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**AIM-AP**

**Accurate Income Measurement for the Assessment of Public Policies**

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*Citizens and Governance in a Knowledge-based Society*

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**AIM-AP Accurate Income Measurement for the Assessment of  
Policy**

**Project 1, Income Distribution**

**National Report**

## **Imputed Rent in Ireland: Distributional Implications**

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## 1. Introduction

Housing represents a substantial element of household's wealth, and households which own their own accommodation have an income advantage over those which have to pay rent. Comparisons of the economic welfare of households based purely on cash incomes fail to take this into account. As part of our investigation of aspects of non-cash income, therefore, we seek to adjust income measures to take into account the "imputed rent" enjoyed by owner-occupiers, and by those enjoying rental accommodation at less than market value – whether the implicit subsidy comes from the public sector, as with social renters (local authority tenants in the Irish case), or from the private sector (as when accommodation is provided free or at less than market rates by an employer or family member).

In this report, we outline the structure of the Irish housing market. We then provide results on the imputed income from owner occupation, the dominant mode of tenure in Ireland. The method by which this assessment is made uses information on the valuation of the owner-occupied housing provided by the owners (or if this is not available, by interviewers). While this approach has its difficulties, it appears to be the most reliable method available at present with the data available.

## 2. Housing in Ireland

The distribution of housing tenure in Ireland is shown in Table 1.

Table 1: Distribution of Tenure, Living in Ireland 2000 and National Survey of Housing Quality 2001-2002.

<i>Tenure</i>	<i>National Survey of Housing Quality 2001-2</i>	<i>Living in Ireland 2000</i>
Own outright	45.2	39.7
Own with mortgage	36.6	44.8
Local authority tenant	7.6	7.7
Private tenant	8.9	6.2
Other	1.7	1.6
All	100.0	100.0

*Note:* Sample size for Living in Ireland Survey was 3,463 households, while the National Survey of Housing Quality had 40,486 households.

The National Survey of Housing Quality had a sample size of over 40,000 households. However, it does not gather information on health and education-related matters as required for our broader study of non-cash incomes. But it can be used as a check on the representativeness of our chosen data source, the Living in Ireland Survey for the year 2000. It can be seen that the overall proportion of owner-occupiers is similar as between the two surveys, but that the Living in Ireland Survey contains more "owners with mortgage". If anything, this is likely to somewhat understate the amount of imputed rent. The other main difference is that the Living in Ireland Survey has significantly fewer private tenants than would be expected.

We now consider each of the three main tenure groups in turn:

1. Owner occupied (including those who own outright, and those who own the property but are paying for it with a mortgage)
2. Local authority tenants (the bulk of the social rented sector, as the voluntary housing sector is small)
3. Private renters

### *2.1 Home Ownership*

Home ownership is the dominant form of tenure in Ireland. More than 80% of Irish households own their own homes, one of the highest rates of home-ownership in Europe. Policies supporting home ownership have been in place for many years, and rising house prices have made home ownership very attractive. A further element is that tenants of local authorities – the major social rented sector – were offered tenant purchases at a substantial discount to the market price.

Government policy in Ireland has been favourable to home ownership, for example:

- Tax relief on mortgage interest payments
  - initially allowed at full marginal rate of tax, subject to a limit
  - reduced to standard rate and 80% of interest, subject to a limit
  - more recently risen to 100% of interest, subject to cap, but still standard rated
- No capital gains tax on receipts from the sale of a principal private residence
- Residential Property Tax introduced for high value properties, second homes, but then abolished
- Stamp duty exemption for first-time purchasers of houses below a threshold value
- There have at times been grants for first-time buyers to purchase new houses
- Currently, there is an initiative called “affordable housing” which offers to those qualifying the chance to purchase a property at a discount to the market price.

These policies made owner-occupation very attractive especially against the backdrop of strongly rising house prices over a prolonged period.

### *2.2 Social Housing*

Social housing has traditionally been provided by the Irish local authorities, aimed at those unable to afford to purchase their own home. This was traditionally done by building estates of local authority houses. More recently, local authorities have begun to purchase rather than build houses as a way of providing housing in a quicker and more efficient manner. The voluntary housing sector is small.

### *2.3 Private Renting*

Private renting was measured as less than 10% of the residential housing stock in the National Survey of Housing Quality.

Some tenancies were subject to rent regulation – but this was removed, as the Supreme Court deemed this incompatible with the right to private property in the Irish

constitution. A social welfare allowance was introduced to support those affected by de-control of rent. More recently, a small tax allowance was introduced for those paying rent. Legislation around landlord-tenant relations, registration of agreements, mediation.

Private sector tenants are predominantly young, and for the most part do not have children.

## 2.4 Housing Tenure and Income

**Table 2: Distribution of tenure within quintiles of disposable income**

within quintile

Quintile	Tenure					All tenures
	Own outright	On mortgage	Social housing	Market rent	Rent free/ employer/family	
	%	%	%	%	%	%
Bottom	44.0	23.8	23.1	7.2	1.8	100.0
2.00	44.1	40.0	9.5	5.2	1.2	100.0
3.00	42.2	46.9	4.5	4.2	2.2	100.0
4.00	38.4	52.8	1.6	5.9	1.3	100.0
Top	29.7	60.1	.1	8.5	1.6	100.0
All	39.7	44.8	7.7	6.2	1.6	100.0

Table 2 shows that owner occupation is a strong feature of housing tenure at all income levels. Renting is a low-frequency tenure, but observed at similar rates in all income groups. Similar remarks apply to the rent-free and privately rent-subsidised (employer or family) category. Social housing, by contrast, is concentrated in the bottom half of the income distribution, and particularly in the bottom quintile.

## 3. Data and Methodology

The dataset mainly used for this project is the Living in Ireland Survey, which in the year 2000 had 3,463 households. Private renters amounted to about 6% of these households- less than the 9% in the National Survey of Housing Quality, which has a much greater sample size (over 40,000 households).

The number of households renting accommodation at market rates in the private sector is 114 (unweighted).

There are three methods for calculating imputed rent:

- i. The capital market approach
- ii. The self-assessment approach
- iii. The opportunity cost approach

Frick and Grabka 2003 assess the three approaches, and conclude that the opportunity cost method offers significant advantages. In the Irish context, the dominance of owner occupation as a mode of tenure means, and the size of the sample (3,463 households) means that there are just 114 (unweighted) cases of private sector rented households on which the opportunity cost method depends to establish relationships

between indicator variables and market rents. Nor is data gathered on which the self-assessment method could be based. By contrast, information on the capital value of the house is gained for more than 80% of the sample. In these circumstances it seems prudent to apply the capital market approach first, before any attempt to apply the opportunity cost method.

The Living in Ireland Survey contains detailed questions on the amount of any mortgage linked to the property, the term of the loan, and when it was taken out. Using this information we estimate the mortgage outstanding at the time of interview. The gross value of the property, as reported by the homeowner, is then adjusted by the amount of the mortgage to give the value of the homeowner's equity in the property. A return of 3% is assumed on the net equity, and this is the value of the "imputed income" added to cash income for such households. In Irish circumstances, this may be somewhat conservative – a strong and sustained upswing in the property market over the past 10-15 years means that the return on investment in housing has been much greater than this.

#### 4. Distributional impact of accounting for imputed rents

As indicated above, the analysis here is based on the capital market approach imputed rent of 3% of the homeowner's net equity in the property; the very low sample size in the private rented sector makes the opportunity cost method unattractive. However, the fact that owner occupation is the predominant mode of tenure means that analysing just owner-occupiers will capture about 90 per cent of the total impact of imputed rent across all tenures.

The average value of imputed rent per household is almost €3,200 per annum or just over 10 per cent of average disposable income. How are these substantial non-cash resources, linked with property ownership, distributed across the population?

**Table 1: Incidence of owner-occupation by Income Quintile  
Capital-Market-Approach using 3% interest rate  
(for owner-occupiers only)**

Quintile	Owner-occupiers		
	Total	own outright	on mort-gage
1 (bottom)	67.2	43.4	23.8
2	83.3	43.4	39.9
3	88.0	41.1	46.9
4	90.9	38.2	52.7
5 (top)	89.1	29.2	59.9
All	83.8	39.1	44.7

Table 1 shows that close to 90% of persons in the top 3 quintiles are owner occupiers and about 5 out of 6 persons in the second quintile; the incidence of outright ownership is somewhat lower with higher cash incomes. The incidence of owner

occupation is somewhat lower (at about two-thirds) in the bottom quintile, but within this, outright ownership is more common in the bottom two quintiles.

**Table 2: Changes in Incomes and Income Shares by Quintile**

Quintile	Disposable income per adult equivalent	Total		% change		
		Income including imputed rent, per adult equivalent	Total	of which due to: own outright	of which due to: on mortgage	
1 (bottom)	7.82	8.23	14.7	9.6	5.1	
2	12.88	12.88	10.4	5.3	5.0	
3	17.89	18.03	9.2	4.5	4.6	
4	23.57	23.46	9.6	4.1	5.5	
5 (top)	37.84	37.40	7.7	2.9	4.8	
All	100.0	100.00	9.3	4.4	5.0	

**Table 3: Changes in Resources per Adult Equivalent due to Imputed Rent**

Quintile	Baseline (EUR) mean	Owner-occupiers		
		Total	own outright	on mortgage
1 (bottom)	6351	1104	823	281
2	10350	1258	700	558
3	14363	1447	743	704
4	18975	1904	856	1048
5 (top)	30469	2436	947	1489
All	16115	1630	814	817

Tables 2 and 3 give further detail on how the imputed rent is distributed across the income distribution, and on its impact on that distribution of resources (moving from disposable income to a wider measure, including imputed rent). The gains for those who own outright are relatively flat in absolute terms across the income distribution, implying that they are highest in proportionate terms for the bottom part of the distribution. The gains for those with mortgages rise roughly in proportion with income, and thus imputed income forms about 5% of disposable income at each level of the income distribution. The net impact on the share of income for each quintile is relatively modest a gain of about 0.4 per cent of income for the bottom quintile and a loss of 0.4 per cent for the top being the strongest features.

**Table 4:; Impact of Imputed Rent on Inequality of Resources**

Inequality indices	Owner-occupiers			
	Baseline: disposable income	Total	own outright	on mort- gage
Gini	0.3020	-3.0	-2.6	0.7
Atkinson 0.5	0.0739	-6.0	-5.4	0.8
Atkinson 1.5	0.2472	-11.5	-7.8	-2.2
DR: 90/10	4.18	-5.5	-4.3	5.0
DR: 90/50	1.90	0.5	0.5	2.6
DR: 50/10	2.20	-5.9	-5.0	2.3
FGT0	21.93	-11.4	-10.2	-3.4
FGT1	5.28	-13.3	-14.8	2.3
FGT2	1.89	-14.8	-15.3	2.1

Table 4 shows the impact of the inclusion of imputed rent in the concept of resources used to measure inequality and relative income poverty (what the EU terms the “at risk” of poverty measure, captured by the Foster-Greer-Thorbecke indices<sup>1</sup>). All the inequality indices (bar the ratio of the 90<sup>th</sup> to the 50<sup>th</sup> percentile) show a fall, albeit no more than 3 per cent in the case of the Gini, which is particularly sensitive to changes in the middle of the distribution. But the Atkinson measure with the index of 1.5, and the poverty measures (FGT) are more sensitive to changes at the bottom of the distribution and show a greater fall – of between 11 and 15 per cent in the case of the FGT indices.

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<sup>1</sup> FGT0 is the head count ratio, FGT1 is the poverty gap ratio and FGT2 is the weighted poverty gap ratio, taking into account the distribution of resources within the poor population.

**Table 5: Impact of Including Imputed Income Classified by Social Group**

	Pop. share in %	Income position (mean equivalised income as % of overall average)		% increase in mean equiv. Income
		Baseline	Including IR	Including IR
		%	%	
<b>Household type</b>				
Older single persons or couples (at least one 65+)	16.6	84	89	17.3
Younger single persons or couples (none 65+)	14.5	130	129	9.7
Couple with children up to 18 (no other HH members)	49.5	98	97	9.2
Mono-parental household	6.3	68	66	7.0
Other household types	13.1	111	109	8.0
<b>Socioeconomic group of HH head</b>				
Manual worker	26.3	100	97	7.3
Non-manual worker	26.5	128	127	9.2
Self-employed	18.9	106	106	10.2
Unemployed	3.0	53	53	11.4
Pensioner	12.1	82	87	17.7
Other	13.1	62	64	13.5
<b>Educational level of HH head</b>				
Tertiary education	17.8	148	148	10.0
Upper secondary education	18.9	104	105	10.9
Lower secondary education	28.0	94	94	9.4
Primary education or less	35.2	78	78	10.3
<b>Housing tenure</b>				
Owners, total	84.4	104	105	11.5
Tenants, total	15.6	79	71	0.0
Owner: own outright	39.7	94	97	13.6
Owner: on mortgage	44.8	113	113	10.0
Tenant: private market (non-subsidized)	6.2	105	96	0.0
Tenant: rent-subsidized due to living in social housing	7.7	54	49	0.0
Tenant: reduced-rent by landlord (family, employer, etc)	1.6	95	86	0.0
<b>ALL</b>	100.0	100	100	10.1

Table 5 examines how the impact of including imputed income varies across social groups and household characteristics. The relative position of older persons is seen to improve substantially – from 84% of the overall average to 89%. For other household types relative income position is quite stable. Similarly, looking at classification of households by the socioeconomic group of the household head, there is a 5 percentage point gain in relative income position for pensioners, but the income positions of other groups are not much changed. Relative income positions remain almost unchanged for all education levels. Finally, as regards housing tenure, there is a rather small gain

in relative income position for owners – it is difficult for this group to obtain a relative income gain precisely because it is so large, and, in the absence of any estimate of the imputed income from social housing, because of lack of suitable data, there is a sharp relative income deterioration for tenants. Notably, the relative income position of those who own outright improves by 3 percentage points; but there is no change for owner occupiers who have a mortgage..

**Table 6: Impact of Including Imputed Rent on Measures of Relative Income Poverty**

	<b>FGT0</b>				
	<b>Baseline</b>	<b>Including IR</b>	<b>% change in poverty (FGT0)</b>	<b>% change in poverty (FGT1)</b>	<b>% change in poverty (FGT2)</b>
<b>Household type</b>					
Older single persons or couples (at least one 65+)	35.7	25.7	-28.2	-46.2	-53.6
Younger single persons or couples (none 65+)	9.8	7.9	-19.6	-21.6	-23.5
Couple with children up to 18 (no other HH members)	18.2	17.5	-3.9	-2.1	-5.5
Mono-parental household	39.7	40.1	1.1	3.4	9.7
Other household types	23.4	21.8	-6.7	-7.7	-12.3
<b>Socioeconomic group of HH head</b>					
Blue collar worker	12.4	13.2	6.1	10.9	5.3
White collar worker	5.0	4.0	-19.9	-7.3	2.6
Self-employed	22.8	19.7	-13.4	-17.1	-22.0
Unemployed	64.9	66.8	2.9	-0.6	-3.8
Pensioner	35.8	24.4	-31.7	-36.0	-37.9
Other	51.3	47.4	-7.7	-12.8	-7.9
<b>Educational level of HH head</b>					
Tertiary education	6.1	3.7	-39.3	-23.1	-16.7
Upper secondary education	16.9	13.7	-18.9	-19.5	-18.8
Lower secondary education	17.9	18.2	1.7	-4.3	-10.5
Primary education or less	35.8	31.5	-12.0	-15.5	-18.5
<b>Housing tenure</b>					
Owner: own outright	24.2	18.6	-23.1	-41.4	-45.0
Owner: on mortgage	12.5	10.5	-16.0	-18.5	-27.3
<b>ALL</b>	<b>21.9</b>	<b>19.4</b>	<b>-11.2</b>	<b>-13.4</b>	<b>-14.4</b>

Table 6 outlines the impact of including imputed rent on risks of relative income poverty across the same social dimensions. The head count ratio falls sharply, from 36 per cent to 26 per cent for households made up of older persons This is confirmed by

a similar result for pensioner headed households. The risks for younger persons without children also falls from about 10 per cent to 8 per cent.

Within the socio-economic groupings, there is a sharp fall in risk for the self-employed. Within the tenure groupings, again there is a greater impact for those who own outright rather than with a mortgage.

Risks of poverty tend to fall for most groups (we exclude tenants from this analysis because of the unsuitability of the data for attributing imputed rent to them). Typically, even if there is a small rise in the risk measured by the head count ratio, the broader measures (poverty gap ratio, taking into account depth of poverty, or the depth and distribution sensitive measure FGT2) show a fall; and where the risk falls, the fall in the broader ratios is greater.

## References

Frick, J. & Markus Grabka (2003) “Imputed Rent and Income Inequality: A Decomposition Analysis for Great Britain, West Germany and the US”. *Review of Income and Wealth* Vol.49, No.4, 513 – 537