

Locational Differences in Changes to House Prices 2008 to 2009

Summary: This study is using advertised house prices to investigate the relationship between changes that occurred between 2008 and 2009 as they affect areas ranked and scored differently in the 2007 Index of Multiple Deprivation. It is concluded that deprived areas were affected disproportionately more than affluent areas. This is explained in part with reference to possible differences in the behaviour of the stakeholders in these areas and with reference to Ferrari, Hennebury et al some implications for policy makers are outlined. Some ideas for further research are also suggested.

Key words: Index of Multiple Deprivation, changing house prices, local areas, affluent, deprived, behaviour.

Introduction

The study described in this article had as its purpose an investigation into the relationship between changes in advertised house prices and the rankings of different areas in the Index of Multiple Deprivation (IMD) and the scores achieved by these areas within this index.

In the big debate about changing house prices that has followed in the wake of the general economic crisis the relationship between the changes and the socio-economic status of areas has attracted little or no attention. Apart from the regular release of regional house price information by some organizations¹ there does not appear to be much information available at a geographical level and these releases have no attempts at other than a superficial analysis. In addition I have been unable to find any literature dealing with the issue of changing house prices at a detailed local level. Yet one would have thought that if the changes in house prices are affecting areas differently there could be implications for social and geographical mobility and also for the housing and planning policies applied in different localities and within different communities. This in turn could have consequences for policies aimed at increasing home ownership, housing needs studies and the land use allocations made by planners.

The Data

Advertised house prices are used because it is a free and readily available source of information that is publicly available and there are no restrictions on its use. Most adverts carry an address of the property for sale, which means that analyses can be carried out at a very detailed area level. They also contain some information on the size and age of the property and occasionally the size of the land area on which the house is standing, which means that several different, detailed and varied analyses can be carried out.

As it would be physically impossible to include all properties advertised for sale at a given point in time, the study is based on a sample and every month 4-600 properties are included. Some of the properties advertised for sale in January-February 2008 may have been advertised again in January-February 2009 at a different or the same price.

Obviously the prize the vendor wishes to achieve will be included in most adverts. This price may reflect the unbiased view of the vendor about what he/she can achieve

in the current market, but it is also likely to be influenced by estate agents and other operators. “Considerable weight is often placed on the advice of professionals who are sometimes afforded a disproportionate authority and legitimacy, even though they may have a strong interest in encouraging transactions and maximising prices.”² For example it has been suggested that “the way in which agents, with valuers and solicitors shaped individual bidding strategies....served to reinforce rising prices in the Edinburgh housing market”³.

As all the adverts from which data has been extracted are by estate agents a bias cannot be ruled out, and in the current economic climate, sometimes described as a buyers market, it is likely that the advertised price will be higher than the final price agreed by the parties. The latter is the price published by HM Land Registry⁴.

One clear disadvantage of using this information is that it is not very precise eg the size of a property is usually given in terms of number of rooms especially number of bedrooms while the size in terms of square metres or square feet is not always given. Another downside of using advertised information is that it can only be verified in an original investigation, which would be very costly in both manpower and finances.

The IMD referred to here is that for the year 2007 and it is assumed the reader is familiar with the IMD and its construction⁵. It is related to the changes in house prices between January-February 2008 and January-February 2009, which is the period when house prices fell most dramatically.

The Area

The area under investigation is the North Staffordshire - South Cheshire sub-region for no other reason than that is the area where the writer has lived and worked since the early '70s. It is broadly identical to the Metropolitan Economic Labour Areas of Crewe and Stoke-on-Trent described by Peter Hall⁶. Subsequent studies have tended to confirm these areas as remarkably self-contained economic entities. Most recently a report on housing market areas delineates “the Stoke-on-Trent housing market area stretching into Crewe and Nantwich” straddling the boundaries between the West Midlands and the North West Regions⁷.

Methodology

The study has as its basis a database containing entries of individual properties advertised for sale since January 2008. The database is held in Access and further analysed in Excel. Details for the months, referred to above, have been extracted from this database.

With the address given in each entry it is possible to allocate a postcode by the use of the Royal Mail postcode directory on the Internet. From that and by the use of directories supplied by the Office for National Statistics and the Research Units of some local authorities the property in each entry has been placed in a particular Super Output Area (SOA). The average price in each SOA could then be calculated.

Having calculated the average price for a number of SOAs some 120+ were identified for which a price was calculated both in January-February 2008 and in January-February 2009. The average advertised price in 2008 could then be compared to the price in 2009; both could then be related to the scores achieved by the SOA. In turn SOAs could then be compared with each other.

The sample of SOAs includes both some rather deprived areas such as found within Stoke-on-Trent and some very affluent areas such as found around Nantwich and Congleton in Cheshire.

Size Analysis

Published house price information very rarely gives any description of the population of properties from which an average house price is calculated. Yet it is clear that a population of large properties will have a higher price tag than a population of smaller properties. A similar comment could be applied to a population of new properties versus a population of old properties. This in turn could affect the outcome of comparisons from month to month or between areas unless the populations for each month or each area are of exactly the same mix.

In this section we will relate house price to the size, size to IMD score and house price to IMD score, but before we can do that we need to derive a quantifiable measure of the size of houses given that such is rarely given in any advert unless you obtain details from the estate agent.

An index has therefore been devised based on the height of the property, sections of windows and no of bedrooms. Two typical properties are depicted below.

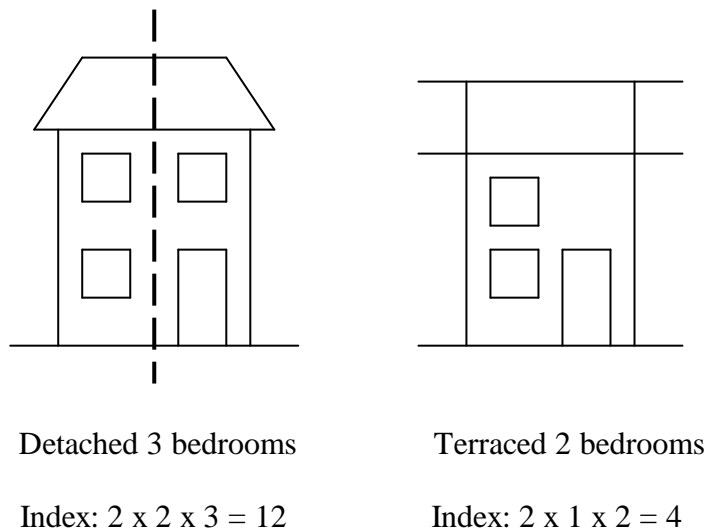


Figure 1

A typical 2 storey, 3 bedroom house will have an index of 12 while the typical 2 storey Victorian terraced house with 2 bedrooms will have an index of 4. Among other things this size index allow us to calculate an average size for an area such as an SOA.

Three questions require answers: 1) How have house prices fared for different sizes of

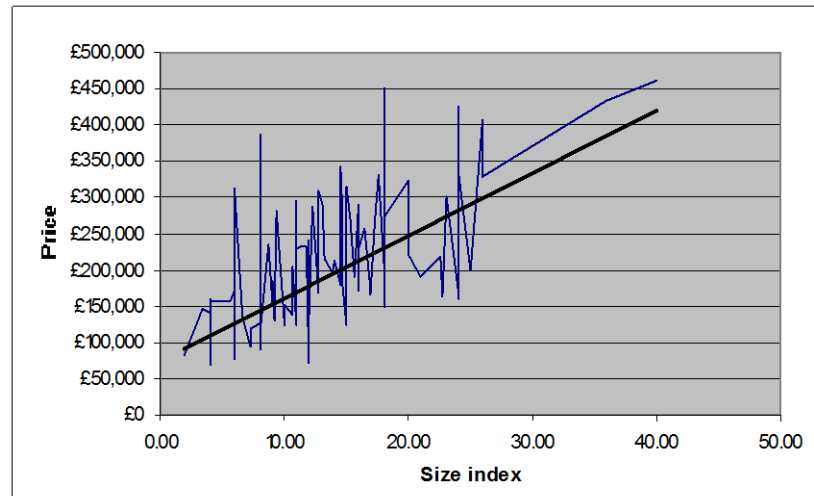
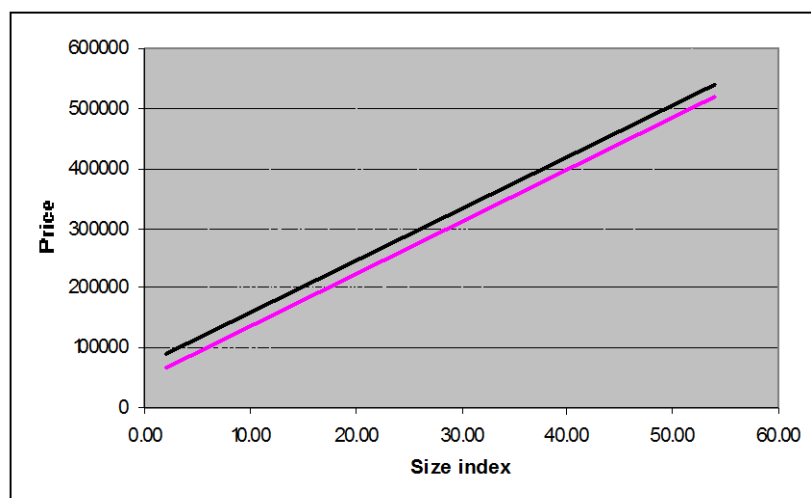


Figure 2: House Price by size, 2008

property? 2) How is an SOA dominated by larger properties scored in the IMD compared to an SOA dominated by smaller properties? 3) How has an SOA classified as affluent (high ranking, low IMD score) been affected by changing house prices compared to an SOA classified as deprived (low ranking, high IMD score)?

The answer to the first question is set out in figure 2 for the first months of 2008. Not surprisingly it shows that the bigger properties had a higher price tag than the smaller properties. A similar graph can be drawn for the year 2009 with a similar trend line and it shows much the same picture. However super-imposing the two trend lines onto the same diagram it is seen that the trend line has shifted downwards highlighting the fact of the fall in prices between 2008 and 2009. The result of this exercise is shown in figure 3 below.



— Trend line for 2008
 — Trend line for 2009

Figure 3: House price by size 2008 and 2009

Deriving the size index enable us to calculate the average size of properties within individual Super Output Areas. This can then be compared with the IMD Score for

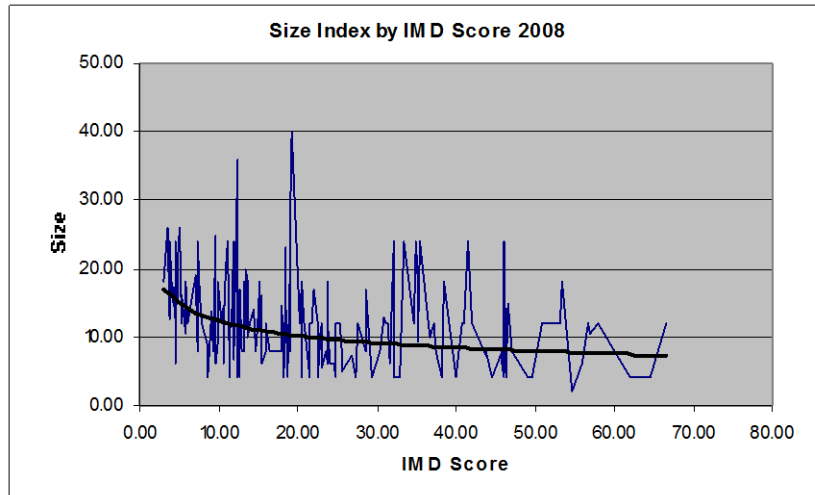


Figure 4: Size by IMD Score, 2008

that area as shown in figure 4 and 5. The answer to the second question above is that not surprisingly we find that in 2008 (fig 4) the larger properties were found in the affluent areas with a low score while conversely the smaller properties were found in deprived areas with a high score. This pattern was repeated in 2009 (figure 5).

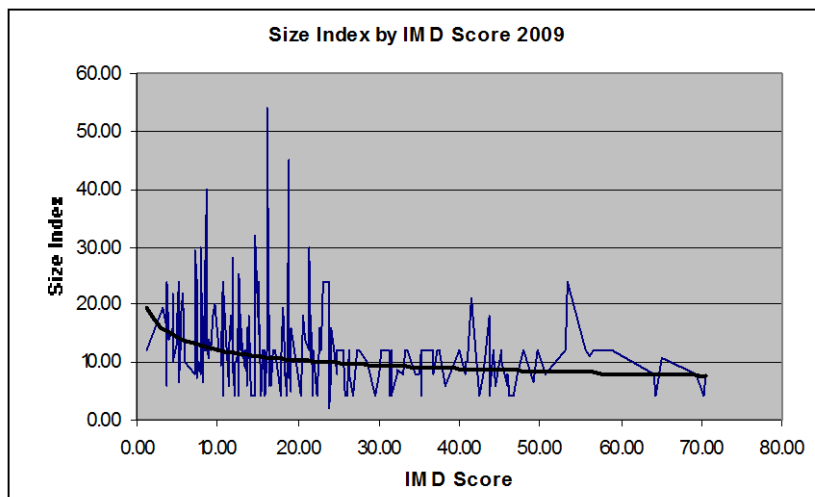


Figure 5: Size by IMD Score, 2009

House Price Analysis

Turning now to house prices for each Super Output Area, an average of advertised prices within each area can also be calculated and in a similar vein to above the result

can be compared with the IMD Score for each area. The result is shown in figure 6 and 7.

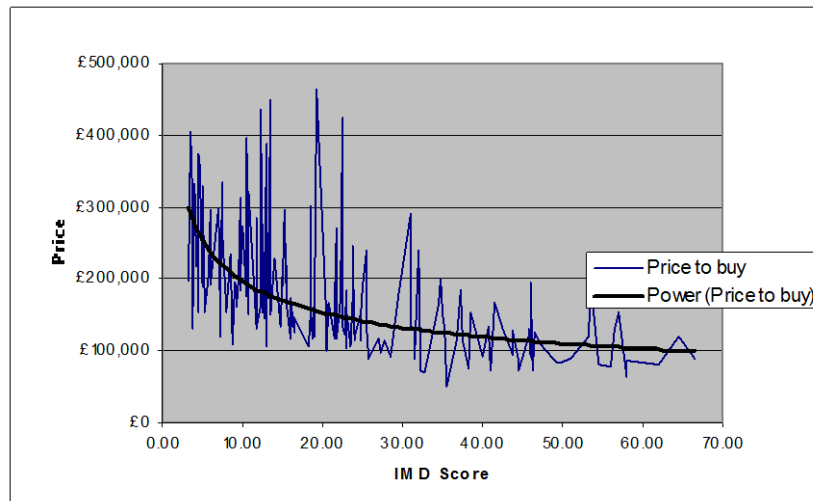


Figure 6: House price by IMD Score, 2008

Figure 6 shows how house prices varied with the IMD score in 2008 and it is noted that prices are highest in areas with a low score ie affluent areas and lower in more deprived areas with a high IMD score. As before a similar graph can be drawn for the year 2009 and in turn this can be superimposed on the 2008 diagram. The result is shown in figure 7 below and it is seen that again the trend graph has shifted downwards thus reflecting the fall in prices.

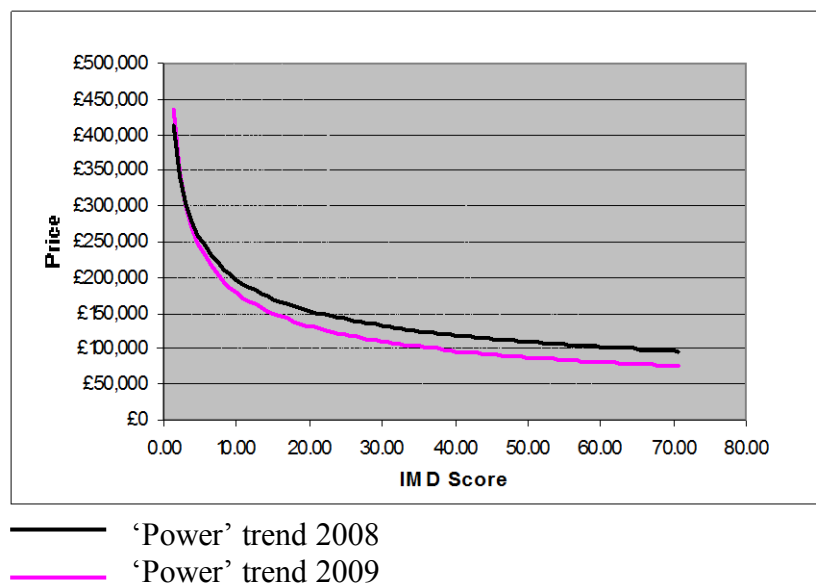
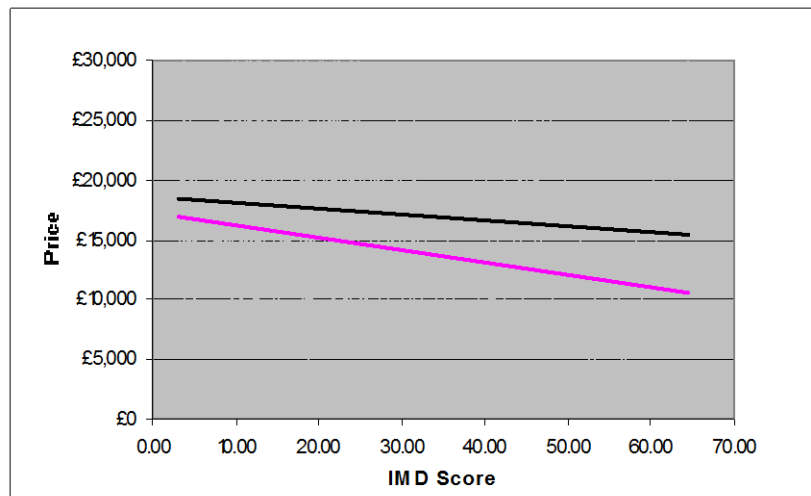


Figure 7: House prices by IMD Score, 2008 and 2009

From figure 7 it is noted that at the left end of the diagram where IMD scores are low as for affluent areas, the two curves coincide. Further to the right as the IMD score increases the two curves appear to separate progressively. This gives rise to the notion

that the fall in house prices between the two periods has affected deprived areas disproportionately compared to affluent areas.



— 'Power' trend 2008
 — 'Power' trend 2009
Figure 8: Price per index unit by IMD Score

This analysis is based on the price of a complete house, but using the size index we could also analyse the price per index unit even though this is a rather abstract concept.

In figure 8 the progressive separation between the 2008 price per index unit and 2009 is still more clear thus supporting the said notion that the fall in house prices has affected deprived areas disproportionately compared to affluent areas.

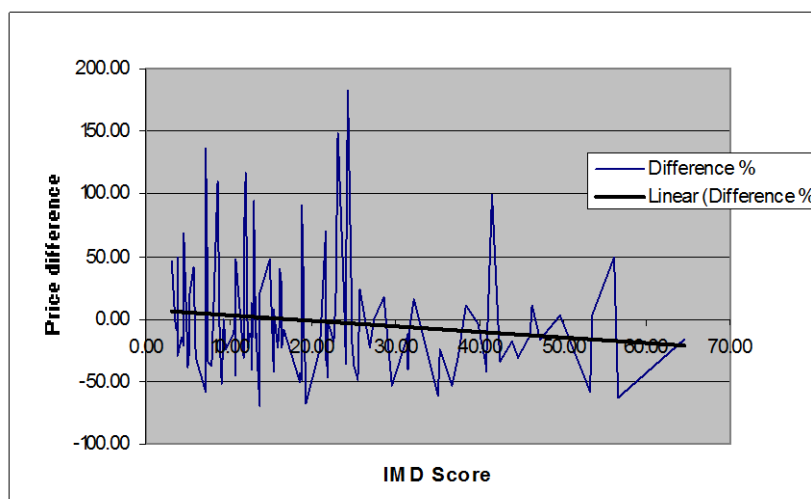


Figure 9: Price difference in percentage of 2008 prices by IMD score.

In figure 9 and 10 the price difference is calculated by subtracting the 2008 price from the 2009 prices. Thus an increase will be shown as a positive difference while a decrease or a fall in price will be shown as negative difference.

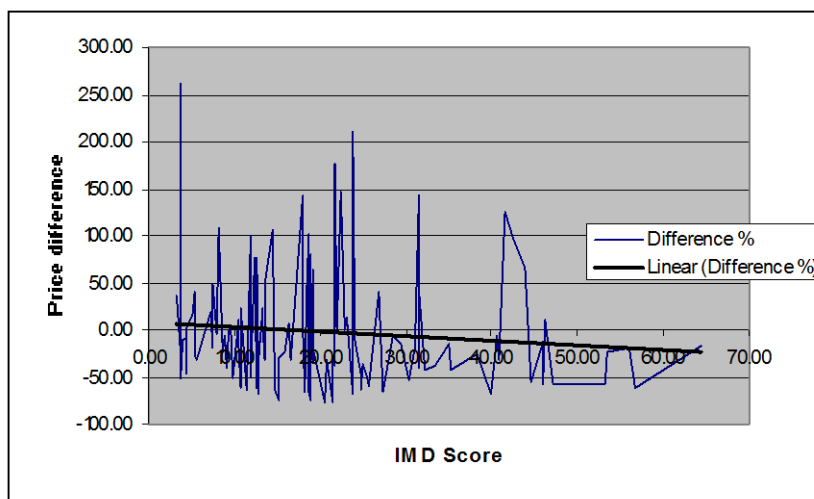


Figure 10: Difference in price per unit of size index by IMD Score.

It is seen that whether we look at changes in the price of whole properties or at the price per unit of the size index the correlation with the IMD score is negative. In other words affluent areas with a low IMD score experienced little difference or even an increase in house price between January-February 2008 and January-February 2009 while areas with a high degree of deprivation and high IMD score experienced a noticeable fall in prices.

Conclusions and need for further research

The outcome of the above study has been that deprived areas have fared disproportionately badly compared to affluent areas in terms of changing house prices between 2008 and 2009. However, the question related to this would be whether this also means that people in the deprived areas have suffered additional hardship as a result of these changes.

All houses are not for sale all the time and that limits the scope of available information about what price can be achieved at a particular point in time. The fact that the houses included in this study are advertised for sale presumably means that the owner was under some kind of pressure to sell at the time referred to. “It is argued that the assumptions about available knowledge and the capacity to process information are flawed and, consequently, households will only evaluate their housing consumption in the presence of ‘stressors’ or ‘triggers’ such as changes in employment.”⁸

If therefore a house owner in an affluent area in the process of selling the house see no change or even an increase in its price he/she will be no worse off or may even

benefit from the sale. Conversely an owner in a deprived area who sees a decrease in the price of his/her house while trying to sell will suffer a real decline in his/her disposable wealth that includes the house. "Deteriorating affordability bites hardest on those who are at the margins of homeownership."⁹ And it could be added that maybe house owners in deprived areas are under greater pressure to sell than house owners in affluent areas. "Misplaced evaluations of falling prices have also been a source of interest and several studies have explored the way in which nominal loss aversion (and perceptions of downside risk generally) contribute to market inertia as households avoid adjusting consumption because of the risk of negative equity."¹⁰ At the same time James Crosby in November 2008 observed: "Lenders are continuing to tighten lending criteria and lend primarily to low-risk borrowers."¹¹ Owners of large properties might therefore have been able successfully to insist on a high price.

Stakeholders in the housing market will not have access to all the information necessary for a rational choice and their capacity to process the information is limited. They only act when they have to, when they are under some form of stress. "... mainstream economic approaches tend to encourage a focus on housing numbers and targets and would suggest that central government should incentivise local provision of additional land for housing."¹² However there is a need for a more nuanced understanding of consumer preferences, for housing plans to move away from targets captured in background analyses, and place greater emphasis on not just the scale of development but also the type and location of new dwellings.¹³

As this study has focussed on property advertised for sale any behaviour revealed is that of the seller, but there is a need to link this behaviour to that of the buyer and the mechanisms which leads to a final settlement especially at different points in economic cycles.

Very large properties eg detached houses of 5 bedrooms or above are very largely the domain of rural areas outside what estate agents call 'estate locations'. However, within urban areas there is need for a more "detailed examination of the spatial distribution of marginal owners to assess the extent to which they are spatially concentrated and therefore the neighbourhood level risks of failure to maintain ownership."¹⁴

Discussion

Positive: It was an interesting subject, well handled especially the cunning use of estate agents data and the house size index.

Negative: The statistical analysis is not up to the standards expected of papers published in the JRSS. The data used are problematic and the analysis is very basic. There are two main problems with the data. Firstly it is advertised price and not transaction price, so it is biased and this bias could be different by SOA and changing over time. Secondly prices are only revealed when houses are for sale. Since richer neighbourhood will have access to additional wealth sources, they may be able to better weather the bad economic conditions, and not put their houses for sales. As such, your sample suffers from selection.

The point I make is that advertised prices do not reveal changes in the market price. For example, individuals may take a long time before revising their asking price, so asking prices cannot be used to infer changes in the market. Moreover, some local

markets may disappear altogether, in poor areas because buyers disappear and in richer areas because sellers may not put their houses on the market, this truncations in the observed data create biases that are not accounted in your analysis.

Response: Obviously I realise that it is very basic and not a strict academic analysis of original research. To that extent your comments were expected, but I maintain that my analysis still have validity. There is a lot more I would have liked to do with the data if only I had the knowledge, experience and resources eg mapped the data to show the geographical distribution of positive and negative changes.

However, I cannot accept your other pointers to shortcomings of the analysis. In my opinion they cannot be used as reasons for rejection of the article, because they are all dealt with in the text.

You point out that I use advertised price not transaction price. Yes "because it is a free and readily available source of information that is publicly available and there are no restrictions on its use". The obvious source for transaction price would be HM Land Registry, but I do not know how you could persuade them to extract - or let you extract - hundreds if not thousands of items of data. Not to mention what restrictions they may put on their use. So yes there is a bias which I also acknowledge a) "a bias cannot be ruled out, and it is likely that the advertised price will be higher than the final price "

You point out that "prices are only revealed when houses are for sale". Yes, obviously! This is about changes in the market place and if the house is not for sale we are talking about 'value' which is something entirely different and incidentally not free of bias either.

You state: "Since richer neighbourhoods will have access to additional wealth resources, they may be able to better weather the bad economic conditions, and not put their houses for sale." I think I have dealt adequately with this aspect in the conclusion, especially the 3rd paragraph.

The analysis deserves at least some recognition especially since nobody else seems to have looked into this aspect of what is happening in society at the moment - possibly because of difficulties in obtaining original data of the kind you are looking for (?). So where to go next? Any ideas?

References

¹ See for example the house price index released by 'Right Move', <http://www.rightmove.co.uk/news/house-price-index/>

² Ferrari, E, Henneberry, J et al (2011), *Behavioural change approach to the housing sector – Scoping study*, p 21, Department for Communities and Local Government, London.

³Ibid, p 25

⁴ See <http://www.landreg.gov.uk/house-prices>

⁵ Noble, Michael et al (March 2008), *The English Indices of Deprivation 2007*, Communities and Local Government, London.
<http://www.communities.gov.uk/publications/communities/indexofdeprivation07>

⁶ Hall, Peter (1973), *The containment of urban England*, George Allen & Unwin, London.

⁷ Coombes, M (CURDS) and Bond, S (ONS), *Travel-to-Work-Areas the 2007 review*, ONS. <http://www.statistics.gov.uk/geography/ttwa.asp>

⁸ Ferrari, E, Henneberry, J et al (2011), *Behavioural change approach to the housing sector – Scoping study*, p 20, Department for Communities and Local Government, London.

⁹ National Housing and Planning Advice Unit (NHAPU), *Housing Affordability: a fuller picture*, 3, NHAPU, Fareham, January 2010.

¹⁰ Ferrari, E, Henneberry, J et al (2011), *Behavioural change approach to the housing sector – Scoping study*, p 21, Department for Communities and Local Government, London.

¹¹ Crosby, James (November 2008), *Mortgage finance: final report and recommendations*, p 28, HM Treasury, London.

¹² Ibid, p 44

¹³ Ibid, p 44-45

¹⁴ Communities and Local Government (2007), *Social Mobility and Homeownership: A Risk Assessment*, New Horizons Research Summary, Department of Communities and Local Government, London.