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The Effects of Taxes and Benefits on Household Incomes 2005/06

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"There has been considerable discussion about some of the results of a recent report from the Office for National Statistics which appears to show that the poorest tenth of the population pay a higher proportion of their income in tax than do the richest tenth. However, in a report written for the Isitfair campaign, Michael Boon shows that the amount of VAT supposedly paid by the poorest tenth of the population would imply that this group spend next to nothing on food, children's clothing, rent, mortgage interest or domestic heating – all the essentials of life.

Using a different set of statistics, (also from ONS publications), the report goes on to show that not only is the above claim about tax burdens unlikely – the tax system is still progressive, as it was intended to be – but that the claim that inequality has grown under recent years is questionable too.

Finally, it has long been believed that a significant fraction of those who are entitled to claim certain means tested benefits like Council Tax Benefit fail to do so. However, the Isitfair report shows that the fraction of Council Tax Benefit supposedly unclaimed is virtually identical with what would be calculated from the incomes discrepancies between the two different sets of ONS data. In other words, the amount of Council Tax Benefit actually claimed could well be close to 100% of the amount that is claimable. If true, this would explain why all the extensive efforts of the government to increase CTB take-up have failed – the percentage supposedly unclaimed is now higher than it was in 2000 – 2001.

1. INTRODUCTION

Recently, (19th June 2007), the Liberal Democrats published proposals for what they claim to be a “fairer” taxation system. In the press release about their proposals they claim that:

“The bottom 20% of households [are] paying a higher proportion of their income in taxes than the top 20% (36.4% v. 35.5%)”.

Their source for this allegation is the paper entitled: *“The Effects of Taxes and Benefits on Household Income, 2005/06”*, published by the Office for National Statistics and available on:

http://www.statistics.gov.uk/downloads/theme_social/Taxes_Benefits_2005-2006/Taxes_Benefits_2005_06.pdf

It would appear that this ONS report, or the data sets underlying it, was also used by the Lyons Inquiry team in their final report where they estimate the effect that 100% take-up of Council Tax Benefit, (compared with what it currently is), would have on the relationship between Council Tax and household incomes.

It is my belief that this ONS report seriously underestimates incomes at the bottom end of the income distribution and overestimates those at the top end. The purpose of this paper is to record some of the evidence for this belief and to explore some of the implications for public policy in the area of taxation and benefits.

2. REASONS FOR DOUBTING THE ONS REPORT

My key reason for questioning the validity of the ONS report: “*The Effects of Taxes and Benefits on Household Income, 2005/06*”, comes from its conclusions about the proportion of household incomes that is taken by Value Added Tax at different income levels.

For example, in Table 16 of the ONS report, the total VAT supposedly paid by non-retired households in the lowest income decile is put at £1,263 p.a. whilst their disposable income is put at £8,510 p.a. This means that VAT apparently takes 14.84% of the disposable income of such households. This is totally implausible, if everything bought by these households were to be charged VAT at the full rate of 17.5%, then VAT would account for just 14.89%, ($=17.5/117.5$), of disposable income. This would leave virtually nothing for spending on items like food, (other than confectionary), children’s clothing, rent, and mortgage interest, (which are free of VAT), or domestic heating, (which attracts a lower than standard rate of VAT). Obviously, nobody could exist on such an expenditure pattern!

Fortunately, another ONS report entitled: “Family Spending – 2006 edition”, (otherwise known as the Family Expenditure Survey), provides detailed data on the actual spending patterns of households in the different income deciles. From this data on spending, it is possible to make reasonable, if not exact, estimates of the average amount of VAT that would be incurred by households in each income decile.

***Note:** There are a number of reasons why VAT cannot be calculated exactly from this data. For example, small traders with limited turnover are often not registered for VAT, so that things like expenditure on household maintenance, which is technically subject to VAT, may not bear its full rate of VAT. In addition, some goods may be purchased second-hand, (where VAT is not always charged on the full purchase price), whereas other items like footwear expenditure are not subdivided into adult footwear, (which carries 17.5% VAT) and children’s footwear, (which is not subject to VAT).*

Nevertheless, the approximate calculations based on this data do suggest that the VAT burden rises fairly smoothly, but slowly, as income levels rise. The figures for the VAT take are: 6.85% of disposable income in the bottom income decile; 8.87% in the second; 9.06% in the third; 8.59% in the fourth; 8.96% in the fifth; 9.08% in the sixth; 9.14% in the seventh; 9.19% in the eighth; 9.08% in the ninth and 9.19% in the top decile.

These results are much more plausible than the levels shown in Table 24 of the ONS report on: “*The Effects of ...*”, (which covers **all** households), where the corresponding figures are: 13.29%; 8.66%; 9.08%; 8.98%; 8.76%; 8.39%; 8.01%; 7.30%; 6.53% and 7.88%. After all, VAT is intended to be a slightly progressive tax with “essentials” being either zero rated or exempt, and “luxuries” bearing the full amount. Poorer households are supposed to spend a higher proportion of their income on “essentials” and richer households a higher proportion on “luxuries” – and the Family Expenditure Survey shows that they do!

There is actually an excellent correlation, (correlation coefficient = +0.9950), between the **amounts** of VAT that I calculate from the Family Expenditure Survey and the amounts of VAT given in Table 24 of the ONS report on: “*The Effects of ...*”. This would suggest that the reason for the difference in VAT **percentages** lies primarily in the incomes part of the equation.

3. COUNCIL TAX AND COUNCIL TAX BENEFIT

For a long time it has been the received wisdom that the take up of Council Tax Benefit amongst those entitled to claim it has been very low. The principal source for this belief would appear to be the series of documents published by the Department for Work and Pensions, the latest of which is entitled: “*Income Related Benefits – Estimates of Take-Up in 2004/05*”, available on

http://www.dwp.gov.uk/asd/income_analysis/final0405.pdf

This document estimates the take-up of benefits according to two different criteria. The first is the number of actual claimants expressed as a percentage of the number thought to be eligible. The second is the amount of benefit claimed expressed as a percentage of the total amount thought to be claimable. For 2004/05, this document gives a range of 62% to 68% for the number of those actually claiming Council Tax Benefit as a percentage of those eligible and a range of 65% to 71% for the percentage of CTB claimable that is actually claimed.

I must confess that, although I find it easy to believe that **some** people are too proud / think that it is wrong to claim CTB, that others are too intellectually challenged to navigate their way through the bureaucracy involved in claiming CTB, (although Citizens’ Advice Bureaux will do this for them), and that others are simply ignorant of the existence of CTB, I find it difficult to believe that **as many as** around a third of those eligible don’t claim their entitlements. After all, this is the section of the population that is supposed to be most hard up and most harshly treated by the Council Tax! To my mind, the take-up figures are implausibly low – suggesting that there is something wrong with the DWP calculations.

If we actually had decent data showing the multivariate distribution of all the parameters determining eligibility for any benefit within the population, then it would be a simple matter to calculate how much benefit was claimable as well as how many people were eligible to claim. Unfortunately no such data exists. Accordingly government statisticians have had to resort to a model, (known as the Inter-Governmental Tax Benefit Model, IGOTM – at least this is what the Lyons Inquiry used), to produce a data set for this purpose. If either the model or the accompanying data set is inaccurate, then the results of the modelling exercise will almost certainly be inaccurate as well.

In this context it is obvious that if we underestimate incomes at the bottom end of the income distribution, (and the previous Section of this report suggests that we do), then we will inevitably tend to overestimate the eligibility for any means tested benefit – and hence underestimate the take-up of the benefit concerned.

Fortunately, we don't need to have particularly good data in order to determine what the **pattern** of net Council Tax, (i.e. after taking up any CTB for which those concerned are eligible), as a fraction of household income ought to be if there were 100% take-up of CTB. My own, (rather crude), modelling and the rather more detailed modelling undertaken by the Lyons Inquiry team reach the same conclusion on this. Council Tax as a fraction of household income should be broadly flat across the different income deciles with a slight tendency towards progressiveness at the bottom end of the distribution and a slight tendency towards regressiveness at the top. The people who pay considerably more net Council Tax than this are those whose savings are out of line with their **current** incomes, (mainly pensioners), and those who live in the jurisdiction of those Local Authorities who do badly out of the current Central Government grant distribution system. (Remember that, at the moment, we are talking about **average** net Council Tax at the different income levels – and averages include **both** the winners and the losers.)

The figures contained the Family Expenditure Survey would suggest that net Council Tax as a proportion of disposable income more or less follows the pattern that one would expect from 100% take-up of Council Tax Benefit. If we express the FES figures for net Council Tax, (given in Table 2.3 of that report), as a fraction of total expenditure, (given in Table A8 of the same report - which includes figures for household savings), we find that Council Tax takes 2.68% of disposable income in the lowest income decile; 3.16% in the second; 3.71% in the third; 4.53% in the fourth; 4.17% in the fifth; 3.64% in the sixth; 3.53% in the seventh; 3.00% in the eighth; 2.72% in the ninth and 2.16% in the top income decile. If the FES is a reasonably accurate measure of household spending, then, unless people **consistently** spend more than their incomes, (week in, week out), there is no way that these figures can be **exceeded** – despite the fact that many publications, (including the Final Report of the Lyons Inquiry), suggest that they do!

On the other hand, if we use the figures for net Council Tax and disposable incomes given in Table 24 of the ONS report on: “*The Effects of ...*”, we find a rather different picture. The corresponding percentages are: 8.15%; 4.61%; 4.88%; 4.57%; 4.23%; 3.88%; 3.59%; 3.08%; 2.66% and 1.92%. This is a very different **pattern**, and rather similar to that which the Lyons Inquiry, (Chart 7.9 of their Final Report), claims is the actual percentage of disposable income taken by net Council Tax with the actual take-up of CTB.

***Note:** In arriving at the figures shown above, it has been necessary to “harmonise” the definitions of certain quantities in order to compare like with like. For example in the FES, housing benefit is treated as a negative cost, (reducing the cost of rent), whereas in the study on taxes and benefits, it is treated as an addition to income. Likewise in the FES net council tax is treated as expenditure, whereas in the taxes and benefits study it is treated as a reduction in disposable income.*

In addition to the adjustments noted immediately above, it is important to realise that the definitions of the income deciles differ slightly between the two documents. Table 24 of the ONS report on: “*The Effects of ...*” is based on, (non-equivalised), disposable income whereas Tables 2.3 and A8 of the FES are based on gross incomes. Overall, the effect of this difference will be to mix the households up a bit, moving some households down one, (or at most two), income deciles and others up by similar amounts. This means that it is somewhat hazardous to attempt comparisons between line items, (like Council Tax or VAT), **by decile**, within the two different data sets.

Nevertheless, being brave, it is interesting to compare what net Council Tax would be if we applied the FES fractions it forms of disposable income, (which appear to be very close to the situation that would apply with 100% take-up of CTB), to the disposable incomes alleged in Table 24 of the ONS report on: “*The Effects of ...*”. This enables us to determine what net Council Tax “ought” to be and, by comparing this with gross Council Tax, we can determine what the total CTB “ought” to be. We can then, in turn, compare this with the total CTB as shown in Table 24 of the ONS document.

When we perform such an exercise, we find that the total actual CTB amounts to 70.96% of what it “ought” to be assuming that the income levels in Table 24 were correct. This is nicely within the range of CTB take-up estimated by the DWP – yet the only reason for this apparent non-take-up is a disagreement between the Taxes and Benefits paper and the FES on the income levels in different deciles.

For the reasons given in the previous section, (the VAT analysis), it would appear that the Taxes and Benefits paper estimates are indeed wrong and that the FES values are more nearly correct. If this is true, then all the attempts to increase CTB take-up are simply a waste of time and money. It is already as close to 100% as it is ever likely to be! Similar conclusions probably apply to the non take-up of other means tested benefits – but I have not (yet) investigated this.

4. ASSESSING INCOME DISTRIBUTIONS

The Department for Work and pensions publishes income surveys in two different forms. The first is the “*Households Below Average Income*” series, available on: <http://www.dwp.gov.uk/asd/hbai.asp>, which despite, its focus on incomes at the lower end of the distribution gives considerable amounts of information across the whole range of incomes. The second is the Family Resources Survey, available on: <http://www.dwp.gov.uk/asd/frs/>, which as its name implies is focused on household incomes from all sources, (including benefits). It would appear that both are based on the same data set which is the result of interviews with a relatively large number of households.

Because of the much larger sample size enjoyed by the Family Resources Survey when compared with that enjoyed by the Family Expenditure Survey, most government departments place greater reliance on the figures contained in the FRS than those contained in the FES.

If most of the errors were sampling errors and if these sampling errors were to be **random**, (as most sampling errors are), then this preference would be entirely justified. However if the sampling errors are **systemic**, caused by the way in which the survey is conducted, then greater sample sizes will do nothing to mitigate it. I believe that there is indeed a systemic error in the FRS and HBAI data sets.

This is most clearly illustrated by figure 2.1 on page 10 of the HBAI report for 2005/06. This shows that around 550,000 households have no income whatever! This is clearly nonsense – **nobody** can live on nothing! (People living off their savings are almost certainly earning interest on them). Of course it is perfectly possible for a household to have no income for a **short** period of time. Professionals like barristers, freelance management consultants and actors all experience this. At other times their weekly earnings would place them comfortably in the top income decile. This type of effect, together with other items like the availability of overtime, moonlighting and so on, means that any survey base on a **snapshot** of the situation at any particular point in time will result in incomes at the bottom end of the distribution appearing to be less than they really are on average while those at the top end will appear to be larger. The income distribution will appear to be even more unequal than it really is.

When we compare the incomes given in Table 24 of the ONS report on: “*The Effects of ...*” with those given in the Family Expenditure Survey, we find that the incomes at the bottom end of the distribution are indeed lower in the Taxes and benefits document than those shown in the FES. At the other end of the income distribution the FES shows a lower average income. The effect on apparent inequality is dramatic. In the taxes and benefits document the ratio between the top and the bottom decile is 12.00, whereas in the FES the ratio is 6.26. So which data set is the more likely one to be accurate?

There are at least three good reasons for preferring the FES data on incomes to the other sources mentioned:

- Unlike the FRS/HBAI, the FES is not based on interviews. It is based on a sample of families recording their actual expenditures over a reasonable period of time. This avoids the problems inherent in any “snapshot” survey approach.
- The households are not segmented into deciles according to their spending, but according to their supposed incomes, (which are independently assessed). This avoids the problem of large purchases, (like replacing the car), distorting the classifications so that such purchases are accurately “smoothed out” within each income decile.
- By and large the expenditure patterns of most households is determined by their **average** weekly incomes – and not by their much jerkier instantaneous incomes that they happen to have at survey time. It is their **average** incomes that are relevant to issues like the burden of taxation, (such as the burden of Council Tax), and their eligibility for means tested benefits, (such as Council Tax Benefit).

5. CONCLUDING REMARKS

All this may appear to be rather abstruse and technical. However it has important practical consequences. If the government's views on income distributions as expressed in the ONS Report: "*The Effects of Taxes and Benefits on Household Income, 2005/06*" are incorrect, (and I am fairly convinced that they are), then this will affect whole swathes of government policy and the political debate thereon. For example: all the talk about inequality in Britain being the greatest for 60 years may be nothing more than hot air; much of the Liberal Democrat Party's proposals for changes to taxation to achieve a "fairer" Britain become irrelevant or unnecessary; all the effort involved in trying to persuade people to take up the benefits to which they are entitled is nothing more than a wild goose chase and, from Isitfair's point of view, the idea that Council Tax Benefit improvements will "solve" the Council Tax problem is simply a chimera.

Rarely in a democracy have so many politicians been so badly misled by so few.