

Housing in Ireland:  
Performance and Policy  
Background Analysis

# The demand for housing in Ireland

## 3.1 Introduction

This Background Paper identifies the factors that have driven the market demand for housing in Ireland in the past. Background Paper 6—the Provision of Social and Affordable Housing—considers the demand for housing provided outside of the market in separate detail. Factors driving market demand include:

- ◆ Economic growth;
- ◆ Demographic developments;
- ◆ Patterns of income distribution;
- ◆ The level and distribution of wealth;
- ◆ The cost and availability of finance;
- ◆ Fiscal policy;
- ◆ The level of housing stock.

The evidence outlined below indicates that many of these factors concentrated to create strong demand for housing.

## 3.2 Economic Growth

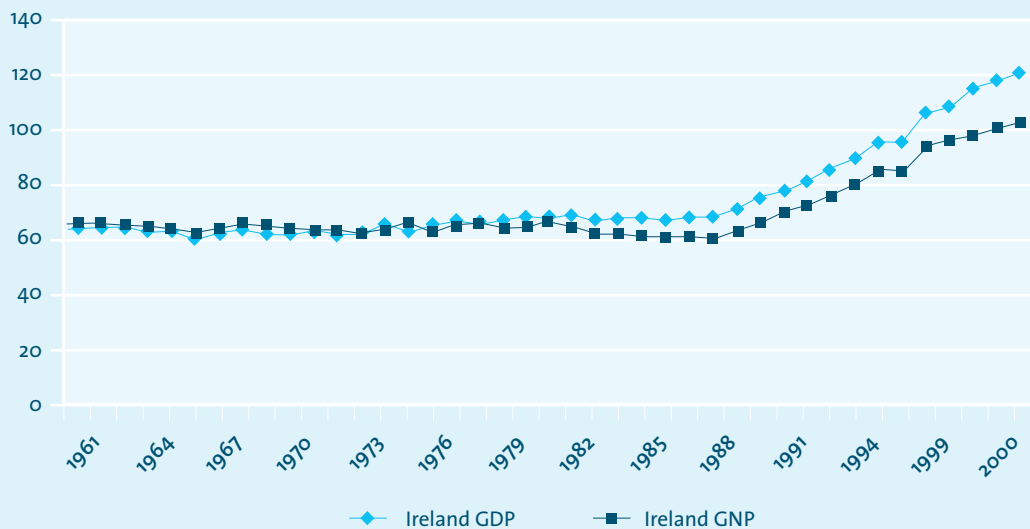
### 3.2.1 Extensive and Intensive Growth

The level of economic growth has a major influence on the demand for housing. It is helpful to distinguish between growth that is extensive (change in the volume of economic activity) and intensive (change in income per capita). Extensive growth is highly variable in a small open economy due to the mobility of labour and capital. If there is weak extensive growth the growth of employment will be below its potential and emigration will occur, thus weakening the demand for housing. Strong extensive growth implies high employment growth and increases housing demand.

Since the mid 1990s Ireland has experienced unprecedented levels of extensive growth. For demographic reasons there was a large increase in the potential labour force over the 1990s. Strong growth in labour demand meant that the large increase in the potential labour force translated into very fast employment growth and indeed immigration occurred. During the period of exceptional growth between 1993 and 2000, total employment grew by an annual average rate of 4.7 per cent per annum while the cumulative increase in employment was 43 per cent or over half a million. The net increase in employment in this period exceeded the increase for the rest of the entire twentieth century. This phenomenal and concentrated period of employment growth implied a sharp increase in demand for housing. The pattern of high emigration in earlier decades also meant that the stock of housing from previous decades was less than would otherwise have been the case.

Demand for housing increases with incomes so that intensive growth (growth in income per capita) also leads to a rise in housing demand. The 1990s were also characterised by exceptional intensive growth. Over the period 1993 to 2000 GNP per capita grew by an annual average of 7.4 per cent while real personal disposable income (i.e. personal income after tax) grew by an annual average of 5.4 per cent. The exceptional nature of the intensive growth over the 1990s can be illustrated by considering Ireland's pattern of average income relative to the EU. In the period since the 1960s average income levels (measured by GNP per capita) in Ireland have been around two thirds of the EU average (and were declining in relative terms before the 1960s). Then over the 1990s average incomes in Ireland converged at breathtaking speed with the EU average (see Figure 3.1). In the current decade, average incomes in Ireland have continued to grow faster than the EU average although at a slower rate than in the 1990s.

Figure 3.1 GDP/GNP per Capita in Ireland (EU15=100)



Source: European Commission, *European Economy* for the GDP series. The GNP series was calculated by applying the ratio of GDP to GNP to the European Economy GDP series.

This exceptional growth in average incomes implied a very sharp increase in housing demand since the mid 1990s. The concentration of the convergence of incomes into the short period of decade was liable to cause an imbalance in the demand and supply of housing. The stock available at any given time is strongly influenced by previous investment in housing (a well maintained house can last up to 200 years) so that the current stock of housing is still strongly influenced by housing investment in previous decades that had substantially lower per capita incomes.

Following 2000, there was a slowdown in economic growth in the global economy and in Ireland. The growth of GNP during the years 2001 to 2003 was an annual average of 2.4 per cent while employment grew by 2 per cent.

Notwithstanding the slowdown in economic growth, there continued to be strong demand for housing. This can be understood as a result of housing demand that arose during the boom years but was not met in that period. A range of indicators now show that an economic recovery is underway.

### 3.2.2 Regional Pattern of Growth

The regional pattern of growth also has a major influence on the demand for housing. Regional GDP figures are available since 1991. The share of GDP produced in the East region in 2001 (46.8 per cent) was little changed from its share in 1991 (46.2 per cent). There was a somewhat bigger increase over the period of strong growth from the mid-1990s in the region's share of GDP—from 45.1 per cent in 1993 to the 46.8 per cent share in 2001. This increase implies a modest degree of concentration of growth in the East region.

GDP figures are subject to a number of well known limitations as measures of real economic activity and employment and regional income data are better guides to regional patterns. Employment growth rates by region are presented in Table 3.1. It can be seen that over the period 1994 to 2002 the fastest growth rate was in fact in the West region with average annual growth of 5.6 per cent compared to the national average of 4.6 per cent. Employment growth in the Border, Midlands and South West regions lagged the national average. The growth rate in the East region over this period was 5.1 per cent, half a percentage point over the national average. This is a non-trivial difference, particularly bearing in mind that the stock of employment is very much concentrated in the East region. Of the increase in employment over the period 1994 to 2002, 46.2 per cent of this increase was in the East region. Hence in terms of the actual volume of demand that the increase in employment has created for housing, there was a substantial concentration of this demand in the East region.

Table 3.1 Annual Percentage Change in Employment by Region

	1987-1994	1994-2002	1987-2002
Border	1.5	3.2	2.4
Midlands	1.3	3.7	2.6
West	-0.1	5.6	2.9
Dublin	1.5	4.8	3.3
Mid-East	3.2	6.2	4.8
East	1.9	5.1	3.6
Mid-West	1.1	4.4	2.9
South-East	0.8	4.8	2.9
South-West	1.3	3.8	2.6
<b>Total</b>	<b>1.4</b>	<b>4.6</b>	<b>3.1</b>

Source: Calculated from CSO, Labour Force Survey 1987 and 1994 and CSO, Quarterly National Household Survey, Q1 (2002).

Regional income figures as measured by disposable income per person excluding rent (mainly imputed rent of owner occupiers) show that average income in Dublin (city and county) in 2001 was 14 per cent over the national average. This is a significant difference and would contribute to underpinning higher average house prices in Dublin<sup>1</sup>. The rate of growth of average income in Dublin since the mid-1990s has been very close to the national average (annual average growth of 9.5 per cent in Dublin compared to 9.4 per cent nationally over the period 1994 to 2001). The Mid East region surrounding Dublin did however have a growth rate (10.3 per cent per annum) that outpaced the national average.

### 3.2.3 Conclusion on Growth

Unprecedented extensive and intensive growth since the mid-1990s led to a major increase in housing demand. Not all of this demand was met during the boom years and strong housing demand persisted in the years of weaker economic growth after 2000. There was some regional concentration of this growth in the East region. In particular, in terms of the actual increase in the level of employment, close to half of this was in the East region. Average incomes also grew somewhat faster in the East.

## 3.3 Demographic Factors

There are a number of demographic factors that can help explain the underlying pattern of housing demand in Ireland. These include:

- ◆ Total population growth;
- ◆ Population growth in those age groups which give rise to the greatest increases in household formation;
- ◆ The regional dispersion of population growth and in particular the regional distribution of household forming population cohorts;
- ◆ Changes in average household size and in household formation patterns;
- ◆ The impact of immigration.

### 3.3.1 Total Population Growth

Total population has grown substantially—from 2.98 million in 1971 to 3.92 million in 2002 but that the growth has not been constant throughout the period. While the total population grew by 15 per cent in the 1970s, growth fell to just over 2 per cent in the 1980s before returning to 11 per cent growth between 1991 and 2002, with growth of almost 1.5 per cent per annum or 8 per cent experienced since 1996. Despite this growth house completions continued to outpace population growth and housing stock per 1,000 inhabitants continued to rise. This is shown in Background Paper 4.

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1. House prices in Dublin in 2001 were 30 per cent over the national average.

### 3.3.2 Population Growth in Household Forming Cohorts

While total population grew by 2.9 per cent between 1991 and 1996 and by 8 per cent between 1996 and 2002, the corresponding growth in the number of those aged between 25–34, the key household forming age cohorts, was 5 per cent and 18.7 per cent (100,000) respectively. Alternatively it may be useful to examine the growth of those who are of household headship age—i.e. aged 25 years and over. Using this measure growth was a little more modest in percentage terms, 7.6 per cent between 1991 and 1996 and 14.7 per cent (335,000) between 1996 and 2002, but substantially greater in absolute numbers and this reflects not only natural population growth but also immigration. Therefore the increase in those of new household formation age was not matched by a corresponding drop in those of household headship age in other age cohorts.

### 3.3.3 Regional Population Growth

An important measure of how demographic changes contribute to the pressure for housing demand is to examine regional differences. The regional split of population growth and population growth by age cohort is however also endogenous to the extent that regional and international migration decisions will be conjectured on price. While overall population growth in Ireland between 1996 and 2002 was 8 per cent, population growth in Dublin was only 6 per cent although even this reflects a difference in patterns between high growth in the inner city and stagnation or decline in many traditional suburbs. Population growth in the Mid East region however (the three non-Dublin counties that help make up the Greater Dublin Authority or GDA) was almost 19 per cent. The population in Cork city fell by 3 per cent over the period. Looking at the growth in 25–34 year olds—over one-third in this age bracket live in Dublin as opposed to 28 per cent of the total population and 45 per cent of 25–34 year olds reside in the GDA in comparison with 39 per cent of total population. The growth figures, however, show slightly below national growth levels in Dublin and only marginally above the national level in the GDA between 1996 and 2002.

### 3.3.4 The Effects of Immigration

An important part of the increase in population since 1996 was as a result of immigration. Obviously immigration is likely to lead to a pattern of household formation somewhat different from that resulting from natural increase with each additional household unit resulting from migration adding one additional net unit to the housing demand regardless of the age profile of the migrants.

The ESRI report that up until 2000 immigration was largely that of skilled labour and that for every 10,000 immigrants 3,100 additional dwellings were required. While net immigration between 1991 and 1996 was 8,300 and between 1996 and 2002 was 151,300, gross immigration flows were 98,400 and 252,400 respectively. Between 1991 and 2002 there was net immigration in every age cohort except for 15–24 year olds who continued to experience net emigration. It is important to consider gross immigration figures, due to the likely presence of asymmetries between the formation of new households by immigrants and the dissolution of households by emigrants.

Given the ESRI's estimates of the formation of 3,100 new households for every 10,000 immigrants this implies a need for an additional 30,000 additional units between 1991 and 1996 (c. 5,000 per annum) and nearly 80,000 units between 1996 and 2002 (c. 13,000 units per annum). The ESRI in their own decomposition of housing suggest a contribution of 6,000 per annum.

### Determinants of Household Formation—Changes in Headship Rates

Possibly the best account of the contribution of demographic factors to housing demand in Ireland comes from the recent account by Davy's.

**Table 3.2** Proportion of Population who are Head of Household

	<25	25-34	35-54	55-64	65+	Total
<b>1991</b>	2%	36%	50%	57%	61%	<b>29%</b>
<b>1996</b>	3%	36%	51%	58%	63%	<b>31%</b>
<b>2002</b>	4%	37%	51%	56%	62%	<b>33%</b>

Source: Davy (2003) – various censuses of population

Davy's note a couple of factors that can help explain these trends in household formation patterns. Firstly between 1996 and 2002 the number of 'children' in their twenties living with parents has increased by 14%—slightly less than population growth in this age bracket (16%)—leading to a decrease in the proportion of persons in their twenties who live in the parental home.

There was a counterbalancing increase in the number of people in their thirties who reside with parents—up 39% on the level in 1996 although the absolute numbers are much smaller at 42,000 as opposed to 246,000. As this was more than twice the increase of the total population in their thirties the proportion residing with parents rose from 6% to 7%. Davy's also include a comparison with UK rates of headship. This is reproduced below in Table 3.3 for point of comparison.



Table 3.3 Headship Rates in the UK

	1992	1996	2000	2001	2002
<25	5%	5%	4%	4%	5%
25-34	48%	49%	49%	49%	49%
35-54	55%	56%	57%	57%	57%
55-64	60%	60%	60%	60%	60%
65+	71%	72%	72%	72%	72%
<b>Total</b>	40%	41%	41%	41%	42%

Source Davy (2003) – UK, LFS, Office of National Statistics.

Change in average household size is perhaps the most important overall measure of the demand for housing units. Obviously the household formation decision is itself tied up with the price of accommodation which is premised upon its availability—see Background Paper 4’s treatment of supply. Table 3.4 shows that the average household size has fallen from 3.97 in 1961 to 2.94 in 2002.

Table 3.4 Evolution of Average Household Size

	1961	1971	1981	1991	1996	2002
<b>Avg. Size</b>	3.97	3.94	3.68	3.34	3.14	2.94

Source Various Censuses of Population

There has also been considerable change in both the average and distributional spread of the number of persons living in different households. The table below shows the percentage of households containing different numbers of people.

Table 3.5 Size of households, 1981-2002

Number of Persons	1	2	3	4	5	>5
1981	17.1%	20.2%	15.0%	15.4%	12.9%	19.4%
1991	20.2%	21.2%	15.3%	16.6%	12.7%	13.9%
1996	21.5%	22.9%	16.0%	17.1%	11.8%	10.7%
2002	21.4%	25.9%	17.7%	17.4%	10.5%	7.0%

While the trend has clearly been to smaller households across the board it is clear that the greatest increases are in single and 2 person households, households with 3 – 5 persons have been broadly static as a percentage of the total and households with more than 5 persons have declined dramatically in a period of just 20 years from one household in five in 1981 to not much more than one in twenty by 2002. Of course, these distributional shifts mask the fact that the absolute numbers of households has been increasing in all categories bar those with more than 5 persons in them.

It is clear that while average household sizes have been declining, ‘marginal’ or newly forming households must have been smaller still in order to bring down the average. The concept of ‘marginal’ household size is some measure of need for new households in the marketplace. Of course the concept of the marginal household includes not only newly forming households but also captures changes in existing households whose size is not necessarily static. It can provide some indication, however, of the type of accommodation required to meet changing household need.

## 3.4. Income Distribution

### 3.4.1 Introduction

Income distribution potentially has a significant influence on housing demand. If the distribution of income becomes more unequal, this would be expected to exacerbate the problems of housing affordability for some people in the income distribution, particularly those not in the higher end but with incomes too high to be eligible for significant state support in meeting their housing needs. This section draws on the analysis of the changes in the different components of income and considers their possible implications for housing demand. There are gaps in our knowledge concerning the impact of changes in the income distribution on housing demand in Ireland so the discussion in this section is tentative.

### 3.4.2 Components of income

The Council's Strategy report (2003) identified the following layers that together give rise to trends in income distribution:

- ◆ Changes in market income, distinguishing between:
  - Changes in wage and profit shares;
  - Changes in the dispersion of earnings from employment;
  - The distribution of market income across households;
- ◆ Changes in distribution of disposable income, distinguishing between the impact of:
  - Changes in social welfare transfers;
  - Trends in the progressivity of income tax and employees PRSI contributions.

#### Wage and Profit Shares

Since 1987, the share of total profits in domestic output has increased and there has been a corresponding reduction in the wage share. The analysis in the Strategy report, however, shows that this change was driven by the manufacturing sector. Outside the manufacturing sector the wage and profit shares were on average broadly unchanged over the years 1991, 1994 and 1999. Within manufacturing the trend in the profit share was driven by a limited number of highly profitable multinationals. These profits do not form part of Irish GNP or household income.

With apparently stable profit shares outside the multinational sector, changes in profit shares would not appear to be a major influence in themselves on housing demand. However, even at a time of rapid growth, a fairly stable profit share in the domestic economy still implies rapid growth in profits which would be associated with a substantial increase in wealth. Access to wealth is a key influence on the housing market in that there are substantial entry costs for owner occupied housing. The strong growth of wealth is liable to have given some groups an advantage in entering the housing market. The issue of the distribution of wealth is discussed further below.

#### Distribution of Earnings

Earnings from employment—including wages, bonuses, benefits-in-kind and other benefits—represent by far the largest share of household income. The distribution of earnings is potentially a key influence on overall income distribution. The distribution of gross hourly earnings in Ireland, in 1987, 1994 and 2000 is shown in Table 3.6.

Table 3.6 Distribution of Hourly Earnings in 1987, 1994, 2000

As proportion of median	1987 %	1994 %	2000 %
All employees, hourly earning			
Bottom decile	0.47	0.48	0.58
Bottom quartile	0.73	0.69	0.74
Top quartile	1.37	1.48	1.45
Top decile	1.96	2.23	2.11
<b>Top decile/bottom decile</b>	<b>4.16</b>	<b>4.7</b>	<b>3.65</b>

Source: 1987 and 1994 data from Barrett, Fitzgerald and Nolan (2000), Tables 7.1 and 7.2. The 2000 data are from Nolan (2003).

It is clear from this data that there was a substantial widening in the earnings dispersion between 1987 and 1994. However the pattern was different over the period of exceptional growth from 1994 to 2000. Over this period there was some narrowing of the earnings distribution. Those in the lowest earnings decile experienced wage growth that exceeded the growth of median earnings: hourly earnings for those in the lowest decile increased from 48 per cent of the median in 1994 to 58 per cent of the median in 2000. Those in the highest decile were no longer experiencing growth faster than the median and there was a modest fall in the earnings for this decile from 223 per cent of the median to 211 per cent.

Thus the trend in the earnings dispersion in itself would not have exacerbated problems of housing affordability over the boom years. Conversely, the extent to which the distribution became more equal is unlikely to have provided much help in addressing housing affordability for those on lower earnings either.

### Market Income of Households

Households receive market income from sources other than earnings, namely, pensions, rent, interest, and dividends, and they will often contain more than one income recipient. The distribution of overall market income across households ranked by income is shown in Table 3.7 for 1994, 1997 and 1998. It is noteworthy that over the period, 1994 to 1998, the distribution of market income became somewhat more equal. There were significant increases in the shares of total market income accruing to the third, fourth and fifth deciles, with a cumulative increase of 3.6 percentage points between 1994 and 1998. The share of the top two deciles fell by 3.7 percentage points and the Gini coefficient also fell<sup>4</sup>. The main influence on the improvement in the distribution of market income across

4. This is a summary measure of dispersion. A value of zero on this measure indicates complete equality, while the closer the measure is to one the greater the level of inequality.

households was the improved employment opportunities from which members of households in the middle of the income distribution appear to have benefited in particular.

**Table 3.7** Decile Shares in total Market Income, Households ranked by income, 1994, 1997 and 1998

Decile	1994	1997	1998
1st Decile	0.0	0.0	0.0
2nd Decile	0.0	0.0	0.0
3rd Decile	0.3	1.1	1.5
4th Decile	2.8	3.8	4.2
5th Decile	6.0	6.6	7.0
6th Decile	9.0	9.5	9.5
7th Decile	12.1	12.0	12.0
8th Decile	15.4	15.1	15.2
9th Decile	20.4	19.2	19.3
10th Decile	34.0	32.8	31.4
<b>All</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Inequality Measure</b>			
Gini	0.565	0.536	0.520
Theil	0.587	0.529	0.495

Source Nolan, B., Maître, B., O'Neill, D., Sweetman, O. (2000).

### Household Disposable Income

Household disposable income refers to household income after taxes and receipt of social welfare transfers. The distribution of household income in 1987 and 1994 across Irish households is shown in Table 3.8. Households are ranked by their equivalent disposable incomes and the income share of total equivalised disposable income received by each decile is shown. Similar data are shown in Table 3.9 for 1994 and 2000 but in this case the distribution is shown over persons rather than households. This involves assigning to each person the equivalised income of their household and then looking at the distribution of this income measure over persons. Data are presented from both the Living in Ireland survey and the Household Budget Survey.

Equivalised disposable income became slightly more equally distributed between 1987 and 1994. The share of the top decile fell by approximately 1 percentage point to 25 per cent, that of the lowest decile rose by 0.7 percentage points to 3.9 and the Gini coefficient dropped from 0.330 to 0.326.

**Table 3.8** Decile Shares in total equivalised Disposable household Income, 1987 and 1994

Households Decile	Share in Total Equivalised Disposable Income	
	1987	1994
1st Decile	3.2	3.9
2nd Decile	4.8	4.8
3rd Decile	5.8	5.4
4th Decile	6.5	6.1
5th Decile	7.4	7.1
6th Decile	8.7	8.7
7th Decile	10.2	10.5
8th Decile	12.3	12.7
9th Decile	15.2	15.9
10th Decile	25.9	25.0
<b>Total</b>	<b>100</b>	<b>100</b>
<b>Gini</b>	<b>0.330</b>	<b>0.326</b>

Source (Nolan et. al. 2000)

**Table 3.9** Decile Shares in Equivalised Disposable Income (%), Ireland 1994-2000

Decile	Living in Ireland Surveys		Household Budget Surveys	
	1994	2000	1994-95	1999-2000
<b>Bottom</b>	3.8	3.2	3.6	3.2
<b>2</b>	4.9	4.5	4.8	4.7
<b>3</b>	5.6	5.5	5.7	5.6
<b>4</b>	6.4	6.9	6.6	6.7
<b>5</b>	7.5	8.0	7.6	8.0
<b>6</b>	8.9	9.3	9.0	9.2
<b>7</b>	10.6	10.8	10.6	10.6
<b>8</b>	12.6	12.7	12.5	12.5
<b>9</b>	15.3	15.6	15.5	15.0
<b>Top</b>	24.4	23.6	24.1	24.4
<b>All</b>	100.0	100.0	100.0	100.0

Source Nolan (2003), Table 3.

Turning to the boom period 1994 to 2000, there was a decline in the income shares of the lowest three deciles; the declines were of 1.4 percentage points (Household Budget Survey) to 1.9 percentage points (Living in Ireland). While not dramatic falls, these do represent non-trivial changes for these groups nonetheless. Changes in the distribution of disposable income were driven by changes in tax and social welfare. These are analysed in depth in the Council's Strategy report (NESC, 2003). This analysis showed that the major influence was the fact that despite significant increases in social welfare payments, their payments did not increase as rapidly as the after-tax incomes of those in employment so that there was some decline in the income shares of the lowest deciles.

Changes in the distribution of disposable income during the period of income boom have been assessed by Nolan (2003) as follows:

*In terms of income shares, survey evidence suggests that the upper part of the distribution does not seem to have pulled away from the middle in the way it is often thought to have done over the boom. Such surveys are not particularly reliable in capturing the highest incomes, at the very top of the income distribution, and those very high incomes may dominate popular perceptions. In terms of the bulk of the incomes, though, the evidence presented here suggests that*

*the most important change in income inequality over Ireland's boom years is that the bottom lagged behind rather than that the top soared away*  
(Nolan: 2003: 137)

What are the implications of changes in disposable income distribution over the boom for housing demand? The lagging of the lowest income deciles is of concern in that it implies an increase in relative income poverty. In terms of housing affordability the direct implications may be more limited. This is because those in the lowest deciles generally do not pay directly the market cost of their housing and thus would be mainly protected from the implications of the fall in income share by public policy. This fall in income share would have implications though in terms of increasing the need for public expenditure on housing support. It would also have indirect implications in that faster income growth in higher deciles would add to all housing costs to the extent that they add to housing demand. The recently announced changes to the social welfare supplementary housing allowance may mean that in the future relative declines in income will have more significance for housing affordability for lower income groups. If one focuses on income groups above the three lowest deciles (which comprise mainly of social welfare recipients) it can be seen that the biggest increases in income shares were in the middle deciles. Hence changes in income distribution *per se* as measured here would not appear to have added to affordability problems for middle income deciles either.

This analysis of changes in the income distribution has adopted the standard procedure of focussing on changes in income shares. With this approach a similar percentage increase across the income distribution, for example a 10 per cent increase in all incomes, will appear as no change in the income distribution. Likewise such a change would leave the Gini coefficient unchanged. However, in terms of the implications for housing demand, it is not only relative percentage changes in incomes that are of relevance. For a given distribution of income that is unequal, even similar percentage increases in income across the distribution will lead to significantly different increases in terms of money changes. Thus, while the income share of the top decile did not change much over the boom (it fell slightly according to the Living in Ireland survey), it remains the fact that the ten percent of the population in this decile received approximately one quarter of the substantial increase in household income over the boom years. The large increase in money income for this group implies that it has been better positioned than other groups in the income distribution to compete for the housing that became available during the boom years.

This section has focussed on *the implications of changes in the distribution of income for housing demand*. This is a distinct issue from the *distributional implications of changes in housing costs and affordability*. The latter issue is a central concern of the Council and is addressed in depth elsewhere in this report.



### 3.5 Level and Distribution of Wealth

A number of factors have combined in the past decade to increase total personal wealth in Ireland. General economic growth as outlined in Section 3.1 has fuelled increasing levels of investments and returns in property, the stock market and other asset holdings. According to a newspaper article in January 2004<sup>2</sup>, the “wealth effect” accruing from rising domestic property prices in 2003 alone was equal to an extra 40 per cent over and above the wealth created in Ireland the previous year. (This is in addition to the appreciation in the value of commercial property or land banks). The recent housing boom has greatly expanded the national housing stock which has now been estimated to be worth some €420 billion. This section considers the impact of the growth of personal wealth in Ireland on the demand for housing (both as a consumption and investment good).

#### 3.5.1. Definition

The last comprehensive survey of personal wealth in Ireland was conducted in 1987 by the ESRI. Levels of wealth were measured through the consideration of two key asset types – property and financial assets. Property was deemed to include the value of a person’s principal residence, business, farm land, and / or other property (e.g. second homes, non-farm land). Financial assets included deposits, government savings, gilts, equities, investment bonds, investments for children etc<sup>3</sup>.

#### 3.5.2. Accumulation and distribution

The ESRI survey in 1987 identified residential property as the single largest category of wealth, accounting for 55 per cent of total personal wealth at that time. Business assets accounted for 7 per cent of total wealth, 25.7 per cent in farm land, and 4.1 per cent in other property. Financial assets accounted for 8.1 per cent. The category of wealth most evenly distributed across the income distribution was residential property. The proportionate share of all other assets (save farm land) generally increased when moving up through the income deciles. Both housing and farmland formed an important source of wealth for the lower income deciles.

It is certain given the dramatic social and economic changes in the period since that the absolute level of wealth has increased dramatically, although in the absence of any similar survey to that carried out in 1987, it is difficult to measure this growth at an aggregate or individual level. What is less clear again is how this wealth has been distributed. Some indicators are listed below to provide a sense of general trends.

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<sup>2</sup> *Celtic Tiger Leaves a Legacy of Wealth, Sunday Times, 18 January 2004.*

<sup>3</sup> *This figure did not include future pension entitlements*

In addition to the estimated increase in the value of the national housing stock, other indicators of the growth in total wealth include:

- ◆ The growth in disposable income as outlined in Sections 3.2 & 3.4;
- ◆ Combined market capitalisation of quoted stocks on the Irish Stock Exchange was €77.5 billion in 2003 up from €2.5 billion in the early 1980s, and by 10 per cent on 2002;
- ◆ Net interest and dividends totalled €2,677 million in 2000 (National Income and Expenditure Report 2001).

In terms of distribution, one asset category which has been measured for distributional impact is residential property – specifically owner-occupation. About 78 per cent of Irish households currently have some net wealth in the form of housing – given that the market value of their house is greater than the debt outstanding on their mortgage. Of these, 49 per cent own their house outright (Central Statistics Office, Census 2002).

**Table 3.10** Housing Wealth by Income Quintile of Households, LII Sample 2000

Income quintile	% of total equivalised income	% owner-occupier	Mean house values of owner-occupiers (€ 000s)		Net value as % of gross	% of total housing wealth
			Gross	Net		
Bottom	7.3	69.6	128.3	124.1	96.7	15.2
2	11.3	80.6	138.2	130.6	94.5	16.1
3	17.0	87.3	169.1	156.0	92.3	19.2
4	23.8	88.7	218.9	198.1	90.5	24.3
Top	40.7	87.0	244.0	205.7	84.3	25.3

Source: Fahey, Nolan and Maître, 2004

The table above demonstrates the relatively even distribution of wealth conferred across the entire income distribution arising from Ireland's high level of owner-occupation. In 2000, the bottom quintile held over 15 per cent of total housing wealth, and the top held over 25 per cent (compared to 7.3 per cent and 41 per cent of total disposable income respectively). Fahey, Nolan and Maître note that in the period 1994-2000, there was minimal change in the distribution of housing wealth across income quintiles (although the levels of owner occupation had increased for the bottom 3 quintiles). See Table 3.11 below.

**Table 3.11 Housing Wealth by Income Quintile of Households, LII Sample 1994**

Income quintile	% owner-occupier	Mean house values of owner-occupiers (€ 000s)		% of total housing wealth
		Gross	Net	
Bottom	63.6	39,000		15.7
2	73.7	41,200		16.6
3	84.6	48,100		19.4
4	90.2	56,100		22.6
Top	88.5	63,400		25.6

Source *Fahey, Nolan and Maitre, 2004*

In relation to the distribution of housing wealth across the life cycle, an apparent advantage is conferred to those over 65 – with their proportionate share of housing wealth exceeding their share of total (equivalised) income.

**Table 3.12 Housing Wealth by Age, LII Sample 2000**

Age Group	% of total equivalised income	% owner-occupier	Mean house values of owner-occupiers (€ 000s)		Net value as % of gross	% of total housing wealth
			Gross	Net		
Under 35	25.4	56.7	164.9	109.3	66	14.1
35-44	20.0	86.9	186.3	158.4	85	19.4
45-54	21.7	88.0	206.7	189.1	92	23.9
55-64	15.0	88.5	175.8	172.2	98	16.8
65-74	10.7	95.0	181.2	180.8	100	14.7
75 and over	7.3	91.1	161.9	160.6	99	11.0

Source *Fahey, Nolan and Maitre, 2004*

As expected, those under 35 (or within the household forming age cohorts) have a smaller share of total housing wealth relative to their share of equivalised income, a factor of the higher level of outstanding debt remaining on individual properties at early points in the lifecycle.

### 3.5.3 Use of wealth and transfers in property market

The increase in personal wealth in Ireland is likely to have impacted on the overall demand for housing in a number of ways:

- ◆ By increasing the value of residential property held for consumption purposes;
- ◆ By funding the purchase of additional property for investment purposes;
- ◆ By facilitating the transfer of wealth between generations to support the purchase of property.

In the absence of specific empirical evidence, it is difficult to quantify the impact of each of these drivers. A number of trends however point to their relevance for overall housing demand. In relation to the growth in private wealth arising from the ownership of housing, the market for equity withdrawal was valued by Gunne and ICS at €75 billion in 2002 (cited in Downey, 2003). In the past few years, on average 57 per cent of applicants for home loans were already owner-occupiers (see Table 3.19 below). This would signify that a substantial proportion of mortgage credit is being used to either “trade up” principal residences or for investment in additional residential property, reflecting increased leverage of equity held in housing.

Residential property as an investment good is also an important element of the demand story. The substantial growth in the number of dwellings in the private rental sector (doubling from 71,000 to 141,000 between 1991 and 2002) signifies the reversal of a long-standing decline, and in the absence of any large corporate landlords emerging, an expansion in the number of private individuals becoming landlords. Other recent estimates such as that of the IAVI that on average 20 per cent of all new house purchases and “a bit less in the second home sector” are for investment purposes shows the growing importance of investment properties in personal asset portfolios.

Recent estimates show a significant growth in the proportion of new houses being built to meet the demand for non-primary residences – i.e. holiday homes (a further discussion of non-primary residences is contained in Background Paper 4). It is likely that the share of personal assets accounted for by “other property” in 1987 by the ESRI – 4 per cent; has increased significantly given that primary residences have shrunk as a percentage of total privately owned dwellings.

The importance of wealth transfers between generations in supporting first time buyers to purchase homes in the Irish housing market through such instruments as “parental gifts” is reflected in the recent (and not uncontroversial) launch of a specially tailored financial product by a major Irish building society. Market research in 2002 conducted by Gunne Residential and the ICS Building Society<sup>4</sup> (cited in Downey 2003) showed a number of trends in relation to parental gifts:

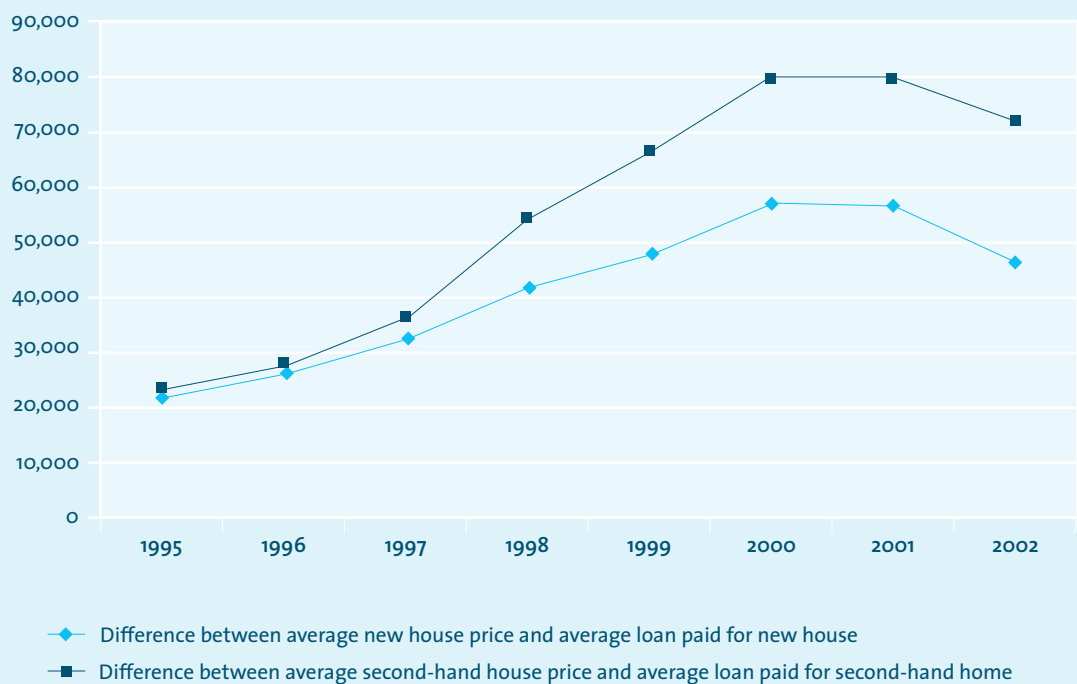
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4. Based on a sample of 625 respondents

- ◆ 1 in 5 parents surveyed underwrote their children's attempts at house purchase to a value of €75,000 plus (either through a gift or a loan);
- ◆ In relation to first time buyers earning less than €40,000:
  - 71 per cent obtained parental or third party assistance of some form;
  - 46 per cent were gifted between €20,000 and €35,000;
  - Over 25 per cent were gifted between €35,000 and €50,000.

Perhaps a final measure of the extent to which personal wealth is being leveraged to acquire residential property is the proportion of finance secured outside of the mortgage market. This is illustrated in Figure 4.1 below – which demonstrates the increasing gap between the average price and loan paid for both new and existing houses. The decrease since 2000 points to a closing gap between the increase in house prices and incomes.

**Figure 3.2** Difference between average house prices and average loans paid – new and second-hand homes, 1995-2002



Source: Adapted from Bacon 2000, *Housing Statistics Bulletins* various, NESC calculations

### 3.5.4 Conclusions

While there is an absence of concrete empirical evidence on the link between personal wealth and housing demand, recent patterns in both the composition of demand (increased demand for investment properties and second homes) and the increased use of equity finance for house purchases signifies the impact of the growth of personal wealth in Ireland.

## 3.6 Cost and Availability of Finance

### 3.6.1 User Costs

The user cost represents a measure of the cost of holding onto housing. The user cost can be approximated by the ongoing financial costs of holding property (property tax and insurance and maintenance), depreciation of the property concerned, the opportunity cost of the capital – the real return on other financial assets minus the expected level of price appreciation of housing (Miles, 1994). One of the deficiencies in the use of user cost is the inability to measure expectations of price changes ex ante and therefore measurement of the user cost has tended to be associated with changes in the actual price level ex post. The measurement of depreciation in Irish housing is also not without contention although at least it is likely to remain reasonably constant as a percentage of the house price over time assuming that the likely longevity of the new housing stock equates to that of the existing stock. Therefore, regardless of the level of depreciation chosen in calculating the user cost the relativity over time would remain the same.

In the reports carried out for the government on the Irish housing market Bacon makes use of a simpler form of user cost which simply measures the difference between the mortgage interest rate (in his case building society rate) and the actual rate of house price appreciation calculated after the event. A chart of how this variable has evolved over time is shown below.

Figure 3.3 User cost of housing 1974-2003

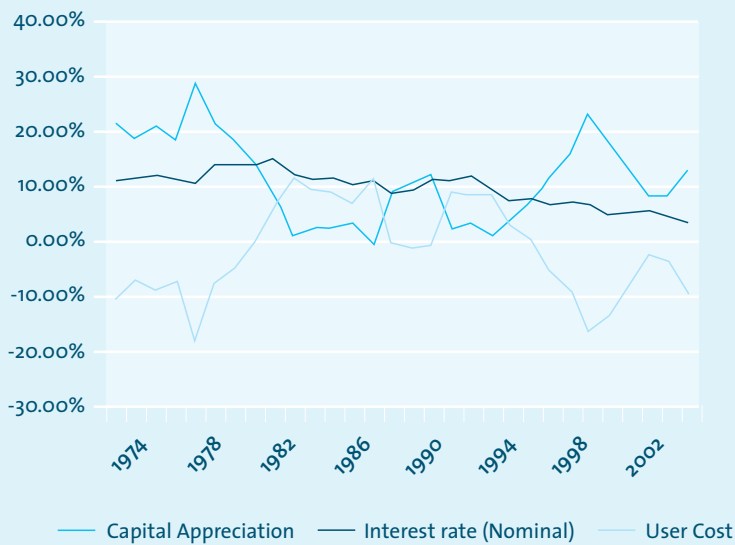


Table 3.13 The Evolution of the User Cost of Housing in Ireland 1974 - 2003

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
<b>Capital Appreciation</b>	21.90%	18.75%	21.05%	19.02%	29.22%	21.91%	19.13%	14.87%	9.69%	0.88%
<b>Interest rate (Nominal)</b>	11.25%	11.50%	12.24%	11.78%	10.89%	14.15%	14.15%	14.42%	15.73%	12.69%
<b>User Cost</b>	-10.65%	-7.25%	-8.81%	-7.24%	-18.33%	-7.76%	-4.98%	-0.45%	6.04%	11.81%
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Capital Appreciation</b>	2.18%	2.47%	3.68%	-0.22%	8.93%	10.92%	12.66%	2.09%	3.51%	0.89%
<b>Interest rate (Nominal)</b>	11.75%	11.54%	10.65%	11.31%	8.67%	9.61%	11.86%	11.37%	11.97%	9.58%
<b>User Cost</b>	9.57%	9.07%	6.97%	11.53%	-0.26%	-1.13%	-0.80%	9.28%	8.46%	8.69%
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>Capital Appreciation</b>	4.08%	7.23%	11.81%	16.03%	23.84%	18.53%	13.92%	8.08%	8.33%	13.37%
<b>Interest rate (Nominal)</b>	7.18%	7.62%	6.80%	7.22%	4.93%	5.38%	5.38%	5.69%	4.69%	3.57%
<b>User Cost</b>	3.10%	0.39%	-5.01%	-8.81%	-16.74%	-13.60%	-8.54%	-2.39%	-3.64%	-9.80%

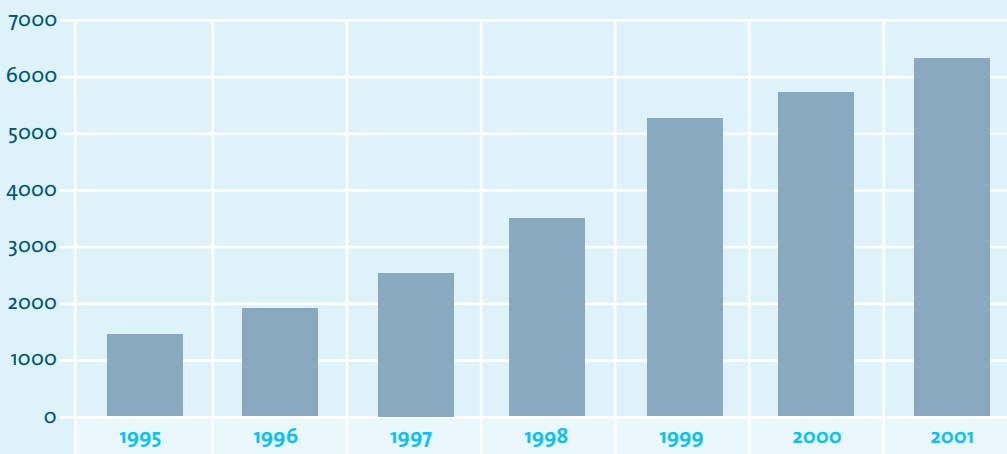
In estimating the demand for housing in this work Bacon finds a coefficient of minus 0.45 for his measure of the user cost of housing – i.e. a one percentage point rise in user cost would give rise to a 0.45 per cent decrease in the price of houses. This is re-estimated by the ESRI and reported by Duffy who finds remarkably similar coefficients over the longer sample period - minus 0.43 in the case of new house prices and minus 0.39 in the case of second hand houses. It is clear that the user cost, at least measured on an ex post basis has been negative over much of the recent past implying that capital growth outstripped the cost of capital. User cost rose somewhat in 2001 and 2002 to approach zero but fell again to reach a double digit negative in 2003 when examined from an ex post or historical perspective.

### 3.6.2. Volume of Mortgage Finance

Notwithstanding the increasing level of housing financed outside of the credit markets shown above, the level of mortgage finance made available to home purchasers has expanded exponentially in recent years. Gross residential lending in 2000 at about €7.5 billion was approximately 500% higher than that in 1990. In 2002, gross lending had increased further again to €11 billion.

Almost two-thirds of the increase in private-sector credit in 2002 (excluding lending to non-bank IFSC entities) was attributable to mortgage credit growth. The annual rate of increase in residential mortgages (adjusted for securitisations) accelerated steadily over the course of the year, from just below 18 per cent in January to 23.1 per cent in December. The volume of mortgage borrowing has continued to rise significantly with the annual rate of mortgage credit growth currently (July 2004) running at 27.7 per cent.

Figure 3.4 Value of residential mortgages advanced (€m)



Source: IMSA Annual Report 2001/2002

The number of individual loans financed by this increase in credit lending also increased exponentially as illustrated in Table 3.14. below



Table 3.14 Loans approved – All agencies<sup>1</sup>

Year	New Houses		Other Houses		Total	
	Number	Value €m	Number	Value €m	Number	Value €m
1992	14,695	702.8	29,738	1310.7	44,433	2013.5
1993	15,527	772.8	29,863	1388.1	45,390	2160.9
1994	18,875	980.8	31,329	1464.0	50,204	2445.0
1995	20,675	1182.1	28,613	1483.9	49,288	2666.2
1996	26,598	1659.2	34,408	2017.9	61,006	3677.0
1997	30,671	2158.6	33,981	2265.6	64,652	4424.1
1998	29,220	2459.0	39,705	3196.1	68,925	5654.9
1999	32,722	3293.4	45,850	4399.3	78,572	7692.7
2000	33,289	3726.2	47,567	5277.4	80,856	9003.7
2001	29,277	3695.9	39,785	5036.6	69,062	8732.6
2002	39,399	5985.9	53,737	8373.4	93,136	14359.3
2003	39,676	6,968.2	58,212	10477.8	97,888	17446

Source Housing Statistics Bulletins, various

Notes 1. Includes building societies, banks, and other agencies, also local authorities)

What is interesting to note however is the high proportion of new properties which are self-funded. Table 3.15 below indicates the difference between the total number of new houses completed in any one year, compared with the number of loans advanced for new homes.

Table 3.15 Number of new Houses Self-Funded

	Total new houses (private)	Number of loans paid	% new houses self-funded
1989	17300	11268	34.9%
1990	18536	11290	39.1%
1991	18472	12044	34.8%
1992	20982	15019	28.4%
1993	19301	12985	32.7%
1994	23588	16230	31.2%
1995	26604	19320	27.4%
1996	30132	25628	14.9%
1997	35454	28193	20.5%
1998	39093	27355	30.0%
1999	43024	31359	27.1%
2000	46657	31533	32.4%
2001	47727	29431	38.3%
2002	51932	32298	37.8%
2003	62686	35292	43.7%

Source: Department of Environment, Heritage and Local Government, *Housing Statistics Bulletin* (various)

### 3.6.3. Lending policies

The major lending institutions have advertised lending policies of between 85 and 95 per cent of the value of the property. While precise figures are not available, it is estimated that the average loan to value ratio in Ireland was 68.5 per cent in the first quarter of 2003 (compared to 64 per cent in the first quarter of 1995)<sup>5</sup>. First-time buyers used to be confined to 20 or 25-year mortgages, but now 30-year terms are standard and indeed 35-year mortgages can be obtained from a number of lenders. Bank of Scotland introduced 40-year mortgages in 2003. In addition 100 per cent mortgages were recently introduced by Ulster Bank for certain categories of borrower.

5. Roche, M. (2003), *Will There be a Crash in Irish House Prices?*, ESRI: Quarterly Economic Commentary.

### 3.6.4 Conclusions

The terms and conditions associated with mortgage lending for residential property have undeniably become more flexible in recent years reflecting the step change in demand but also increased competition in the market. It is evident from an examination of the growth in mortgage lending that the on-going flexibility and level of credit available is a key driver of on-going demand for the consumption of housing in the Irish market.

## 3.7 Fiscal Policy

Some policy changes have taken place that, other things being equal, can be considered to have reduced the effective demand (demand backed by purchasing power) for housing. As will be seen, other things have not been equal and these dampening influences have been quite secondary to more general fiscal developments which have increased disposable incomes and the relative attractiveness of investment in housing, thus contributed to fuelling the demand for housing.

### 3.7.1 Reducing the effective demand for housing

#### Mortgage interest tax relief

Prior to 1974, a person could set all mortgage interest payments arising from the purchase of his or her principal private residences against income tax. This blanket support for home-ownership rested on it being considered an important social objective. Since 1974, successive Finance Acts have reduced the generosity of mortgage interest tax relief – by, variously, setting ceilings to the total tax reduction allowed, allowing only a percentage of the total interest repayments to be claimed and, most recently, by standard-rating the tax allowance. These have had the effect of significantly reducing the influence of mortgage interest tax relief on the demand for housing. While the relief was still “a significant part of the total package of government housing measures” at the end of the 1980s (NESC, 1988: 20), its low value relative to the price of housing by 2003 makes it only a marginal factor in the house-purchase decision today. Its cost to the Exchequer has declined substantially, in real and relative terms (Table 3.16).

Table 3.16. Estimated Cost of Mortgage Interest Tax Relief, Tax Years 1993–94 to 2000–01 (€m).

1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
274	203	206	192	182	178	158	199.1

An interesting variation in the tax treatment of mortgage interest incurred on purchases of housing has been the treatment of investors. The Finance Act of 1998 (on foot of the first Bacon Report) withdrew the ability of investors in rental accommodation to offset their mortgage repayments against rental income in calculating their tax liability, but this was restored by the Finance Act of 2001. The 1998 restriction was considered to have impacted negatively on investors' purchases of housing and the consequent supply of private rental accommodation, confirming that—through this extension of mortgage interest relief additional funding was, in fact, being incentivised to take the form of demand for housing.

A similar re-evaluation of the net impact of investors' demand for housing—as more likely to be helping increase aggregate supply than 'crowding out' primary home buyers—also led to sharp swings in the stamp duty treatment of investor purchases of new housing. Starting in 1998, their exemption from stamp duty on purchases of new houses was ended and they were levied at rates rising to a maximum of 9 per cent on the higher valued houses (people purchasing for owner-occupation were, and are, exempt subject to the issuing of a Floor Area Certificate). The 9 per cent rate for investors was introduced in the Finance Act of 2000 but subsequently reversed the following year.

### Cash grants

The first-time buyers of new homes falling within specified floor area limits first became entitled to a cash grant in 1977. The grant was initially £1,000 (€1,270) and quickly increased to £2,000 (€2,540), a non-negligible part of the cost of a house in the late 1970s. It was not increased in line with house prices thereafter, and with their escalation from the mid-1990s onwards, it rapidly dwindled in significance—its final value was €3,800. The measure was abolished altogether in November, 2002.

For a period in the 1980s (1984 – 1987), a particular group of first-time home buyers, viz., local authority tenants of a minimum three years standing buying a house from the private sector and 'surrendering' their local authority dwelling, received a £5,000 (€6,350) cash grant in addition to the other supports available. Over the 4-year window this Surrender Grant Scheme existed, some 7,700 grants were paid out, suggesting that approximate 6.5 per cent of all local authority tenants at the time availed of the Scheme and purchased housing on the open market.

## 3.7.2 Increasing the effective demand for housing

### General

A key context to the performance of the Irish housing market in recent years has been the growth in effective demand for housing coming from the combination of a larger population enjoying higher real incomes. Fiscal policy has significantly added to this purchasing power since 1987 by significantly reducing the tax-take out of personal incomes so that disposable income has grown even faster than

gross income. In so far as this reduction in personal taxation has favoured individuals at the higher end of the distribution, it has served to fuel demand for housing as a luxury good rather than as a basic necessity (housing is both). Other things being equal, a more affluent population seeks to buy 'more home' by acquiring larger homes or homes in more valued locations, and/or by acquiring second properties as an extra durable good (e.g., a holiday property) and/or as an investment.

When the impact of Budgets since 1987 on personal incomes are compared to what would have happened if all the parameters of the tax system (bands and allowances) and social welfare transfers had been indexed to the rise in earnings (the ESRI's "distributionally neutral" benchmark), the evidence is that Budgetary policy during the period 1987-2001 has been particularly benign to those on the highest incomes (NESC, 2003: Figure 2.8, p. 123). To this extent, therefore, fiscal policy has fuelled the demand for housing as a luxury good.

A further general way in which fiscal policy has influenced the level of aggregate demand for housing is through the benign tax treatment that has consistently been afforded the privately owned residence, both in its capital value and the value of the service provided by it. When Capital Gains Tax was introduced in 1975 at a rate of 26 per cent, sales of principal private residences were exempted and they have consistently maintained this status through subsequent rate changes and other modifications.<sup>6</sup> In 1977, local authority rates on private residential properties were abolished. In 1984, a limited form of Residential Property Tax was introduced but abolished altogether in 1994. In 2000, the intention to introduce a Speculative Property Tax of 2 per cent on the value of second homes was announced but, within 12 months, it was decided not to proceed with it. Generally, recommendations that some form of property tax on private residences would be an equitable way of treating all owner-occupiers equally (embracing the significant number who own their homes outright) and a desirable way of including the country's main source of private wealth in its tax base (e.g., NESC, 1988) have consistently not been acted on.

### Targeted

In 1991, a Mortgage Allowance Scheme was introduced that provided a subsidy over each of the first five years on the mortgage repayments which a former LA tenant or person renting from an approved housing association incurred when they purchased a house (new or second hand) from the private sector. The amount of this allowance has been raised several times in a bid to keep it sat a meaningful level. Relatively small numbers of people are empowered by it (in 2003, some 230 householders).

6. The standard rate was raised to 40 per cent in 1992 and reduced to 20 per cent in 1998. "While the potential Exchequer cost in terms of revenue foregone, estimated at £120 million per annum (in 1998), is very significant a number of important points must be borne in mind: (i) The abolition of this exemption would be seen as a tax on the family home and would be difficult to introduce without the provision of roll-over relief. (ii) The provision of roll-over relief would significantly reduce the actual revenue raised as the tax liability on the gain from the sale of a principal private residence would be in most cases deferred by purchasing another residence. (iii) CGT levied on the principal private residence would probably disproportionately affect the older sections of the community as they are more likely to trade down. (iv) The introduction of CGT on the sales of private residences would have an impact on the housing market as mobility may be discouraged with consequential adverse implication for house prices generally. Consequently, the introduction of CGT on the principal private residence would, it seems, conflict with a number of other public policy objectives." Tax Strategy Review Group, 1998/25.

In 1992, the Shared Ownership Scheme was introduced. This enabled local authority tenants to identify a house (this has since been raised to 40 per cent), with the local authority purchasing the remainder and agreeing to sell them its equity stake over an agreed period. The qualifying income limit for availing of the Scheme has been raised several times in a bid to keep pace with house prices. The Scheme has served to inject a substantial volume of purchasing power into the private housing market. In 2003, some 1,000 houses were being purchased in this way and it was judged to be the state's "most widely used support for low-income home owners" (Norris and Winston, 2004).

The 1982 Budget introduced a tax allowance for people over 55 paying rent in the private sector, available to them at their marginal rate. In 1995, when the allowance was £500 (€635), it was extended to people under 55 but standard rated. The level of the relief changed very little in real terms from its introduction and its current value stands at €1,270 for under 55s, and €2,540 for over 55s. Growth in expenditure on this relief has largely been driven by growth in the numbers availing of it. It is regarded as having had a possible effect in increasing the demand for private rental accommodation, as more surely having increased the rents that landlords charge and minimally, if at all, affecting the supply of rental accommodation (Tax Strategy Review Group).

**Table 3.17** Estimated Cost of Income Tax Relief on Rent Paid in Private Tenancies, Tax Years 1993-94 to 2000-01 (€m).

1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
1.5	1.4	7.1	9.7	11.4	11.9	13	19.1

Source: Revenue Commissioners

Aggregate public expenditure on Supplementary Welfare Rent Supplements has grown steadily; its scale first surpassed the estimated cost of mortgage interest tax relief in 1997 and by 2003 stood at €330 million. This injection of public finance into the housing market affects house prices chiefly by sustaining investor demand for rental housing. In 2003, it was strengthening rental demand on the part of more than 59,000 persons.

### 3.8. Housing Stock/Completions

The housing stock per 1,000 inhabitants provides some indication of the degree of the ability of a given population to house themselves adequately with the existing stock and therefore some measure of the 'pent up' demand for housing in the economy. As the housing stock rises for a given population so demand for existing units and therefore price would be expected to decrease. This relationship is premised on a constant population structure and pattern of household formation and the extent to which these are changing and are not taken account of the effects of changes in either could be expected to be represented in the coefficient on the per capita housing stock variable. The housing stock per capita is to some extent a reciprocal of the average household size variable and would therefore be expected to be greatest in those regions where the average household size is lower due to demographic reasons e.g. inner city areas—and these demographic differences would have to be taken into account if one were to provide a meaningful regional comparison.

In the first Bacon report the total housing stock per head of population was one of the explanatory variables used in the modelling of housing demand and a coefficient of minus 1.42 was reported over the sample period 1974-1996 (Bacon *et al.*, 1998). As Bacon notes, given that the relationship was modelled using logarithms this implies the coefficients can be interpreted as elasticities that is the sensitivity of house prices to the variables included. The coefficient of minus 1.42 implies that a 1 per cent increase in the housing stock is associated, other things being equal, with a 1.42 per cent decrease in the house price. However, Murphy and Brereton re-examined the house price equation given in the Bacon report over the longer time frame from 1974-1999 and found it to be poor at predicting demand between 1997 and 1999. They therefore posited possible misspecification of the model or speculative frenzy as possible explanations. The estimated coefficient on the per capita housing stock as assessed by them varies from minus 1.41 to minus 2.08 over the sample period dependent upon the exact specification of the model used.

The ESRI have re-estimated the model taking into account more recent data observations and have split the model into the determinants of new and existing house prices. They find that the coefficient on the housing stock per capita is lower in their model at minus 2.48 for new houses (i.e. a one per cent increase in stock would imply a 2.48 per cent decrease in house prices) but is somewhat higher at minus 0.70 for second hand house prices. The estimated coefficient for second hand house prices is statistically not significantly different from zero (i.e. we cannot say with 95% confidence that the variable has any effect on second hand house prices whatsoever).

There is no official measure of the housing stock in Ireland. The Census and Quarterly National Household Survey enumerate and estimate respectively the number of households in Ireland but this does not take into account temporarily vacant dwellings or second homes both of which are contributors to the overall stock. One of the better measures of the overall housing stock may be the number of domestic connections to the electricity supply. Indeed it is the

number of new domestic connections to the ESB that is used to gauge the level of new housing completions in Ireland. In 2002 the ESB had 1,564,036 domestically connected customers. This compares with 1,287,958 permanent private households as enumerated in the census of April 2002. The discrepancy of almost 280,000 units is multi-faceted and is likely to include second homes, holiday homes, including temporary dwellings such as mobile homes, vacant stock and also possibly some derelict or semi-derelict stock and slight timing variations. A further side of this discrepancy is the degree to which new housing construction fails to contribute to the formation of new households. This will be looked at when we come to examine supply.

A table is presented below which shows the stock of housing in Ireland as represented by ESB connections at each of the recent censuses and the associated population and therefore housing stock per 1,000 inhabitants. The table shows that the housing stock has not only risen rapidly but has grown more rapidly than population as a whole. This reflects ongoing decreases in household size as were seen in the section on demographics.

**Table 3.18 Housing Stock per 1,000 Inhabitants – Census Periods**

	1971	1979	1981	1986	1991	1996	2002
<b>Housing Stock (000s)</b>	737	941	990	1096	1182	1310	1560
<b>Population (000s)</b>	2,978	3,368	3,443	3,540	3,525	3,626	3,917
<b>Housing Stock per 1,000 persons</b>	247	279	287	310	335	361	398

*Notes* Housing stock proxied by ESB domestic connection

The increase in stock per 1,000 persons between 1991 and 2002 implies that using the coefficient of minus 2.48 as estimated by Duffy that in the absence of other factors new house prices would have fallen by in excess of 46 per cent.

An important question is the degree to which it is the housing stock or the number of households that matters in driving demand and this may be tied up with questions of income distribution and the ownership of second homes. Another important question is the validity of splitting the model to examine the determinants of new and existing house prices separately given that, abstracting from location etc., would we not expect a coherent model of house price determination?



### 3.9 Composition of total demand

#### 3.9.1 Characteristics of private market demand

Data collected by the Department of the Environment, Heritage and Local Government based on a sample of mortgage survey forms submitted by the mortgage lending agencies provides a breakdown of some of the characteristics of applicants approved for home loans. Table 3.19 below outlines some of this data for the period 1998 to 2003.

Table 3.19 Analysis of loan approvals

	1998	1999	2000	2001	2002	2003
<b>Range of loans paid</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
< €100,000	-	69.0	58.0	47.3	36.4	26.1
€100,001 – €150,000	-	22.1	26.8	30.3	31.1	30.0
€150,001 – €200,000	-	5.9	30.3	14.8	20.0	23.9
€200,001 – €250,000	-	1.6	31.1	3.0	6.6	11.0
> €250,000	-	1.4	30.0	4.6	5.9	9.1
<b>Previous tenure</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
Owner occupied	58.7	56.3	56.1	52.2	53.6	53.4
Private tenant	19.3	21.3	21.6	22.3	22.7	21.7
Local authority tenant	0.9	1.0	0.8	0.6	0.6	0.8
Parents' residence	19.3	19.6	19.1	22.6	21.2	22.3
Other	1.9	1.9	2.4	2.3	1.9	1.8
<b>Marital status</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
Single	31.3	54.7	59.7	67.2	70.0	71.3
Single/about to marry	9.1	5.1	5.0	4.0	16.9	15.0
Married < 5 years	16.1	10.1	9.3	7.9	2.7	3.0
Married > 5 years	39.2	20.2	18.1	12.8	4.7	4.9
Widowed/separated etc.	4.3	9.9	7.9	8.1	5.8	5.7

	1998	1999	2000	2001	2002	2003
<b>Occupation</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	
Professional/ managerial/employer	52.9	48.5	48.3	46.8	43.3	41.1
Salaried, non manual	22.0	15.4	13.0	13.0	22.6	24.7
Skilled; semi-skilled manual	19.9	26.2	28.8	30.7	22.7	21.2
Unskilled; manual	3.4	9.4	9.2	9.2	10.5	12.4
Farmer; fisherman	1.8	0.6	0.6	0.4	0.9	0.7
<b>Ranges of incomes</b>						
<i>Based on principal income only</i>						
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
< €30,000	42.4	37.2	35.5	23.8	27.4	31.6
€30,001 to €40,000	24.3	26.3	23.2	25.4	23.8	24.9
€40,001 to €50,000	14.5	14.4	15.5	19.8	18.6	17.6
€50,001 to €60,000	7.9	9.0	9.7	12.6	11.4	9.9
€60,001 to €70,000	4.1	4.2	5.6	6.8	6.7	5.3
€70,001 to €80,000	1.8	2.3	2.9	3.4	3.5	3.0
Exceeding €80,000	4.9	6.6	7.6	8.2	8.6	7.6
<b>Based on combined incomes</b>						
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
< €30,000	11.5	9.8	6.3	3.2	5.1	7.6
€30,001 to €40,000	31.6	19.4	16.6	13.9	10.0	11.4
€40,001 to €50,000	33.9	20.8	22.0	22.3	19.2	18.8
€50,001 to €60,000	16.7	18.0	18.5	21.0	20.6	19.5
€60,001 to €70,000	4.5	12.8	13.3	15.5	15.8	14.6
€70,001 to €80,000	1.1	7.2	8.6	9.4	10.4	9.9
Exceeding €80,000	0.7	12.0	14.7	14.7	19.0	18.3

Source: Annual Housing Statistics Bulletin (various)

The following points are of note in relation to the above data:

- ◆ The significant increase in the average size of loan granted whereas 91 per cent of loans in 1999 were for €150,000 or less, this had dropped to 56 per cent in 2003;
- ◆ 3 per cent of successful applicants sought loans greater than €200,000 in 1999 this had risen to 20.1 per cent in 2003;
- ◆ The relatively stable proportion of owner-occupiers—receiving approximately 1 in 2 of all loans granted across the period in question;
- ◆ The increasing proportion of single persons being granted loans growing from about 44.7 per cent in 1998 to almost 92 per cent of recipients in 2002;
- ◆ Based on principal income only, 18.7 per cent of recipients earned more than €50,000 in 1998 – this had risen to 25.8 per cent in 2002

### 3.9.2 Characteristics of residual demand

The requirement to provide dwellings in the non-market sector can be viewed as a residual for those who are unable to afford adequate accommodation resulting from market outcomes. Residual demand has been strong over recent years, with the level of pent-up demand (as reflected in the local authority housing waiting lists) continuing to outstrip increases in supply. The extent of demand for social and affordable housing is considered further in Background Paper 6.

### 3.10 Conclusions

The preceding sections point to the interaction of a number of economic and social developments to drive the considerable increase in housing demand witnessed over the past decade. The impact of this increase in light of actual supply on house prices and affordability is considered in Background Paper 5 and Chapter 3 of the main report.