

Current Issues Note 23

Food price increases and their impact on London's lowest income groups

By **Simon Kyte** and **Alkesh Hirani**



**Transport
for London**

LONDON
DEVELOPMENT
AGENCY

MAYOR OF LONDON

copyright

**Greater London Authority
December 2008**

Published by

Greater London Authority
City Hall
The Queen's Walk
London SE1 2AA

www.london.gov.uk

enquiries **020 7983 4000**

minicom **020 7983 4458**

ISBN: **978-1-84781-209-4**

Cover photograph

© shutterstock.com

For more information about this publication, please contact:

GLA Economics

telephone 020 7983 4922

email glaeconomics@london.gov.uk

GLA Economics provides expert advice and analysis on London's economy and the economic issues facing the capital. Data and analysis from GLA Economics form a basis for the policy and investment decisions facing the Mayor of London and the GLA group. The unit is funded by the Greater London Authority, Transport for London and the London Development Agency.

GLA Economics uses a wide range of information and data sourced from third party suppliers within its analysis and reports. GLA Economics cannot be held responsible for the accuracy or timeliness of this information and data.

GLA Economics, the GLA, LDA and TfL will not be liable for any losses suffered or liabilities incurred by a party as a result of that party relying in any way on the information contained in this report.

Contents

Background..... 2
 The Consumer Prices Index 4
Methodology and approach for analysis..... 5
 ‘Eating in’ and ‘eating out’ 6
Findings 6
 The changing price of the basket compared to actual expenditure 6
 The CPI inflation rate for the lowest quintile..... 8
 A likely decrease in inflation for the poor..... 9
 Adjusting for differences in net rents in London 10
 A more detailed analysis of food expenditure patterns amongst low income households..... 12
Conclusions 15

Current Issues Note 23:

Food price increases and their impact on London's lowest income groups

Background

As at October 2008, commodity prices have fallen markedly. However, in late 2007 and through much of 2008, commodity prices were rising steeply. Amongst these were food commodity prices. Global stocks of rice fell to their lowest levels since the Bangladesh famine of the mid 1970s¹ and several countries in the developing world such as Egypt and Haiti saw street protests and rioting. A succession of droughts in Australia saw stocks of wheat drop to their lowest level for four decades. Some developing countries such as India and Egypt responded by imposing export restrictions in order to maintain supplies for domestic markets and keep local prices under control². In an attempt to protect consumers from rising food inflation, many developed countries either slashed or temporarily abolished import tariffs on various food commodities. But what impact has all this had on the food expenditure of low income households in London? This Current Issues Note seeks to elucidate these issues within the limitations of available data which are often sample-survey based and based on self-reporting³.

Food expenditure has strong interactions with other types of expenditure. It is therefore necessary to examine the changing prices of these 'other' expenditures since price rises in some essential items may impact on food expenditure. At the same time as there have been marked increases in food prices, there have also been particularly steep increases in energy costs – which have disproportionately affected lower income groups. It has also been necessary to examine trends in expenditure of some other consumption goods such as alcohol and tobacco to see whether consumption has followed similar patterns or not. This does not necessarily imply that reduced expenditure on, say, tobacco, will have translated into increased expenditure on food. Finally, the difference in property rental costs between London and the remainder of the country needs to be taken into consideration.

As income rises, food expenditure tends to decline as a share of total expenditure. However, the actual amount spent continues to rise. Therefore, in economic terms, its characteristics – at least in aggregate – are 'normal'⁴. Given that, for the UK as a whole, incomes have risen in recent decades, in general, people are now spending a far lower proportion of total expenditure on food than they did in recent decades. An indication of this can be gleaned from an analysis of group indices within the Retail Prices Index (RPI). In the period between 1947 and 1951, 35 per cent of household expenditure was on food. In the early 1950s this proportion rose to 40 per cent but by 1970 it had fallen to 26 per cent, by 1980 to 21 per cent, by 1990 to 16 per cent and by 2004 to just 11 per cent. In the context of increasing disposable incomes and household expenditure,

¹ Although recent price increases in food commodities have been quite marked, most food commodity prices remain relatively low when compared to prices in the 1970s. After the 1973 spike in food commodity prices, prices fell quickly but remained above the levels experienced in the 1960s until the global downturn of the early 1980s.

² Rising local prices for rice in many Asian economies threatened programmes of poverty alleviation as poor people in such countries spend a large share of their income on basic food commodities and the poor often get more than 40 per cent of their calorific consumption from rice. See Sushil Pandey, 'The true price of rice' in *Rice Today* (Jan-Mar 2008).

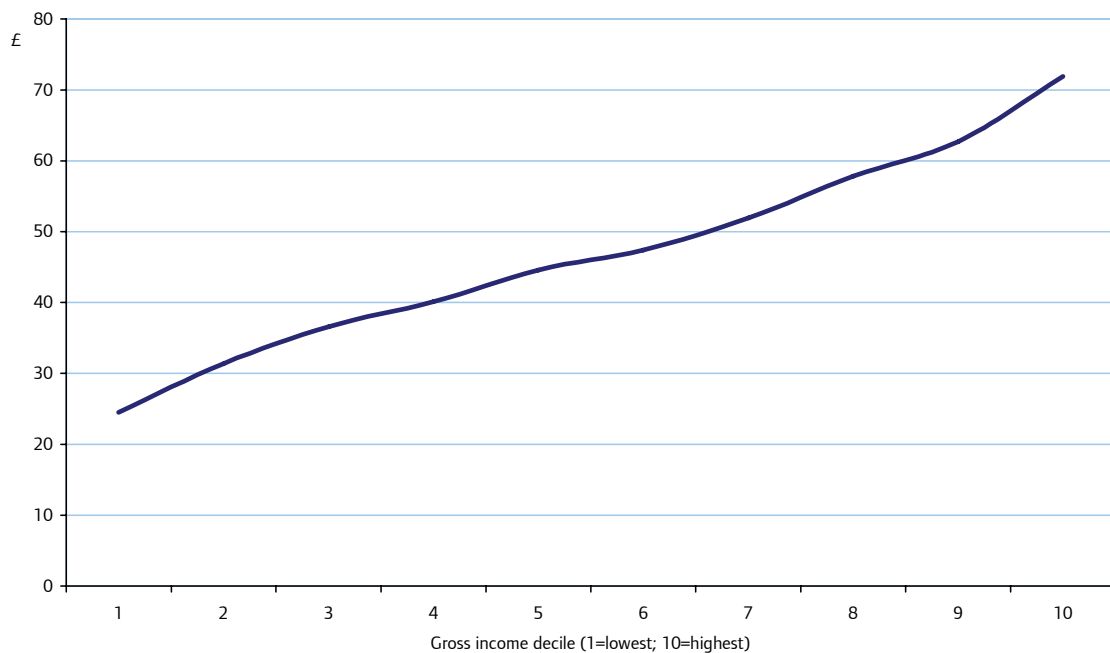
³ There is an additional data concern with regard to food expenditure. Unintentional bias may be introduced because the inflation figures for each food category are for all shops and markets sampled by the CPI, including those in which the lowest quintile is unlikely to shop.

⁴ The demand for a normal good increases as income rises. The demand for an inferior good decreases as income rises. Some cheap options within food may have inferior characteristics so that as incomes rise demand shifts away from them to other alternatives.

this does not mean that less was spent on food, just that more was spent on other groups of expenditure such as transport⁵. RPI data suggest that, whereas prices as a whole increased by 48 per cent between 1990 and 2004, food prices only rose by 27 per cent whilst average earnings increased by 83 per cent.

However, on account of the fact that low income groups spend a higher proportion of their income on food (as well as other commodity-based essentials such as fuel), one might speculate that the poor in London had suffered disproportionately from recent increases in food prices. Whilst Figure 1 shows that actual expenditure on food amongst the lowest two gross income deciles is lower than for higher income deciles, Figure 2 demonstrates that the lowest two income deciles still spend around 16 per cent of expenditure on food items, compared to less than 8 per cent in the top income decile.

Figure 1: Actual weekly household expenditure on food by gross income decile, 2006



Source: ONS – ‘Family Spending’⁶, GLA Economics

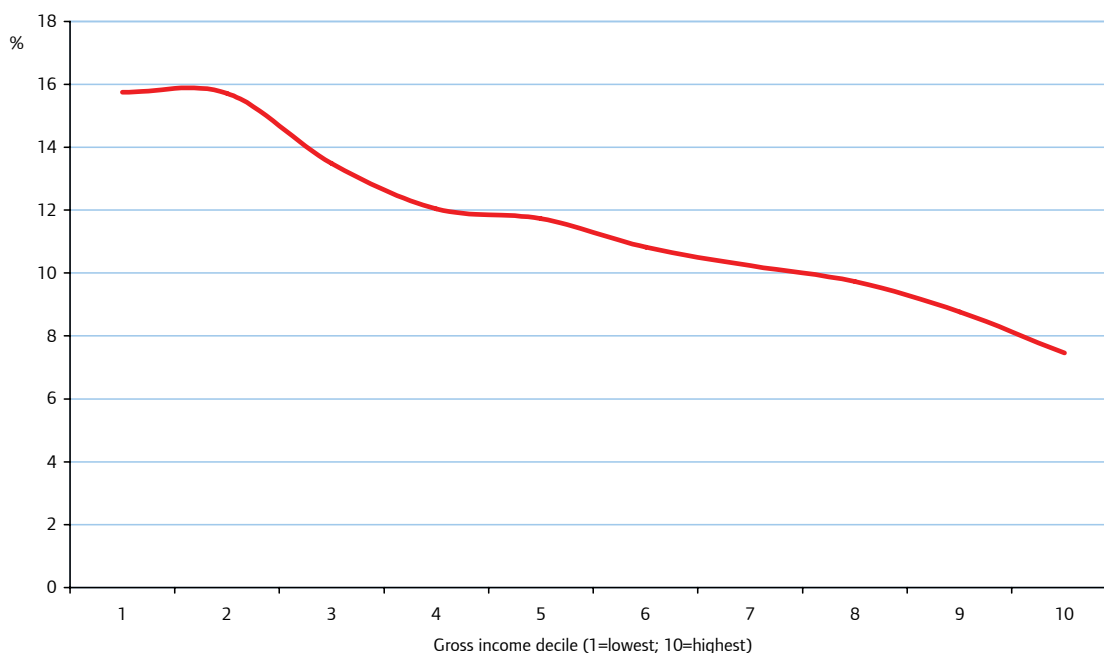
⁵ See O’Donoghue, McDonnell and Placek – ‘Consumer price inflation, 1947 – 2004’, Economic Trends 626, Jan 2006, ONS.

⁶ ‘Family Spending’ is an annual report published by ONS reporting on the Expenditure and Food Survey (EFS). Data for this graphic are from Family Spending (2007).

Current Issues Note 23:

Food price increases and their impact on London's lowest income groups

Figure 2: Household expenditure on food as a percentage of all weekly household expenditure by gross income decile, 2006



Source: ONS – 'Family Spending'⁷, GLA Economics

The Consumer Prices Index

The Consumer Prices Index (CPI) is one of a number of measures of inflation in the UK; one which emerged out of the need to have a consistent and harmonised price index throughout the EU. In the UK the RPI has a much longer history⁸. One particular characteristic of the CPI is that it includes 'net rents'⁹ but does not include mortgage interest payments.

The overall CPI is created from a series of separate price indicators covering different goods and services and these are then weighted into a 'basket of goods' which is revised from time to time. Every so often the indices are 'rebased' as they were in 2006¹⁰.

⁷ 'Family Spending' is an annual report published by ONS reporting on the Expenditure and Food Survey (EFS). Data for this graphic are from Family Spending (2007).

⁸ Since December 2003, the UK has officially used CPI inflation rather than RPIX (the RPI excluding mortgage interest payments) inflation as its target measure for inflation. However, the RPI is still used to calculate the uprating of state pensions. The CPI excludes Council Tax and mortgage interest payments whilst including some costs such as charges for financial services that are not included in the RPI.

⁹ Rents are recorded net of any subsidies such as Housing Benefit payments. This has the effect of lowering the amount spent on rent within the lowest quintile but there is a degree of distortion created between deciles as mortgage interest payments are not included within the CPI.

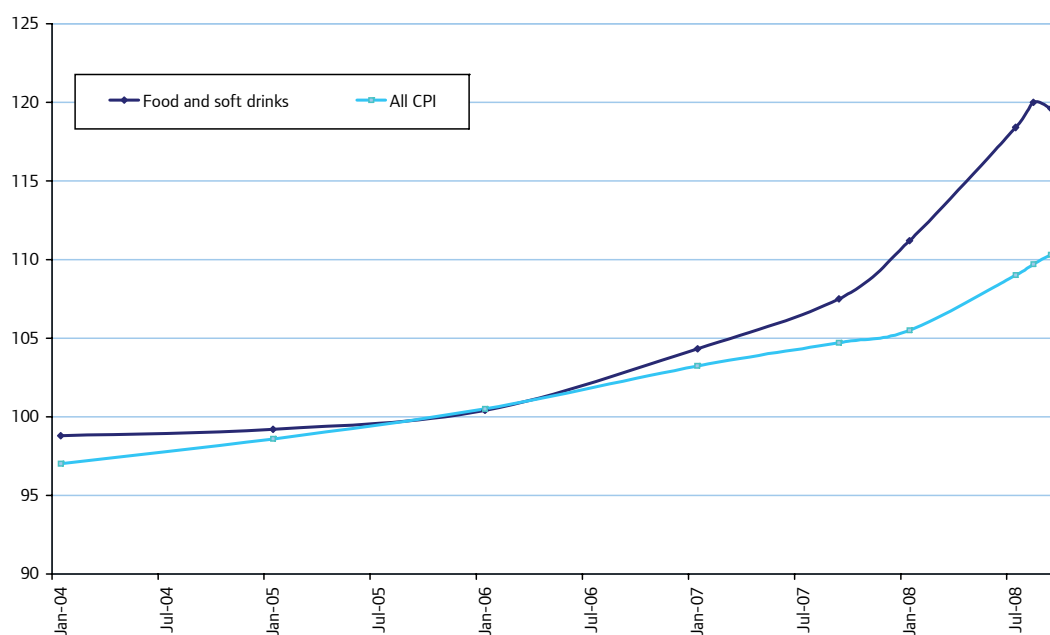
¹⁰ All published CPI levels were rebased to 2005=100 with effect from 14th February 2006. All series based on 1996=100 were discontinued. The rebasing was in accordance with an EU Commission Regulation aimed at improving the transparency of the Harmonised Indices of Consumer Prices published across the EU following extensions to coverage and new member states.

Methodology and approach for analysis

The aim of this brief study is to see how food price increases may affect the food purchasing behaviour of those on low incomes in London¹¹. Arbitrarily this was defined as the lowest quintile of gross incomes¹². In order to undertake an effective analysis, it is essential to understand movements in prices in other goods and services. It is also important to consider some potentially counteractive trends such as rising incomes and their degree of penetration to the lowest 20 per cent of gross incomes. A methodology was devised to establish CPI individual series for both food and non-food component series. This was used to baseline a fixed basket of goods as defined by ONS for the 2003-04 year. All price series were indexed to July 2005 =100 and rebased further back to provide a longer run time series. Some assumptions had to be made as there were changes to the classifications of some series. The basket of goods was kept fixed throughout the period so that changes in prices could be separated from changes in consumer behaviour. Actual expenditure by the lowest quintile was then examined independently.

The first finding was that food prices have risen more rapidly than the CPI as a whole since 2005. This was an unsurprising finding since some component series have been on a long term downward trend in prices. These include ‘technological’ products such as data processing equipment as well as the aggregate series for clothing and footwear where cheaper imports have generally been responsible for pushing down prices.

Figure 3: Food price index compared to CPI index as a whole (July 2005 = 100)



Source: ONS - CPI, GLA Economics

¹¹ On account of data limitations, some parts of the study had to concentrate on the detailed expenditure patterns amongst the lowest income quintile at the UK level only.

¹² The lowest quintile is the lowest fifth of incomes – or lowest 20 per cent. In the majority of cases, where the term ‘lowest income quintile’ is used, the gross income quintile is implied – that is to say, the quintile based on incomes prior to the effects of redistributive taxes and benefits.

Current Issues Note 23:

Food price increases and their impact on London's lowest income groups

What is also evident from the September 2008 data is that food prices in aggregate seem to have peaked. This is consistent with falling commodity prices and anecdotal data from major retailers. In August 2008 only oils and fats fell on the previous month whereas in September the majority of indices within food fell. However, there were still strong rises in the prices of fish and milk, cheese and eggs.

'Eating in' and 'eating out'

CPI data for both food and alcoholic drinks are separated between expenditure on food and alcoholic drinks in restaurants, bars, pubs and clubs and expenditure on food and alcoholic drinks in the home. This study needed to deal with food as a whole regardless of where it was purchased or where it was consumed. Therefore it was necessary to make an adjustment. In our analysis there is a category entitled 'broad food' which includes all food whether it is eaten in, eaten out or brought in from a take-away, and a category representing 'restaurants and hotels excluding food and drink' which was renamed 'accommodation etc.'. Similarly, there is also a modified category of expenditure entitled 'broad alcohol and tobacco'¹³.

Findings

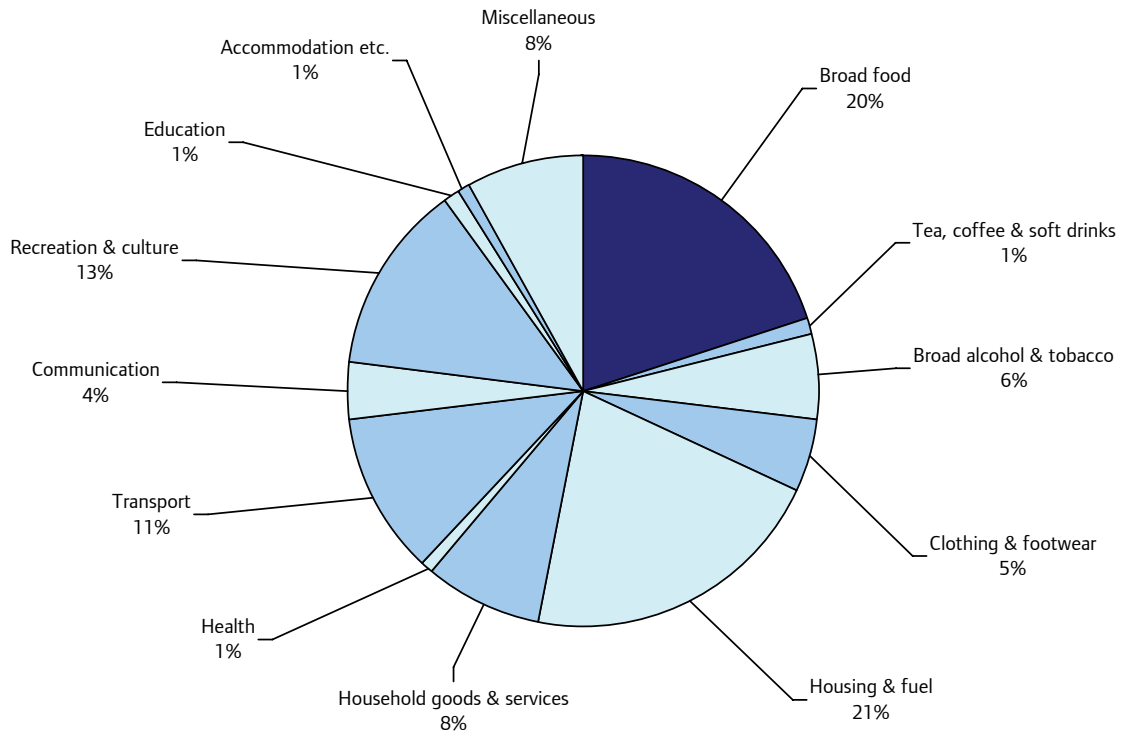
The changing price of the basket compared to actual expenditure

The results of the analysis showed that about 19 per cent of expenditure amongst the lowest income quintile went on 'broad food' in 2003-04. It should be noted here that this is prior to any adjustment for London's extra rental costs which are examined briefly later in this paper. The analysis of subsequent years and the three most recent months of CPI data showed that this share increased slightly over the period to September 2008 to over 21 per cent. This is in-line with intuitive evidence that food costs have been rising at rates faster than CPI as a whole. A slightly increased share of expenditure was also going on 'housing and fuel' which seems likely to continue to increase for several months before decreasing. The analysis of actual expenditure was limited by the currency of available data for the lowest quintile, the latest available year at the time of writing being 2006. However, the analysis showed that household expenditure as a whole had increased¹⁴ and that the share of expenditure allocated to 'broad food', at 22 per cent, was marginally higher than would have been expected from the price increases in the fixed 2003-04 basket of goods. The 2006 cost shares of the fixed basket are presented in Figure 4 whilst the shares of actual expenditure for the same year are presented in Figure 5. A comparison of total actual expenditure against the basket's costs adjusted for inflation suggests that, even within the lowest quintile, expenditure as a whole had been rising as a result of increased disposable incomes. However, it should also be noted that the data currency issue means that analysis of the period in which the 'food price spike' has occurred has not been possible.

¹³ As a result of this adjustment, the data presented here are not strictly comparable with most other studies. The data in the pie charts will have a larger share of expenditure / costs associated with food and a lower share of expenditure / costs on Restaurants, hotels and accommodation, which has been renamed 'Accommodation etc.'.

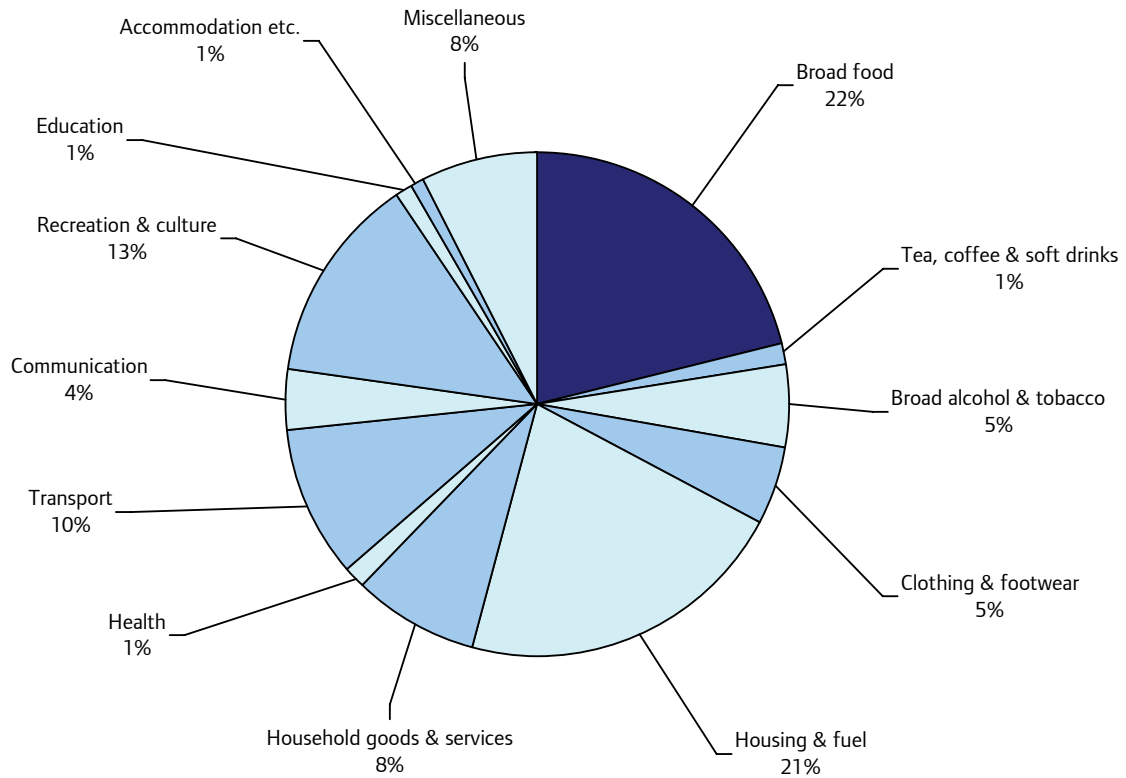
¹⁴ This seems to have been particularly the case amongst the lowest decile.

Figure 4: Shares of cost of fixed basket (lowest income quintile), 2006¹⁵



Source: ONS – CPI and EFS, GLA Economics

Figure 5: Shares of actual expenditure (lowest income quintile), 2006



Source: ONS – EFS, GLA Economics

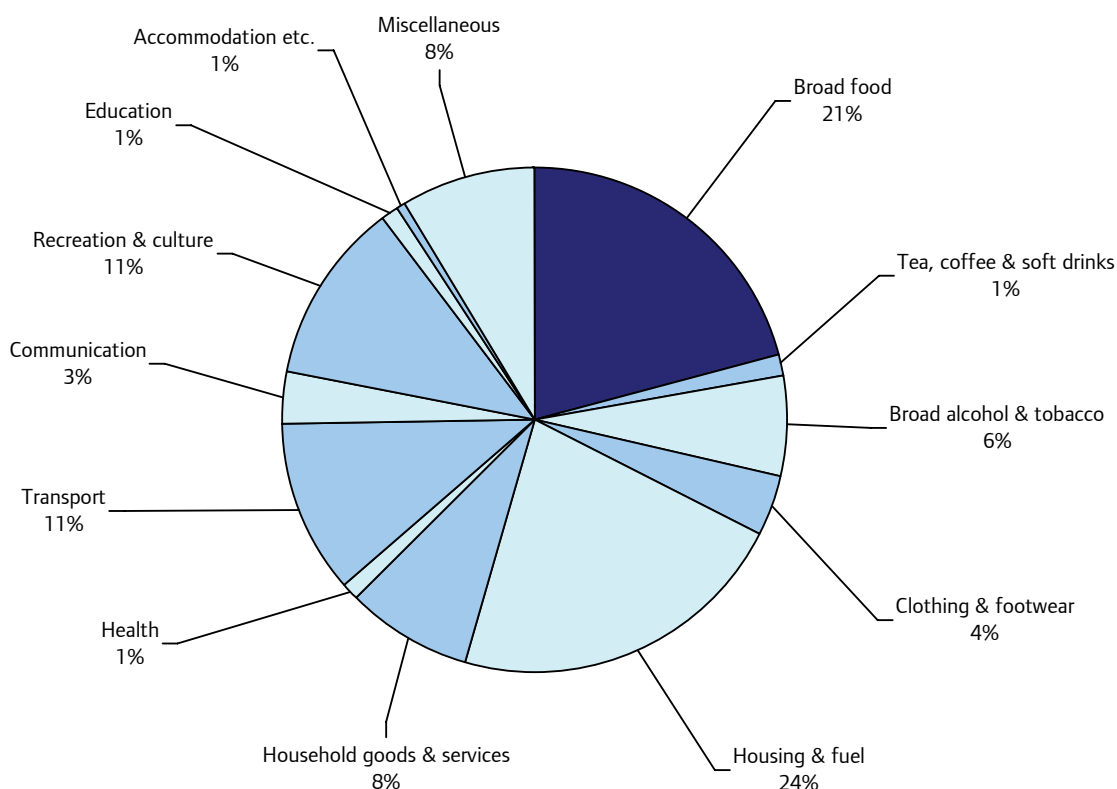
¹⁵ Note that 'Accommodation etc.' is the residual of restaurants / hotels once food and alcohol expenditure have been removed from this aggregate.

Current Issues Note 23:

Food price increases and their impact on London's lowest income groups

Figure 6 shows the latest situation based on September 2008's CPI data with regard to the costs of the fixed basket. It demonstrates that components of expenditure most likely to have been affected by the strong rises in commodity prices over previous months – such as food and fuel – are taking up a greater share of the total costs of the basket.

Figure 6: Shares of cost of fixed basket (lowest income quintile), September 2008



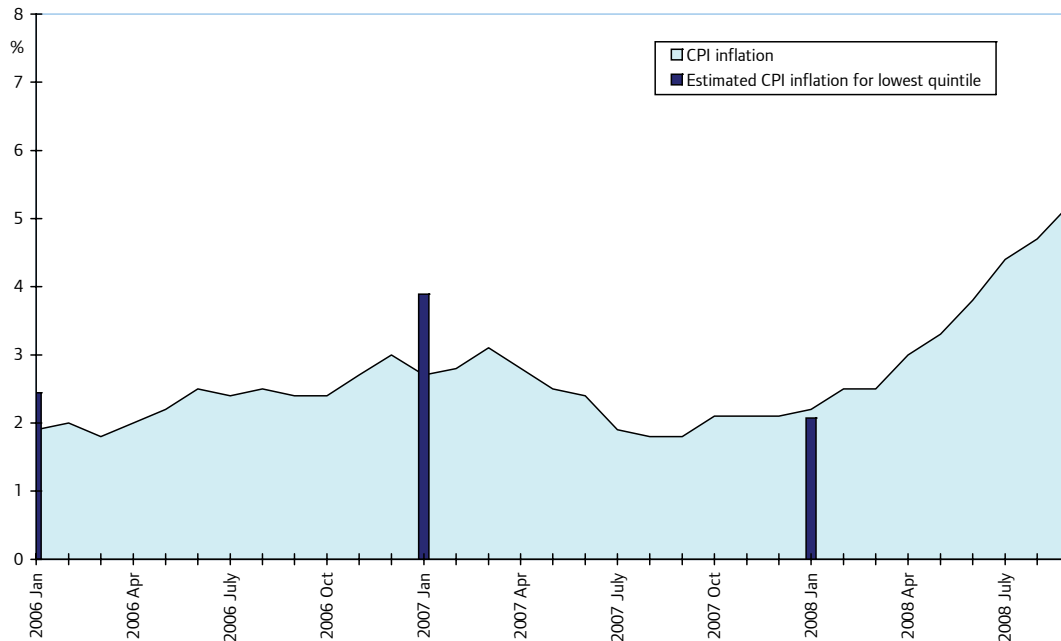
Source: ONS – CPI and EFS, GLA Economics

The CPI inflation rate for the lowest quintile

At the time of writing the latest data point for the CPI is September 2008. For the typical household, CPI inflation is running at a recent high of 5.2 per cent. However, our analysis suggests that for the bottom quintile, CPI inflation is running substantially higher at around 6.9 per cent as shown by the most recent dark blue column in Figure 7. Historical analysis shows some anecdotal evidence that when inflation is going through spikes, prices rise more rapidly for the poor. Of course, the exact effect will depend on which prices are rising. The recent driver has been commodity prices – both food and oil (driving energy utility bills upwards)¹⁶.

¹⁶ For a discussion of lags between oil prices and energy utility prices see Current Issues Note 21, 'Rising energy prices and their effects on environmental behaviour', GLA Economics, July 2008.

Figure 7: Consumer Price Index (CPI) inflation with selected dates of CPI inflation for the lowest quintile, 2006-2008



Source: ONS - CPI, GLA Economics

A likely decrease in inflation for the poor

The very fact that the poor are more affected by changes in commodity prices is likely to mean that when this period of mainly commodity-led inflation starts to fall, it may fall more rapidly for the lowest quintile. The Bank of England expects CPI inflation to fall quite rapidly over the next couple of years. However, recent falls in sterling will make imported goods more expensive¹⁷.

Over the last three months the price of a barrel of oil has halved; soyabeans, wheat and orange juice as commodity prices have fallen by around one third and sugar by over 10 per cent. Wheat prices are now 30 per cent lower than in October 2007, having been more than 40 per cent up earlier in the year and even in the UK wheat production is up about one third according to the National Farmers' Union. Energy utility bills are lagged on the oil price so they can be expected to fall early in the new year. Major retailers such as Tesco suggest that food retail prices are already falling and this is supported by the majority of food price indices in the most recent monthly CPI figures¹⁸. The overall effect could be that, within a few months, the inflation rate for the lowest quintile could be even lower than that for the UK as a whole.

¹⁷ At the time of writing, sterling is down by approximately 25 per cent on the US\$ compared to one year ago. It is also down markedly against a trade-weighted basket of currencies.

¹⁸ September 2008

Current Issues Note 23:

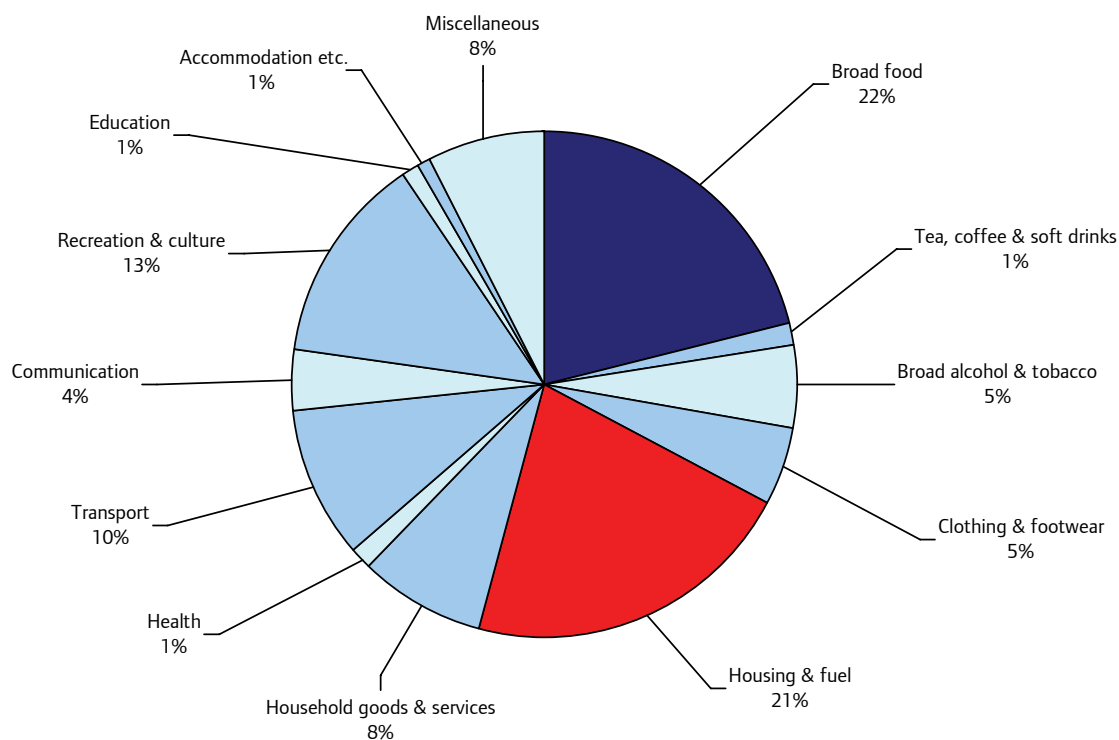
Food price increases and their impact on London’s lowest income groups

Adjusting for differences in net rents in London

Rents within the expenditure analysis are considered net of subsidies such as housing benefit. Nevertheless, there remain very considerable differences between London and the UK as a whole in terms of rents¹⁹. Rents in London are more than a fifth higher than the UK average whilst in Scotland they are more than 40 per cent lower. Patently, greater expenditure on housing costs results in less available resources for expenditure on other things.

Housing rents in London net of benefits are more than double the UK average. Housing subsidies such as housing benefits, rebates and allowances tend to impact mainly at the lower end of the income distribution. London has more people renting who are in higher income quintiles than the UK as a whole resulting in average rents being higher in the capital. Other things being equal, greater expenditure on housing costs for Londoners results in less resources being available for expenditure on other goods and services.

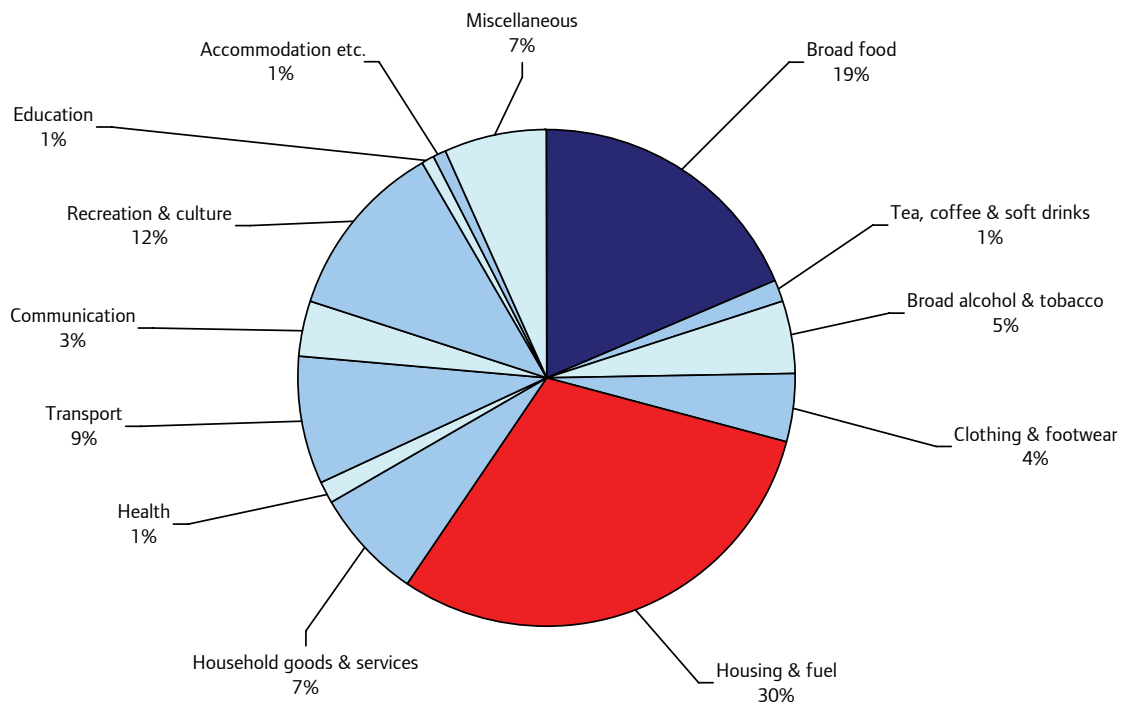
Figure 8: Shares of actual expenditure of the lowest income quintile for the UK, 2005/06



Source: ONS - EFS, GLA Economics

¹⁹ The only other region in which rents are above the UK average is the South East.

Figure 9: Shares of actual expenditure of the lowest income quintile for the UK (adjusted for London rent), 2005/06



Source: ONS - EFS, GLA Economics

Figure 8 shows that, on average, 21 per cent of expenditure for households in the UK went on housing and fuel costs (the aggregate series which includes net rental costs), whereas it would be around 30 per cent for London households (taking rent into consideration)²⁰ - see Figure 9. Assuming all other expenditure were to remain constant, when differences in wages between the lowest income quintile amongst Londoners and the lowest income quintile for the UK as a whole²¹ is taken into account, the lowest income quintile in London would still have a net total expense of £5 per week more than the lowest income quintile of the UK as a whole.

It is worth keeping in mind household rent is the average net rent for the whole of the London and UK populations rather than only rent for the lowest income quintile. This means that rental costs for more affluent segments of the UK population (which tend to be more concentrated in and around the capital) are also considered²². Whilst housing-related benefits are related to property rents, there is no weighting to state benefits to account for the additional costs of living in London.

²⁰ Note here that Figure 9 shows the expenditure of the UK's lowest income quintile adjusted for the difference in net rents between London and the rest of the UK. It does not purport to show the actual expenditure of London's lowest quintile, per se. The pie chart is therefore intended only for illustrative purposes.

²¹ The figure for the UK as a whole includes London and is therefore consistent with pie charts presented earlier.

²² Another influence is the demographic structure of London which is skewed towards younger age cohorts when compared to the rest of the UK and is also more 'non-traditional' in terms of family structure.

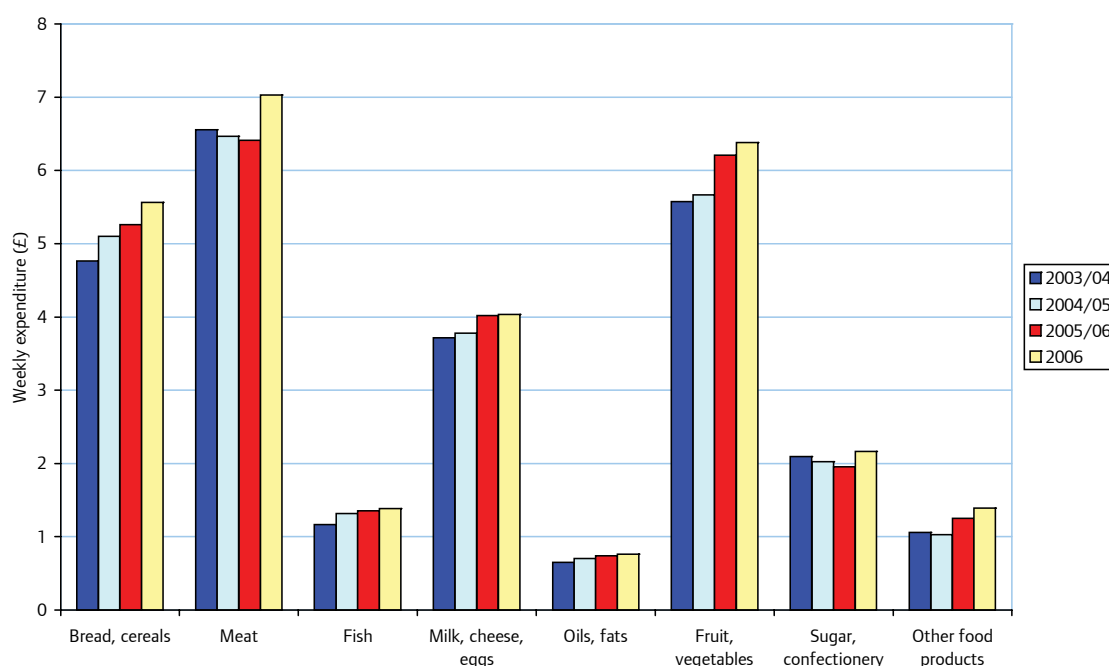
Current Issues Note 23:

Food price increases and their impact on London's lowest income groups

A more detailed analysis of food expenditure patterns amongst low income households²³.

Weekly expenditure on food for the lowest quintile in the UK has increased over the last four years of available data. This is likely to have had two separate drivers: increases in food prices and increases in personal disposable incomes. Figure 10 shows a gradual increase in expenditure on bread and cereals (which includes pasta, cakes and biscuits) and fruit and vegetables. Most other series show only small changes but an overall increase in expenditure over the time period.

Figure 10: Expenditure on food, 2003/04-2006²⁴ in the lowest income quintile – unadjusted for price movements



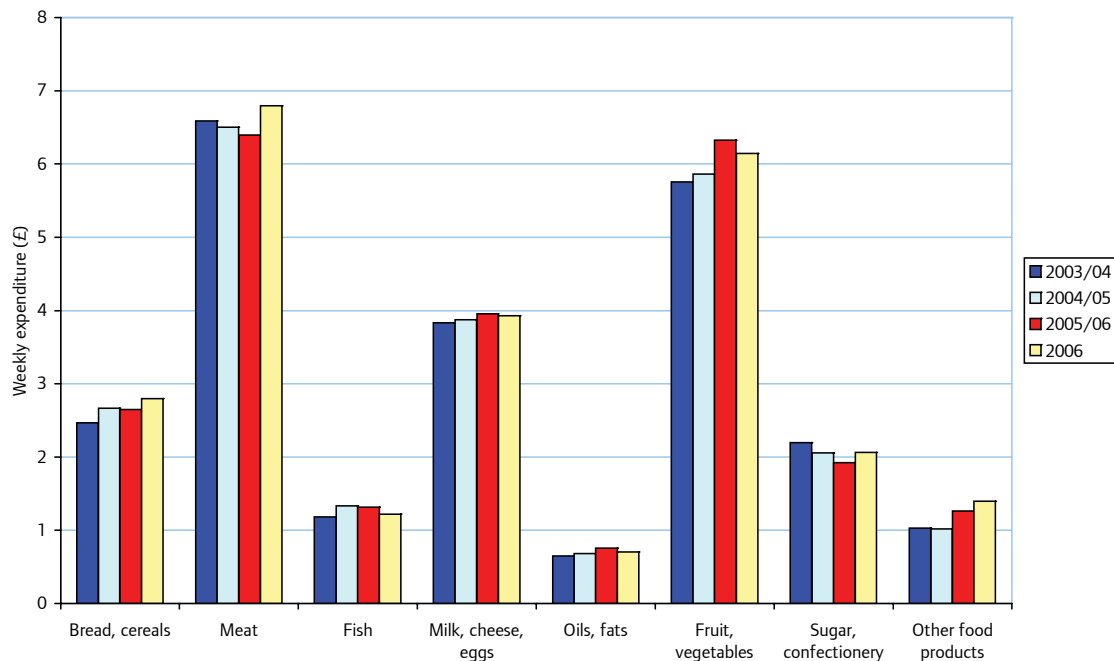
Source: ONS – CPI and EFS, GLA Economics

In order to analyse changes in consumption, the price change element (which is included in Figure 10) has been stripped out of actual expenditure and the results from this analysis are shown in Figure 11.

²³ Expenditure in the detailed food, tobacco and alcohol analysis is for the lowest income quintile of the UK rather than for that quintile in London.

²⁴ Until 2005/2006, data were gathered on a financial year basis. 2006 is presented separately on a calendar year basis.

Figure 11: Real expenditure on food in the lowest income quintile – adjusted for price changes, 2003/04-2006



Source: ONS – CPI and EFS, GLA Economics

Expenditure on bread and cereals, fruit and vegetables and 'other food products' has increased in real terms during the period of time analysed. Unfortunately, there is very limited information about real expenditure for sub-series of fruit and vegetables such as fresh, dried, frozen and tinned. Meat has exhibited an inconsistent pattern throughout the years and expenditure is known to decline with downturns in the economy. Milk, cheese and eggs, fish, and oils and fats have all remained relatively stable – at least in their respective aggregations. Real expenditure on sugar and confectionery has followed a downward trend over the years, although this does not necessarily mean people are consuming less sugar as sugar intake also comes from many other products.

With the distortions of price movements eliminated, it can be seen that changes in real expenditure for the lowest quintile can be driven by changes in income or eating patterns. However, other factors may affect expenditure on food other than prices and income. These would include reports advocating or discouraging eating certain foods, concerns caused by animal diseases and infections and increasing awareness of the importance of healthy eating.

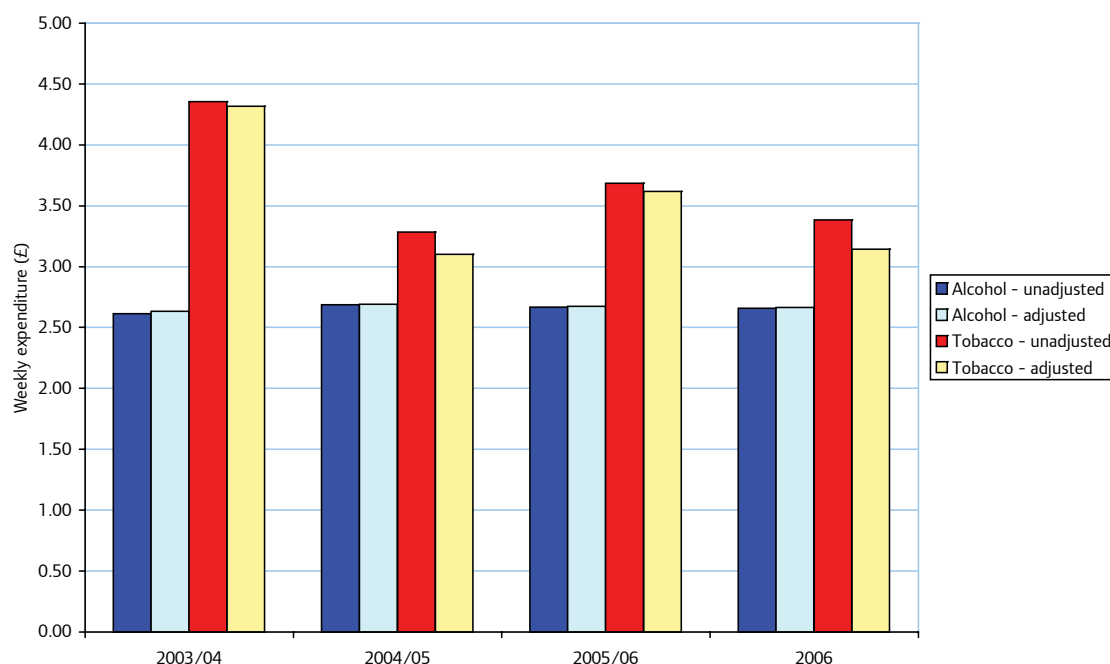
Government campaigns to promote healthier eating have been paralleled by campaigns for responsible alcohol consumption and to encourage smokers to quit. Indeed, the period under consideration coincides with changes in the legal status of smoking in public places in Scotland during March 2006²⁵.

²⁵ Bans on smoking in enclosed public spaces came into effect later in other parts of the UK: April 2007 in Wales and Northern Ireland and July 2007 in England.

Current Issues Note 23:

Food price increases and their impact on London's lowest income groups

Figure 12: Expenditure on alcohol and tobacco in the lowest income quintile – unadjusted and adjusted for price movements, 2003/04-2006



Source: ONS – CPI and EFS, GLA Economics

Real expenditure on alcohol has remained broadly stable over the period 2003/04-2006. Increased taxes on alcohol have meant that the price of beer and wine has increased in line with inflation, adding, annually, around 1p to a pint of beer and 5p to a standard 75cl bottle of wine during the period 2003/04 to 2006 whilst duty on ciders and sparkling wines remained frozen until 2007/08. A more recent 9 per cent beer tax increase is seen by some as one of the key drivers behind the recent severe falls in beer sales. The latest figures, covering the period from July to September 2008, show overall sales down 7.2 per cent compared with the same period one year earlier and sales have fallen in supermarkets as well as in pubs²⁶. Real expenditure on tobacco has fluctuated between 2003/04 and 2006 in spite of a smoking ban in public places being introduced in Scotland in March 2006. Taxes on tobacco went up in line with inflation each year adding approximately 10p to a packet of 20 cigarettes every year.

The General Household Survey²⁷ indicates that over the early part of the period in question there was a reduction in the proportion of the over-16 population smoking although compared to rapid falls in the late 1970s and 1980s, the reductions since 2000 have been relatively small in spite of a Government target to reduce the proportion of the adult population that smokes to 21 per cent by 2010²⁸. However, the General Household Survey for 2006 indicates a more marked drop in the proportion smoking. NHS data suggest that the number of successful quitters has risen, but has been rising

²⁶ British Beer and Pub Association (BBPA). However, it is also possible that former beer consumers have simply switched to another alcoholic beverage.

²⁷ General Household Survey - ONS (2005)

²⁸ The achievement of this target might, in part, be facilitated by smoking prevalence being high in the oldest age cohorts of the UK's demographic structure.

less rapidly than during the period 2002/03 to 2004/05 and was broadly static between 2005/06 and 2006/07.²⁹

Conclusions

Food price inflation in recent months has been higher than overall CPI inflation. This has a negative impact on households who spend a relatively high proportion of their expenditure on food which implies that the lowest two income deciles are likely to have been hit disproportionately³⁰. However, in the period up to 2006, even those in the lowest income quintile were benefiting from increased incomes and were able to spend more on food. Nevertheless, real income growth has been slowing whilst inflation has been picking up. Our analysis suggests that the inflation rate (here defined as CPI inflation) for the lowest income quintile has tended to be higher than for the country as a whole during periods where price growth is accelerating. As at September 2008, CPI inflation for the lowest income quintile was substantially above the overall CPI inflation rate and this raises the question as to how food purchasing behaviour will respond to the economic slowdown. The inflation spike over the last year may now be short-lived and marked falls in commodity prices should disproportionately benefit the poor in London.

The latest data on UK predominantly food stores sales covering the three months to September 2008 suggest that shoppers generally – i.e. across all income quintiles as a whole – are cutting back on the amount of food they are purchasing. Until this point, there had only been evidence of consumers switching from higher quality to lower quality brands and to supermarkets focused on economy goods. In other words, consumers had been demanding more low quality goods and fewer higher quality goods as their disposable income came under pressure. However, in Q3 2008 UK sales from predominantly food stores fell in volume terms by 0.1 per cent³¹ when compared to Q3 2007. Most analysts have assumed that this implies that consumers are actually eating less, but there is an alternative possibility that they are simply wasting less.

²⁹ NHS Information Centre – Lifestyle Statistics (2008).

³⁰ The proportion spent on food is broadly similar for the lowest two gross income deciles.

³¹ This is the first time that the figure has been negative since ONS started releasing these data in 1986. However, it should be noted that recent retail sales data – even in aggregate – have been volatile.

GLAECONOMICS

Greater London Authority
City Hall
The Queen's Walk
London SE1 2AA

Tel: 020 7983 4922

Fax: 020 7983 4137

Minicom: 020 7983 4458

Email: glaeconomics@london.gov.uk

www.london.gov.uk/mayor/economic_unit



Transport
for London

LONDON
DEVELOPMENT
AGENCY

MAYOR OF LONDON