The treatment of owner occupied housing in the Irish Consumer Price Index

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1 Introduction & Background

The treatment of Owner Occupied Housing (OOH) within a Consumer Price Index (CPI) is a complex issue, both from a theoretical and practical perspective. This paper is concerned with the treatment of owner occupied housing in the CPI, primarily from an Irish perspective and from a European perspective in a wider context. This paper will touch briefly upon the different approaches used to treat owner occupied housing but will not deal with these in any comprehensive fashion. The current practice used in the Irish CPI is presented and the advantages and disadvantages of this approach are outlined. Developments in respect of Owner Occupied Housing (OOH) at EU level are currently underway; and as a result of the development of a harmonised EU approach, will require that one specific approach, the net acquisition approach, may have to be applied as the alternative method to be used in the Irish CPI. The implications of adopting this new approach will be investigated. The presentation will allow for a more comprehensive overview of the issues raised in this paper.

2 Theoretical Approaches

There are a number of different theoretical approaches which can be applied to treat owner occupied housing. Each approach has its' own relative advantages and disadvantages. Another consideration, which has to be borne in mind, is the complexity of and cost involved in adopting the different approaches on the one hand; and the availability of sufficient and reliable data sources on the other. In theory, certain approaches may offer a more suitable direction; however, the practicalities of implementation may require the adoption of alternative or somewhat modified approaches. Whichever approach is ultimately adopted, it is important to note that each of the alternative approaches can result in significantly different impacts on a CPI, both in terms of the expenditure weights and, in the short to medium term, on price levels.

Rental Equivalence

Rental Equivalence puts a value on the service provided, defined as shelter or accommodation services, by using the market rent for the same type of dwelling, where such a rental valuation exists. In most cases, the outcome of this approach would mean that the index for private rents would be used as the proxy for the equivalent rental value of owner occupied housing. In the US, the Consumer Expenditure Survey asks owner occupiers to place a valuation on their accommodation. The question asked is ‘if someone were to rent your home today, how much do you think it would rent for monthly, unfurnished and without utilities?’ Owners are therefore asked to put a subjective valuation on the probable or likely rental value. This information is then used to calculate the expenditure weights for rental equivalence. However, the actual price data used for calculation of price change is collected from ‘real’ renters.

Conceptually, this approach sounds logical and administratively simple to implement, if you have sufficiently reliable rental index. However, if your overall rental market is small or your sample does not have sufficient coverage then problems may arise. In addition, it is difficult to explain to the general public that the valuation of the change in the 'cost' of their (owner occupied) shelter services is based on the prevailing rents in the market. In Ireland, the change in rents has not matched either the significant falls in house prices or changes in mortgage interest rates.

The User Cost Approach

This method tries to measure the change in cost to owner occupiers of using their residence or dwelling. In calculating weights there are two components: regular or recurring costs such as repairs and maintenance and property taxes; and the opportunity cost of having money tied up in the dwelling as opposed to it being used for some other purpose or investment, in other words the rate of return that would be achieved or available on other alternative assets. While estimating and calculating recurring 'maintenance' costs is relatively easy, the estimation of the opportunity costs of alternative investment returns is a more complex requirement and would require the use of complex modelling mechanisms to identify the various alternative returns. Therefore, this approach poses conceptual and methodological issues for NSIs and could result in difficulties when trying to explain the concept to users and to the wider general public. As a consequence of its complexity, it may be difficult to get widespread support for this approach. To most consumers, the cost of accommodation is something which is real and tangible, as opposed to some conceptual formulation.

The Acquisitions Approach

The Acquisitions approach treats housing as a consumer good on the one hand (consumption of housing) and investment on the other (land component). It assumes the treatment of housing should be the same as all other items in the consumer basket and that the full transaction price is to be reflected as the unit of measurement. However, it is seldom that a property will be purchased outright for cash and therefore this approach ignores the on-going cost of servicing the initial outlay, i.e. mortgage interest repayments. Saying that, it is the preferred approach, which is under consideration at EU level.

The Payments Approach

This method measures the cash outflows which are associated with owner occupied housing. In essence the main component of this approach is mortgage interest repayments. This is the approach currently adopted in Ireland and in the UK (Retail Price Index).

3 The current Irish Practice

In the national CPI, housing includes a number of key components, the main items are: mortgage interest payments, public and private sector rents and basic repair and maintenance costs and charges. Mortgage Interest payments represent 6.661% of the total basket of goods and services and represents one of the largest single items within the basket. Capital repayments, because of their nature, are deemed to be an investment and as a result are excluded from the index. The two factors which determine the change in the mortgage interest repayments are the change in the weighted average variable mortgage interest rate (weighted by reference to market share of each financial institution) and the change in the level of house prices over time. As older mortgages are repaid and as newer mortgages (at current prices) are taken out, the hypothetical national 'average' mortgage size tends to increase over time (reflecting increasing house prices). Because of its weight, any changes in interest rates can have a significant impact on the overall rate of inflation. In the two year period from January 2009 to January 2011, the index for mortgage interest repayments fell by 27%, house prices fell by 26% and the average mortgage interest rate by 11% (from 4.15% to 3.66%) . The consequence of the fall in interest rates resulted in an annual inflation rate of +4.3% in January 2009 falling to +1.7% in January 2011. This method has been in operation since the mid-70s and is relatively easy to explain and comprehend. However, that's not to say there hasn't been some criticism of this method, particularly by 'some' economic experts. They tend to criticise the inclusion of credit type adjustments in an index, where in earlier times, prior to monetary union, a change in the rate of interest was used to control inflationary pressures. This change would subsequently be reflected in higher mortgage interest rates, leading to a probable increase in inflation, the opposite of what should be the intended outcome.

4 Developments at EU Level

At national level, the Consumer Price Index is the official measure of inflation. As such, its objective is to measure price change, by reflecting the specific consumption pattern of the population as a whole. Because of differences in national consumer tastes and preferences (such as coverage within the basket of goods and services) and to a lesser extent differences in retailing, each national index is unique to each country. In addition, countries may employ different pricing methodologies and practices. As a result of these direct and implied differences, it is difficult to compare national CPIs against each other in any meaningful manner. They represent the respective national circumstances. Much effort has been undertaken at EU level to develop the Harmonised Index of Consumer Prices (HICP). The HICP is constructed to measure the changes over time in the prices of consumer goods and services acquired by households. It provides a comparable measure of inflation in the euro-zone and across the wider EU. It is calculated according to a harmonised approach and is subject to a full range of regulations, rules and guidelines. Because of its harmonised approach, it provides an official and comparable measure of consumer price inflation in the euro-zone for the purposes of monetary policy in the euro area and for assessing inflation convergence as required under the Maastricht criteria (limit of 2%).

Since 1997, Member States have produced the HICP on a monthly basis and there have been on-going efforts to further refine methods to strengthen harmonisation, which have included amongst other things: an extension to coverage (health, education & social protection), re-inforcing standards and guidelines (the EU has instigated a system of compliance monitoring), standardising methods (such as seasonal products) and the introduction of temporal coverage (standardising the pricing collection reference period). One of the biggest projects in recent years and one which has the highest level of priority is the issue of owner occupied housing. This remains one of the few key areas where the HICP has an outstanding issue for resolution. Over the past number of years a series of pilot projects on owner occupied housing have been instigated, with a view to deriving a harmonised basis for the compilation of national house price indices and the production of harmonised owner occupied housing price indices. At present, there is a draft EU Regulation under consideration which will oblige Member States to produce on a quarterly basis national house price indices with effect from Qtr 2 2012 and Owner Occupied Housing Indices from Qtr 2 2014. In anticipation of this and in an effort to publise the developments underway, Eurostat (the Statistical Agency of the European Union) issued a research paper in January 2011 entitled 'Experimental House Price Indices for the Euro area and the European Union'. This paper provides the experimental results from the work of the pilot projects to date and explains the strengths and weaknesses of the current data series. It is Eurostat's intention, with the cooperation of the Member States, to produce further research papers, with a view to progressively improving the completeness, quality and comparability of these indices at EU level. From 2012, it is anticipated that a new statistical release on house price indices in the EU will be published on a quarterly basis. By 2014 the other OOH indices will be disseminated. However, no formal decision on the possible inclusion or continued exclusion of owner occupied housing from the HICP will be made until a formal report on the quality and suitability of the indices is prepared two years after the full data is available

(2016). Only then will a formal decision be taken by the Heads of National Statistical Offices of the European Statistical Systems on whether to include OOH in the HICP.

In recent years the requirement for a more detailed analysis of housing markets has intensified as has the demand for high quality comparable statistics on national, euro area and EU housing markets. Market developments across the EU have shown different patterns .In Ireland, there has been a drop of the order of 40% since peak, in Denmark house prices have declined by 17% in the three years between Qtr 1 2007 and 2010, while countries like Germany have shown a more stable pattern, with house prices at the same level as 2005. The renewed importance attached to the development of residential property price indices means that it has also increased gained political significance from the perspective of macro-economic surveillance. The rationale for an indicator on house prices is that the fact that housing figured prominently in the recent financial crisis. Therefore users, including the politicians, require the provision of high quality and harmonised data on house price developments.

Until this coordinated effort was put in place there was very little comparability in respect of national data on house prices within the EU. Existing national indices, where available, came from various sources, often from outside the official statistical system. The concept underlying these particular indicators often differ widely between countries, in particular with reference to the type of price data (transactions prices, appraisals values, judgements by market experts, offer prices), the coverage of regions (in some cases limited to capital cities), dwelling types (covering flats or existing dwellings) and the treatment of quality attributes that differ across properties. Given these differences, the development of comparable, timely and high quality statistics on changes in residential property prices has been considered an essential element in its own right, while at the same time serving as a key part of the need to derive a suitable method for the treatment of owner occupied housing in the HICP/CPI. For the purposes of measuring all other goods and services in the HICP, the principle employed is to reflect actual transaction prices, the prices paid by consumers for goods and services. To follow this basic premise, it was decided that house price indices should, as closely as possible, reflect actual transaction prices. In other words, the price observation should be based on the purchase price of a residential property. In the context of coverage and weights, the suggested principle is based on the net acquisitions approach, the net addition to the household sector. This means that the purposes of owner occupied housing the coverage includes the price of new houses (new to the household sector) and net transfers from other sectors to the household sector (an example of this would be a former army residence or social housing being sold on the open market).

5 Ireland as a case study

Ireland has participated in the EU OOH pilot project for the past number of years. The main developments involved have been to develop a new national house price index, to develop a manual on Owner Occupied Housing and to develop a comprehensive legislative framework. Over the past number of years, Ireland has worked with the main financial institutions to improve the quality and timeliness of data on mortgage transactions and has developed a hedonic model for the calculation of house price indices. This new index which was formally published for the first time in May 2011 provides a full monthly series back to January 2005. Prior to the development of this new national index, the only authoritative source was the Permanent TSB/ESRI index, which represented less than 20% of the total mortgage market. A significant amount of time was spent in cleaning the basic data records, in so far as this was possible, in developing outlier detection tests and in developing the precise hedonic model. As no two houses are the same, the measurement and comparison of house prices requires special treatment. Further effort will be required to strengthen the quality of the data; in particular the lack of post codes and individual address details outside of the capital city is one area which is still deficient.

The main difference between the national CPI and the EU HICP is in respect of coverage, the greatest difference of which is due to the inclusion of mortgage interest payments in the CPI and their exclusion from the HICP. Seven other items whose weight equals to 2.8% are also excluded from the coverage of the HICP. Therefore, as the HICP is a direct subset of the national CPI, there is an obvious and inextricable link between the two. As a consequence, there is a strong preference to retain this relationship. There is also a concern that a multiplicity of different sets of indices, based on different concepts, might lead to confusion.
In the first instance, Eurostat may possibly create an experimental HICP including Owner Occupied Housing as a piece of research or analysis. The formal publication of a HICP including OOH can only occur once given full approval by the National Statisticians. Since Ireland wishes to, in so far as possible, to maintain the direct link between the two indices, then any such decision to include OOH in the HICP will require Ireland to decide whether to modify the national CPI by excluding mortgages repayments and substituting them with owner occupied housing. This would represent a major methodological change and will require careful consideration and planning.

To look at the possible impacts of this change, it is important to consider the structure of and status of the Irish housing market. Home ownership is an important feature of the Irish and Ireland has one of the highest rates of home ownership in the western world. Consequently, until the recent decade the rental market in Ireland has remained relatively small, relative to the European norm. In the beginning of this century, Ireland as a nation, was building a significant number of new houses and apartments, as many people purchased second and third properties for investment purposes, attracted by the low cost of borrowing and record rates of return. House prices, in the period from the beginning of 1996 to the peak in early part of 2007, rose by 300% as demand rose and as the cost of borrowing declined. In addition, a loosening of borrowing requirements by financial institutions and a lax system of financial regulation resulted in a major housing bubble. When the world financial crisis hit this, together with domestic factors, resulted in a property price crash, where prices declined by in the region of 40% since they reached a peak in 2007. This decline has also been accompanied by a significant decline in the volume of transactions or activity in the housing market.

If we take the House Price Index as the proxy for all Owner Occupied Housing, then we can use this to measure the potential impact of this new method. While the changes in the level of house prices are in themselves very important, what is of greater significance is the actual expenditure weight which would be assigned to owner occupied housing. While we are still in the process of trying to estimate the precise weight we can be assured that the weight assigned to owner occupied housing would be significantly greater than the current weight of mortgages. The inclusion of an OOH component into a CPI will require a recalibration of the weights of all other items in the basket, with their relative share declining accordingly. Another important aspect to note is the reference period of the weights. If the base year corresponds to a boom year then the base period weights will be very large and will have a greater influence on the overall index. If on the other hand, in the base year there was a slump in the housing market, the weights may underestimate the real size of the market. The following table shows a hypothetical impact of house price changes at different estimated weights.

Weight of OOH		**Impact on CPI**	**Impact on CPI**	**Impact on CPI**
	Annual % Change	+/-5%	+/- 15%	+/- 25%
10%		+/-0.50	+/-1.50	+/-2.50
15%		+/-0.75	+/-2.25	+/-3.75
20%		+/-1.00	+/-3.00	+/-5.00

In an era of relatively low general inflation, the impact of including house price changes in the index can have a significant impact. Obviously, sharp decline in house prices, as has occurred in Ireland in the past three years, would have had a significant drag on the rate of inflation.

6 Conclusions & Observations

It is a national priority that the national CPI and the EU HICP should remain as close to each other as possible. At present, as outlined earlier, the HICP is a subset of the national CPI. Therefore it is easy to explain the differences between the two indices, both in the context of coverage and in the context of differences in the indices and annual rates of inflation.

While the various different theoretical approaches have different weights and in the short term the potential outcomes may diverge, international experience has shown that they can deliver similar outcomes in the medium to long term.

The current EU proposal, as it stands, would seem to suggest that a decision will be made, one way or the other, on whether to include OOH or not into the HICP. If agreement is reached on its inclusion, then Ireland will have to make a decision on whether to employ the proposed new method in the national CPI. However, there are a number of factors to consider:

(a) The need to have a clear communications policy to introduce any new method into the public domain;

(b) Whether the link between the two indices should be retained and in that respect, since the indices are now largely aligned, whether there should be only one index;

(c) The timing will be important, from the perspective of implementation but also from the perspective of the weighting reference period (during a boom or a bust);

(d) Another factor is the issue of the cost implications of developing new methodology vs. fitness for purpose – the method must be cost effective, efficient and fit for purpose.

Whatever measure is utilised, the corresponding weight of OOH would be high and as a result has the potential to have a significant impact on the CPI, if the price trend of OOH moves in a different manner to the average of all other items. It has particular implications for those countries, such as Ireland, where changes in house prices are significant. Conversely, for more stable markets, the likely impact of the inclusion of OOH will be less as house price changes will have a more limited impact.

Each method has its advantages and disadvantages, and each in turn, has its own complexity in terms of implementation. Different countries employ different methods. Ultimately, Ireland, as a partner in the European Statistical System, is somewhat bound by developments at EU level. It remains to be seen, if current EU proposals reach finality.

In conclusion, it is important to note what is happening in the current housing market and the impact this might have on the inclusion of OOH in the CPI. As interest rates are in process of what appears to be an upward trajectory, the importance of the cost of mortgage interest payments in the context of the overall economic situation of the household is gaining added significance. At the same time, house prices continue to decline. From a consumer perspective, the increased cost of borrowing would seem to more important. The inclusion of OOH (and the exclusion of mortgage interest) might be a difficult proposition to explain in such circumstances. In my own personal opinion, the best approach is for

(a) National CPIs to measure housing in the most appropriate method which satisfies national circumstances;

(b) The EU HICP should continue to exclude Owner Occupied Housing;

(c) A new independent satellite index, HICP including OOH, should be produced but should not be regarded as replacement for the existing HICP.

Appendices & References

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