and the UK described earlier? As stated before, some products are typically targeted at first-time buyers and considered a first step in the owner occupied market. These products aim at full home ownership in the end. Home buy and Shared ownership are UK examples, while *Starterslening*, *Startersrenteregeling* and also *Kopen naar Wens* are Dutch examples. In these products, the dwellings are sold on the open market, while the “subsidy” is paid back and can be used to subsidise a next home owner.

Other products are more regulated and have property rights that are somewhere between full home ownership and renting. These intermediate tenures aim at a perpetuity; affordable housing not only for the first buyer but also for the buyers that follow. These products all have resale restrictions: they are “protected” from the open market and can be considered a separate housing sector. LCT and SEH are US examples, while *Koopgarant* is a Dutch example. Special about the Dutch product is that private social rental housing associations play a key role in the provision of affordable home ownership.

6.2 Discussion

For home buyers, the different products imply different risks of losing money in a stagnating market, as well as different opportunities for building equity in a growth market. Moreover, different affordable home ownership products have different consequences for housing market mobility (Clark et al. 2007). Lack of equity to make the next move in the housing market may be a problem for the owner of a dwelling with an intermediate tenure

in a growth market. In the current stagnating market, however, intermediate tenures seem to have more to offer consumers than conventional owner occupation. After all, homeowners share their losses with the provider, and the buyer of *KoopGarant* benefits from the guarantee that he can sell his dwelling within 3 months.

Affordable home ownership products have different features and target groups, but appear to fulfil a need of households who cannot access ordinary home ownership. A drawback for all affordable home ownership products is the complexity. This makes lenders as well as consumers reluctant and sometimes even suspicious. Good and independent analysis of the pros and cons of the various financial products and intermediate tenures is crucial for the future of the affordable home ownership market.

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