Home Ownership among Low Income Households

Lars Gulbrandsen and Thorbjørn Hansen

Abstract
Norway is one of the European countries with the highest home ownership rate. At any time about 80 percent of Norwegian households are home owners and between 90 and 95 percent will attain home ownership sooner or later in their life course. Normally home ownership attainment is strongly correlated with income. In Norway the high ownership rate will of necessity reduce the range of such a correlation. However, the correlation is undoubtedly to be found in cross sectional data. A nation wide survey carried out in 2004 showed an ownership rate of 30 in the lowest decile of household income and 98 in the highest one. Different Norwegian governments have tried to make housing policy measures as public loans and housing allowances more suitable to facilitate home ownership attainment even among low income groups. In succeeding low income households may enjoy the happiness to be an owner in a housing market moving upward, but at the same time be exposed to considerably larger risks. In the paper we discuss the design of a coming research project where we will analyse both the chance of attaining home ownership and the risk of falling out of an owner position. We will use a longitudinal data base containing data on income, financial assets and deficits, ownership registrations, prices from the house transactions, household composition and moves for the whole Norwegian population. We intend to select a sample consisting of all Norwegian households who at least in one year in the period from the outset of 2000 until the end of 2004 have belonged to the lowest income decile (approximately 300 000 households).

1. Introduction
Norway is one of the European countries with the highest home ownership rate. At any time about 80 percent of Norwegian households are home owners and between 90 and 95 percent will attain home ownership sooner or later in their life course. Since World War II the establishment of home ownership has been a central part of Norwegian housing policy. The state played a key role, not least by financing a substantial part of new construction. More than one half of all dwellings in Norway have in a shorter or longer time been financed by the Norwegian State Housing Bank (Gulbrandsen 2004). Besides of this support in the form of low-interest state loans, home ownership has been favoured by the taxation rules. Interest payment has been deductible in the assessment of taxable income while the corresponding

---

1 Paper presented in the workshop “Home ownership in Europe: policy and research issues”. Delft 23th and 24th of November. 2006

2 NOVA – Norwegian social research.. E.mail;lars.gulbrandsen@nova.no

3 Norwegian Building Research Institute. E.mail: thorbjorn.hansen@sintef.no
imputed income from the house investment has been based on very low assessment value and was completely removed from 2005 onwards. The effect of this favouring of owners compared to tenants is further strengthened by increasing housing prices. Apart from a short period in the last eighties and the beginning of the nineties, house prices in Norway have been increasing since 1993, most of the time more than the increase of the consume price index. In the last governmental white paper to the Parliament on housing policy (St.meld. nr 23, 2003-2004) the situation of tenants were characterized as a poverty trap. We will also point out the lack of good alternatives to owner occupancy. More than half of the supply of rental houses comes from individual owners temporarily renting out their own homes or an extra dwelling. This type of renting will almost never represent a permanent housing situation for the tenant (Nordvik & Gulbrandsen 2004). Unlike many other European countries Norway neither has any big social housing sector. Municipal housing constitutes only four per cent of the Norwegian dwellings.

In this paper will we will describe and discuss the research design of a project focusing on the attainment of home ownership among households with low income or lack of other economic resources. To become an owner in a market with strongly increasing prices may produce wealth accumulation even among poor people. However, to have a rather good economy is a prerequisite to remain as an owner and maintain the real estate. At the same time the possibility of decreasing prices increases with the strength and the duration of the price growth. People who become owner occupiers late in a period with increasing prices will be in the most vulnerable position and among these the newcomers with low income will have the most exposed position.

2. Home ownership and social and economic inequality

Normally home ownership attainment is strongly correlated with income. In Norway the high ownership rate will of necessity reduce the range of such a correlation. However, the correlation is undoubtedly to be found in cross sectional data. Among low income households it’s much more usual to be a tenant than among other households. Table 2.1 shows the share of tenants in the household income deciles. Among households in the lowest decile a great majority rent their dwelling. In the highest decile almost nobody are tenants.
Table 2.1 Per cent tenants after gross household income. (income deciles). Source: The level of living survey 2001.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>69</td>
<td>48</td>
<td>40</td>
<td>31</td>
<td>25</td>
<td>17</td>
<td>13</td>
<td>8</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>

With such a high total ownership rate as 80 per cent, a correlation of this size can not be the result of stability on the individual or household level. Only a minority of Norwegian tenants are tenants thorough their whole life course. For the majority it is a transitional phase covering the phase between leaving parent’s home and first establishment as home owner. Based on data from 1997, Gulbrandsen (2004) has shown that the likelihood of becoming an owner occupier in the early phase of the life course was very strongly correlated with income. In the level of living survey from 2001 the interviewees were asked if they expected to be a homeowner or not in three and six years respectively. Provided that everything goes as expected, the distribution of homeownership will be more equal to an ever increasing extent (table 2. 2). Cohort analysis on data from the level of living surveys from 1997 and 2004 demonstrate in the same way the considerable shifts in tenure at the age of late twenties and early thirties (table 2.3). In the same period the total ownership rated was unchanged. In 2004 for instance the ownership rate in the age group 20-29 was 37 per cent, not significant different form the corresponding rate in 1997.

Table 2.2 Percent who still expect to be a tenant in three and in six years respectively after gross household income (income deciles). Source: The level of living survey 2001.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>In 3 years</td>
<td>43</td>
<td>33</td>
<td>25</td>
<td>19</td>
<td>15</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>In 6 years</td>
<td>23</td>
<td>25</td>
<td>16</td>
<td>11</td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 2.3 Ownership rate in age cohorts 1997-2004. Source: Level of living study. (Gulbrandsen 2006)

<table>
<thead>
<tr>
<th>Age 1997</th>
<th>20-29</th>
<th>30-39-</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>34 %</td>
<td>74 %</td>
<td>85 %</td>
<td>92 %</td>
<td>93 %</td>
<td>87 %</td>
</tr>
<tr>
<td>Age 2004</td>
<td>27-36</td>
<td>37-46</td>
<td>47-56</td>
<td>57-66</td>
<td>66-76</td>
<td>77-86</td>
</tr>
<tr>
<td></td>
<td>70 %</td>
<td>83 %</td>
<td>89 %</td>
<td>90 %</td>
<td>89 %</td>
<td>76 %</td>
</tr>
</tbody>
</table>

Social inequality in the housing sector measured as ownership rate in different income decile is definitely to be found early in the adult life course. This is demonstrated in table 2.4 which shows the distribution of owners in income deciles in three different age groups. A great bulk of the correlation shown in table 2.1 is produced by people in the age interval 20 to 35. However, even in the next age interval the correlation is of substantial strength, while the difference in ownership rate between elderly people with low and high income is of relatively modest size.

Table 2.4 Ownership rate by age and income (decile). Level of living study 2004.

<table>
<thead>
<tr>
<th>Age</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-35</td>
<td>4</td>
<td>17</td>
<td>34</td>
<td>50</td>
<td>69</td>
<td>78</td>
<td>84</td>
<td>89</td>
<td>93</td>
<td>92</td>
</tr>
<tr>
<td>36-60</td>
<td>58</td>
<td>54</td>
<td>71</td>
<td>68</td>
<td>76</td>
<td>91</td>
<td>92</td>
<td>96</td>
<td>97</td>
<td>99</td>
</tr>
<tr>
<td>61-80</td>
<td>80</td>
<td>83</td>
<td>89</td>
<td>96</td>
<td>90</td>
<td>97</td>
<td>93</td>
<td>95</td>
<td>94</td>
<td>93</td>
</tr>
</tbody>
</table>

The distributions shown, mainly in table 2.2 and table 2.4 are more caused by people’s movements upwards along the income distribution than by growth of homeownership rate among low income groups. After three years, and even more after six years, a crucial part of households at the lower end of the income distribution will have moved upwards and taken their place in a higher income decile. In table 2.4 we have used decile values based on the distribution of all households. In the age interval 20-35 for instance 27 per cent are to be found in the two lowest deciles and 13 percent in the two highest deciles. In the age group 36-60 we find a mirror picture: 9 percent in the two lowest deciles and 29 per cent in the two
highest. In this respect elderly people are similar to young people with 27 percent in the two deciles at the bottom and nine percent at the top.

The two tables indicate changes in two important variables, namely household income and household tenure. These two variables constitute important aspects of phenomenon we need to be informed of when doing research on housing market dynamics as well as research on vulnerable groups on the housing market. In a certain period all household either will have changed or kept constant their values on these two variables. In addition individuals and households who change their value may do this one time or more. Income may for instance increase, decrease or remain stable. A household may either live in the same dwelling all through the period or move house one time or more. The financial assets of a household may either remain stable or be changed as a result of saving, inheritance or consumption. Changes in the size of a household’s total property may also be a result of change in the value of their real capital, for the most part in their housing capital. Nor the household itself is a constant unit, but a unit somebody leaves either by death, divorce or moving out of parental home, or move into by birth or couple formation. Often it can be discussed whether the last type of move is a change of an existing household or establishment of a new one. The whole time new households are established either by young single people leaving the parent’s home and establishing their own or by people leaving their household in case of divorce. As a way to successful establishment of home ownership among young people, two single person households merging into a two person household has shown to be an important condition for success on the housing market (Hellevik 2005).

The tables indicate that home ownership attainment is an effect of age as well as economic resources. Our main approach is to throw light on the question about attainment of the status of home ownership in low income households at different phases of the life course. We ask who becomes a home owner, at which phase of life, at which price and at which financial risk. By our dynamic approach we are not confining ourselves to changes in tenure but will also concentrate on movements along the income distribution, from the lowest to higher deciles and vice versa. We will also outline the risk of falling out of an owner position. The probability of survival as a tenant or correspondingly as an owner occupier, will primarily be analysed by different Cox-hazard models.
3. Data

In the period 2004-2006 Norwegian Social Research (NOVA) and Norwegian Building Research Institute in cooperation have carried out a housing research program on behalf of the Norwegian Housing Bank. One of the themes in the program has been research on disadvantaged and vulnerable people in the housing market. Already in our application for the program we outlined a research project named “With low income on the housing market”. At that moment we were quite aware of the lack of adequate data to carry out such a project. A more adequate data base had to be established. The same conclusion was drawn in a review of earlier Norwegian research on vulnerable people suffering from bad housing (Hellevik & Nordvik 2004). As the next step in the program a more adequate database was established by Statistics Norway. At the moment we are in process of working out a report which will give a documentation of this new data base. In this report (Gulbrandsen & Hansen 2006) we will also outline two research projects which will terminate the research program and at the same time be outset of new research based on this data base. The first project will focus on housing careers among tenants in dwellings owned by the municipality. They other project which we outline in this paper, is about home ownership among low income households.

We have earlier made a preliminary description of the data base of the project (Gulbrandsen & Hansen 2005). With the exception of data from the Norwegian census in 2001, all data in the base come from different official administrative registers. The data are prepared and delivered by Statistics Norway. All public registers and gradually more and more of the private registers in Norway are based on a personal number, unique for each individual. The existence of such a possibility for identification, opens up a wide range of opportunities to connect data from different registers. Statistics Norway has done severe efforts to make data from administrative registers available for research. An important register in this context is a so called income register established by Statistics Norway as data base for production of annual income statistics for persons and households. This register is constructed as a longitudinal data file including all people living in Norway in the period since 1993. The newest data included are from the year 2004. The main source is data from the income tax return. In addition to earned income data on public transfers, tax-free transfers as well as transfers subject to taxation are included. For all people and households these incomes and transfers are added up into a variable called total income. Two of these items are of special interest in housing research, namely housing allowance and economic social assistance. Since data are collected from the tax assessment, the register also contains data about the tax each
person has to pay. Therefore data on net annual income is available for all persons and all households.

So far some of the important variables from other registers don’t have the same quality as the variables in the income register. This is primarily the case for data about dwellings and house property. An important source here will be the full Norwegian census from 2001. This census was based on registers for the counting of persons in the traditional and literal sense of the word. This counting was supplemented by a questionnaire to all households living in occupied dwellings. This questionnaire contains a lot of question about the dwellings. The questionnaire also detects which people who actually are living in and together with whom in each dwelling and is therefore the main source for identification of what we may call households membership. These data were intended to be a sort of quality control of the address information in the central register of all persons. The data from the questionnaires were also meant to be a source for better statistics on households. So far has not all forms of cohabitation been noticed in the central register of persons. These data were also intended to give the necessary information for construction of a so called house address register which will give full information about and be a connection between all persons and all dwellings based on unique number codes for persons as well as dwellings. The quality of our data base for housing research depends heavily on how fast and how well Statistics Norway succeeds in the establishment and updating of this house address register. This work is postponed and has met some difficulties. Approximately five per cent of all dwellings are still without a unique dwelling number. People living in these dwellings are to found in the other registers, but it is impossible to link them to a unique dwelling number. The main source for future improvement of this register will be notices of changes of address (Solheim 2005).

In a country with a high rate of owner-occupiers interest on debt will constitute an important component of the housing expenditure. Since 75 per cent of the debt of the households has been taken up with security in real estate (Norges Bank 2005), the bulk of the households’ payment of interest will be related to housing costs. The right to deduce interests makes interest payment into a very reliable variable in the data from the income tax return. Since such payment is a deduction item in the income calculation, it is in the interest of everybody to control that all interests are included. The information is given to the taxation authorities by each bank or moneylender.
For everybody living in Norway financial assets and debts are annually reported to the taxation authorities from banks and other finance institutions. Like data on income and transfers, these data might be added up to gross and net financial capital for each household.

The great challenge is to estimate the market value of the property which is financed through the bulk of household’s debt, namely the dwellings. In the tax return register we will find the official tax assessment. Few years ago these assessments were calculated by Statistics Norway to constitute on average 16 per cent of the actual market values. The taxation values vary too much between dwellings to give any reliable value estimate for each individual dwelling by multiplying the assessment value with a constant determined by the mean value of the underestimate.

We will try to overcome this problem by connecting data from another register, called GAB. The three letters in the abbreviation are the first letters in the Norwegian words for landed property (grunneiendom), address and building. This is a complete register containing all landed property in Norway. Every real estate transactions in Norway are collected in this register. More than 2.7 millions landed properties are to be found in the register (Solheim 2005). The most important variables that will be taken out from GAB are type of property, type of transaction and market price.

Before the census in 2001 all housing properties were already registered in GAB. The GAB-system was quite adequate for all buildings containing only one family. However, for blocs of flats GAB did not have any information about each dwelling unit. Besides of the usefulness in housing research, the new address register will give Statistics Norway a better opportunity to produce household statistics.

In Norway everybody who moves has to notify change of address to the local registration office. Statistics Norway has established a data file based on all these notices through many years. We will have data from this base for the period we have chosen. In this respect the quality of the new house address register will be quite essential. At the same time information about moves will give an opportunity to overcome some of the lacks of the new house address register. Concerning movements dated from before the period we have chosen, we want to include the date of the movement to the present dwelling.
The registration of the ownership of houses and real estate is of great importance for our research project. In the GAB register ownership is connected to the unique person number of the owner or the owners (in Norway married couples most often own their home together and both are registered as owners in GAB). For people who have moved house after the census in 2001, the GAB register give a possibility to check if they own their new dwelling. We will check if movers who were owners in 2001 are still owner of their new dwelling: We are also able to check if movers who were tenants in 2001 are still tenants or if they have become owner occupier in their new dwelling. In the GAB we will also find the price the owners have paid for the house. These data are not limited to new owners since 2001. For all estates we will have registered price and the year of the last purchase.

In addition the data base contains a set of demographical variables. We will have registered events representing changes in marital status for instance marriage, divorce, widowhood etc. as well as other events as birth and death. Changes in cohabitation status have primarily to be taken from the new house address register. Children and parents will be connected irrespectively if they are living in the same household or not. Education is an important variable in social research. We will have information about the level and type of highest completed education and ongoing education for pupils and students. These data are updated annually.

4. The research design

We define low income households as households belonging to the lowest decile on the distribution of the total household income. To be able to select these households we need a secure identification of households. In Norway the official definition of a household is one or more persons who are living together in a dwelling. According to this definition each person was given a unique household number based on the 2001 census. Early in 2005, in connection with presentation of new register based statistics on households, Statistics Norway reconstructed the household number base from 2001 and allocated new households identification numbers to households which were new established since 2001. This gives us the possibility to select the households belonging to the lowest income decile in the income year 2001 and in the income year 2004. For the years 2002 and 2003 we are faced with problems of data censoring. The lowest deciles from these two years might either be selected by using the household identification numbers from 2001 or by using the identification
numbers from 2005. In both case we will include households which in reality don’t exist in 2002 and/or 2003 and loose households which would have been included with a correct household identification number at these two points of time. For the moment we will probably be satisfied with a selection on the basis of the identification numbers of 2001 and 2005 only. This sampling will give us all households in the lowest decile in 2001 and all households in the lowest decile in 2004. Some of these will be the same household at both point of time, some will be the same households belonging to the lowest decile at only one point of times and some of the households will have changed between the two points of times, either by loosing members or by getting new members. Some households will only exist at one of the two points of time, either by being established as completely new households or having disappeared either as a cause of death, migration or other causes.

The annual household income statistic is based on a sample from the income register, consisting of between 15,000 and 20,000 households. Irrespective of our sample design, we intend to use the decile value from these statistics to determine decile placement of the selected households for other years than the two selection years.

Table 2.4 indicated that the important research questions concerning ownership are strongly depending on age. Early in adult life ownership attainment will be crucial. Later in the life course home ownership will be a much more permanent characteristic. Late in the life course the home owner rate is slightly declining. Elderly people are both moving into nursing and old people’s home and into dwelling with special care arrangements. Quite a lot of such dwellings, normally owned and let by the municipality, have been constructed in the last decade, not least as a response to the elimination of co-residence of people belonging to more than one generation. The share of people older than 65 living together with one or more adult children have decreased from 27 per cent in 1960 to five per cent in 2001 (Gulbrandsen & Langsether 2003). If such co-residence still had been as usual as before, our research design would have been more complicated.

This combination of stability and change heavily depending on age points out two different research strategies. Even among low income households quite many will have been owner occupiers for many years and are expected to continue to be owners. For these owners we can describe for instance loan to income ratios as well as loan to value ratios (LTV), and correlate these measures with data about original price at the time of the purchase.
For younger people the dynamics of change will be much more important. Economic resources, household composition and tenure will happen to change dramatically from one year to another. Concerning tenure, data from the 2001 census will be our starting point. The date of moving into the house will give us some information about the history behind the tenure status. For home owners we will focus on the probability of survival as a home owner in the period until the end of 2004. For households who have moved house between 2001 and 2004, we will check if any of the household members are registered as owner of the new dwelling (by data from GAB).

For tenants in 2001 we will correspondingly study the probability of survival as a tenant. Again this will be measured by registration of moves and checking out ownership status of the new home. A great bulk of the new home owners will consist of young people establishing a new household either by moving from parent’s home, or more important by cohabitation with another young person.

These careers will be analysed by cox-hazard models where other data in the base will serve as covariates. Even if we concentrate on the low income group, changes in income will be an important variable, both changes within the lowest echelon and not least movements from the lowest decile to a higher one.

We will study the financial risks following a home purchase and the management of such risks by following the development of household income and financial assets in the following years after the purchase. Do people react to financial stress by increasing their income or by increasing their loans? To what degree are rather new home purchasers among the applicants for and receivers of housing allowances or others types of social security support?

In studying home ownership among low income households we need to make comparisons with other households. Since all persons and households are included in the relevant registers we can find the necessary data for comparisons in the registers. This would be an ideal solution which may be problematic due to the machine and storage capacity of our local computers. Another possible alternative is to use data from nationwide representative surveys for comparisons. In the field of housing Statistics Norway has carried out level of living survey with housing as main theme in 1997, 2001 and 2004.
5. Concluding remarks

We have so far outlined a design for a dynamic study of home ownership attainment among low income households. The study will be based on a new data base which represents an enormous progress compared to earlier Norwegian research on the housing situation among vulnerable groups (Hellevik & Nordvik 2004). The planned study is our first attempt to make use of the data base. Even if the quality of many of the variables are not yet as good as we might wish, we have to compare the new data situation with the rather problematic status reported in the research review (Hellevik & Nordvik 2004). Much of the earlier research has been done with a qualitative approach with great problems of generalizations. Due to scarcity of economic resources much of the quantitative research in the field was characterised by small sample with low response rates. Compared to this data situation the new data base represents an enormous progress even if about five per cent of the housing units still haven’t got an exact number for dwelling identification.

Undoubtedly one of our greatest challenges is the problem that our research units are not stable over time. While the data base is selected from a register of individual persons the most appropriate research unit in housing research is the households. In a longitudinal design we can follow individuals. Households however are not always stable units over time. This is especially true among people in the first years of their adult life course. We could overcome some of the problems by concentrating on individual persons instead of households. If doing so we would lose just a very important aspect of one our dependent variables, namely home ownership attainment. The unstable character of the household unit among younger people is one of the most important causal factors behind their decision to rent or to buy a home. Because of the quality of our data base such unit instability becomes a problem in our data analysis. This is a rather comfortable problem to cope with.
Litterature


Hellevik, Tale (2005): På egne ben. Unges etableringsfase i Norge. NOVA Rapport 22/05


Nordvik, Viggo and Lars Gulbrandsen (2004): The supply of private rental housing, volatile or flexible? Paper presented at the ENHR-conference Housing Growth and Regeneration, University of Cambridge, 2-6 July 2004


St. meld, nr 23 (2003-2004). Om boligpolitikken