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Prosperity and fairness[1]

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Introduction

In this paper, I consider how we measure prosperity and fairness - with the dual aims of contributing to the debate about policy design and of bringing that debate nearer to the concerns of Europe's citizens. It argues that we can take immediate steps to implement new measures of economic performance that are both theoretically well-founded and embody popular concerns about fairness. It suggests that policymakers need to set more realistic aspirations with regard to rising living standards, to give more weight to macro-economic stability, and to pay greater attention to inter-generational fairness.

Much of the conference is concerned with the *sources* of growth; in this paper, I am concerned with the *uses* of growth. As the programme indicates, stronger growth will make it easier to handle the consequences of the financial and fiscal crises, but success depends on how the additional resources are used and for whose benefit. These are not remote matters of macro-economics, but of very real interest to individual households.

1. Prosperity

The measurement of prosperity has been much discussed in recent years. As a result of the groundwork laid by OECD and the Stiglitz Commission (2009), we are now in a position to make major progress. Political commitment has been made by European leaders and by the European Commission. The proposals have been advanced in reports, such as that on *Evaluating economic performance, well-being, and sustainability* prepared by the Conseil d'Analyse Economique and the Sachverständigenrat (2010), and there has been valuable work by statisticians, such as that by the Task Force set up by Eurostat (Leythienne, 2011).

[1] Revised version of paper presented at the ECFIN Annual Research Conference, November 2011. I am grateful to my discussants, Juan Dolado and Andrew Watt, and to Andrea Brandolini and John Micklewright, for their most helpful comments which have led to significant improvements. They should not however be held responsible for the views expressed.

At the same time, the 2011 public debate about the European economy is cast almost entirely in terms of Gross Domestic Product (GDP). Whether or not we are in a double-dip recession is viewed in terms of whether GDP is growing. In the UK, everyone seems to be concerned whether quarterly growth of 0.1 per cent is going to become zero. It is not even adjusted for the most obvious element – which is population growth. If we were to look at GDP per capita, then we would find that UK growth is already negative, since population is rising at a rate of 0.15 per cent per quarter.

Why are we still focused only on GDP? In my view, it is because the Stiglitz Report, and other documents on moving "beyond GDP" give two messages. The first is that there is more to life than economic prosperity. This is undeniable and I fully support attempts to measure well-being. But it remains the case that economic activity makes a contribution to human well-being and that we can improve how we measure this by means of the national accounts. This is the second message of the Stiglitz Report, but one that has tended to get lost from sight, with the happiness agenda dominating.

A human face to the national accounts

This brings me to the first main point I want to make, which is that we can take immediate steps to improve national accounts. In particular, we can implement Stiglitz recommendations 1 and 2 to bring the accounts closer to the concerns of the individual citizen. The Commission recommended:

1: When evaluating material well-being, look at income and consumption rather than production;

2. Emphasise the household perspective.

In what follows, I look particularly at household income, or the inflow of economic resources, but much of the analysis can be applied, with appropriate modifications, to household consumption. While consumption is the natural choice when concerned with standards of living, income is more relevant if we are concerned with the control over resources.

There is a large gulf between national income and household incomes. If one takes the standard GDP tables and seeks to explain them to one's non-economist neighbours, then it is hard to make a link between the national accounts and the accounts that they may submit to the income tax authorities. Does positive GDP growth mean that individuals have higher incomes? Studying the national accounts is like entering a maze. One departs from some recognizable landmarks – see Figure 1 - like wages and salaries (although even these are not straightforward, since they include employer contributions for social security and for private benefits, so are not identical to the amount received in the pay packet). But then one has to find one's way through the institutions that stand between the productive economy and the household sector.

It is for this reason that I believe we should give much more prominence to household disposable income – following the Stiglitz recommendations. The definition of household disposable income still poses problems of interpretation, but it is a lot closer to what my non-economist neighbour can understand in relation to their own incomes. And, importantly, it shows a rather different picture from GDP. Figure 2 shows the Lisbon decade for the Euro (17) area. Two points are immediately apparent. The first conclusion is that there was significant real growth up to 2007. Household disposable income rose by 16 per cent from 1999 to 2007, or 12 per cent when expressed per capita. In other words, the real resources in the hands of European citizens increased over this period by nearly one eighth. That does not appear to be a bad performance. The second positive point is that, as has been pointed out in a recent report on the Great Recession from the Debenedetti Foundation by Jenkins et al (2011), in the crisis period from 2008 household incomes levelled off, rather than falling precipitately.

How do the household disposable income figures compare with GDP? Figure 2 shows with the squares the annual GDP figures. First, we may see that between 2004 and 2008 gross disposable real income of households grew more slowly than GDP. But when GDP fell by approaching 5 percentage points after 2008, the combined effect of automatic stabilisers and active intervention served to moderate the impact of the recession on household disposable incomes. This is a considerable achievement – and is a good reason for giving prominence to the outcome for household income in the macro-statistics. In my view, this is a success – a little heralded success – of the measures taken in 2008 at the G20 and by national governments. Yet these figures have not been given prominence. I only discovered these data from the report of Eurostat Task Force!

This good news may not however cheer up my non-statistical neighbours. They may say that this news does not correspond to their personal experience. Their incomes have not grown and have not been stabilised. In the UK, the Income Tracker put out by the supermarket chain ASDA (owned by Walmart) shows shrinking household spending power (*The Times,* 26 October 2011). This lack of correspondence may reflect distributional issues, which I take up in section 2. But it also reflects differences in definitions and in the uses of national income. If the neighbours have the patience, they make ask us to explain what constitutes household income in the national accounts.

To explore this further, I take the UK national accounts. Figure 3 shows the annual data from the United Kingdom national accounts, where each variable is expressed per capita and adjusted to a volume basis by an appropriate deflator. GDP per capita grew by 13 per cent between 2001 and 2007. From 2007 to 2009, it fell by 6 per cent. Starting from the "Adjusted gross disposable income" (expressed in real terms and per capita), as defined by Eurostat (see for example Leetmaa et al, 2009, page 11), we can see that in the UK this rose by a very similar amount to GDP between 2001 and 2007, but then did not fall between 2007 and 2009 (in fact it rose by 1.3 per cent). (In 2010 real income fell slightly in per capita terms but still left the 2010 figure above that for 2007.)[2] However, the Eurostat definition of adjusted gross disposable income includes several items that the non-economist may not recognise as part of income, as we can see by modifying the definition in a sequence of steps. The first is the allowance for the change in households' net equity in pension funds. Step 1 shows the effect of omitting this allowance. The second, and larger, allowance is for the value of individual services which households receive free of charge from the government, such as health, educational and cultural services. As is noted by Eurostat (Leetmaa et al, 2009, page 3), this adjustment makes the figures more comparable across countries, since it takes account of the differing degree to which national governments furnish such services. In 2007, the value of social transfers in kind varied from 13 per cent or under in Latvia, Lithuania, Poland and Slovakia to 26 per cent in Denmark and Sweden (Leetmaa et al, 2009, Table 2). In the US, the comparable figure was 8 per cent. Step 2 shows the effect of omitting this item; it is apparent that it contributed a sizeable amount to the growth of the national accounts figure. The final element included in the Eurostat definition is an imputation for the rent attributable to owner-occupiers for the services provided by their houses. Step 3 shows the effect of omitting this allowance.

All of these elements of the national accounts figure for adjusted household disposable income have a clear logic. The definition makes sense. But it is not particularly intuitive. The non-economist neighbours would probably recognise that they do indeed benefit from public services and from not having to pay rent, and that in the future they may benefit from the pension funds. However, these are not spendable income; they are not cash in the bank. It is the latter that they – and ASDA - have more in mind. (The other obvious difference is that the ASDA indicator is based on household survey data, adjusted by earnings and other indices; these are not discussed here, although reconciliation of household survey and national accounts income data is an important issue – see Atkinson, 2008.)

The differences in Figure 3 matter. Whereas the spendable income series moves in a similar way over the period from 2007 to 2009 (and similarly fell in 2010), the growth between 2001 and 2007 in spendable income was much more modest – in the UK about half the growth in national accounts disposable income (7 per cent rather than 14 per cent). It is on this longer-run difference that I would like to focus.

[2] It may be noted that in 2010 household real income per capita and real GDP per capita moved in opposite directions.

Growth, crises and prosperity

At the end of the series in Figure 2 – after 2011 Q1 – I have put a question mark. This is for two reasons. First, there is question as to what will happen as a result of the current austerity programmes. Since 2009, real household income in the euro zone has fallen. Caught between declining income support, on the one hand, and rising prices, on the other, real household incomes may well fall further. However, in the spirit of this conference, I want to look to the longer term. What can we expect in the decades to come?

Here I believe that we have to recast our aspirations. In the light of the experience, not just the crisis, but of the whole 2000s decade, we cannot, in my view, expect household spendable incomes per head to grow at the same rate as GDP per head. The gap seen in the past in the UK in Figure 3 is likely to continue. In my judgment, the richer members of the EU have to set themselves less ambitious objectives in terms of household spendable income. I say "richer members", since I fully support the goal of upward convergence, with the poorer Member States catching up. But for rich countries, we have to be more modest. Future generations will of course benefit from new technologies, with products and processes that we cannot conceive, but they will not necessarily be a great deal better off in terms of spendable incomes. This is why I suggest recasting our objectives, so that these allow for household spendable income growing at a slower rate than GDP per head.[3] Indeed, it could be seen as "responsible stewardship" if we succeed only in passing on the world in as good a state as we inherited: to ensure that future generations can enjoy the same standard of living as today.

This may sound as though I have given up on growth, but this is far from the case. Growth in GDP per head is essential for the long-term, and not just for the immediate resolution of the debt crisis. We need rapid technological development to meet the challenges of climate change and the depletion of natural resources. We need the resources generated by growth of GDP to invest in the infrastructure necessary to provide for a growing world population. We need additional resources to provide for investment in education and training, and to accommodate an ageing population. For all these reasons, growth in GDP is essential. What I am saying that we have to recognise that household spendable incomes will not grow at the same rate, and indeed we should be satisfied if – in the face of the challenges just described – we are able to maintain standards at those of current rich EU member states.

[3] This assumes a stable boundary between private and public provision. If this boundary is shifted as a result of austerity measures (for example, increasing private expenditure on health services), then this needs to be taken into account when assessing the growth of spendable income.

Such a lowering of expectations may not be an attractive political message, but it could I believe be made more palatable if linked to policies to maintain stability of household incomes. Responsible stewardship should ensure that we do not fall below the current standard of living but also that we do not have recurrent crises. We already have such policies, and they operated with considerable success, but they need to be nurtured and developed. Many people feel, quite reasonably, that they have been caught up in a crisis that is not of their own making. They sense that the world used to be better ordered and more secure. And they are right. There was, as Figure 4 shows, a long period when we had no financial crises. Here I am drawing on joint research with Salvatore Morelli of Oxford, where we have studied 25 countries over a 100 year period (Atkinson and Morelli, 2010 and 2011). There were, according to the classification we adopted, some 73 banking crises, but they were concentrated in the period before 1940 and after 1980. Only 2 took place in the intervening period. I need hardly point out that this was a period when there was much greater regulation of the financial sector.

As the OECD has shown, financial crises have typically led to particularly severe economic downturns. There should therefore be political traction in seeking to reduce aspirations with regard to the growth of spendable income and raising hopes with regard to the security of household incomes. It is these objectives that I see as characterising responsible macro-economic stewardship.

3. Fairness

One important reason why individual experience does not coincide with the aggregate picture is unequal distribution. A good example is provided by the figures for capital income. In the UK, the rise in total net property income shown by the national accounts between 2007 and 2009 masks a fall in interest received offset by a larger reduction in the interest paid, with evident redistributive implications between the generations to which I return in the second part of this section. Within categories of income, there are large differences. In the US, there is concern that much of recent growth has been captured by the top 1 per cent (Atkinson et al, 2011, Table 1).

Prosperity and inequality

There are many references to "inequality" in the public debate, but much less clarity as to what is meant. For some people, their only concern is with poverty and those at the bottom of the distribution; they are quite relaxed about top incomes racing away, providing that fewer people are in poverty. Others are concerned about poverty but also about the wider distribution. Attention has focused recently on the middle class, defined in a multitude of ways (Atkinson and Brandolini, 2011), and their being squeezed. And still others are interested in incomes and wealth at the top and the economic, social and political implications of the rising share of the top 1 per cent.

These differences are important when it comes to the implementation of Recommendation 4 of the Stiglitz Commission that “average measures of income, consumption and wealth should be accompanied by indicators that reflect their distribution”. What measure should we adopt? As the Stiglitz report notes, median income provides a better measure of what is happening to the “typical” individual or household than mean income. Not only is the median easy to explain, but also its use underlines that we are searching for a measure that forms the counterpart to mean income, measured in € per year.

Focus on the household in the middle invites the question – what is happening to other households? A summary measure of inequality that is sensitive to all incomes is the Gini coefficient. This can, as proposed by Sen (1976), be combined with mean income to form a measure of real national income, defined as mean income times 1 minus the Gini coefficient. This is equivalent to subtracting from mean income the proportionate “cost” of inequality. So a country with a Gini coefficient of 25 per cent is rated at ¾ of mean income, and a country with a Gini coefficient of 33 1/3 per cent is rated at 2/3 of mean income.

It should be stressed that the measures of national income adjusted for distributional concerns combine both equity and efficiency. It is not simply a case of supplementing national income by an index of inequality. Sen called his measure “real national income” because he was seeking an overall measure, where growth and distribution are brought together.

Such adjustments for distribution can change the way in which we view economic performance. In Figure 6, I show first household income, as calculated by the Institute for Fiscal Studies for the UK from 1961 to 2010.[4] As the trend line indicates, the mean rose by an exponential rate close to 2 per cent per annum, with slower growth in the 1970s and faster growth in the 1980s. The incomes for the median person however grew more slowly – at a rate close to 1½ per cent. The same is found if we follow the approach of Sen and subtract the cost of inequality as measured by the Gini coefficient. Inequality-adjusted income grew nearly ½ per cent per year more slowly than mean income. What is more, we can see that inequality-adjusted incomes grew rather more steadily. In the 1970s, inequality was falling and this in part offset the slower growth; in the 1980s inequality grew rapidly. The 1980s no longer stands out as a successful decade: both 1980 and 1990 are close to the trend line.

[4] Income is adjusted for differences in household size and composition using the modified OECD scale, and expressed at 2009-2010 prices. Households are weighted by their size. No account is taken of within-household inequality. The non-household population are missing.

In the final graph (Figure 7) I show an alternative: the effect of moving from the mean income to the mean income of the bottom 99 per cent. This draws on the evidence about top incomes given in the World Top Incomes Database,[5] and it should be noted that the sources and definitions are different and not fully comparable across countries. The graph shows the position in 2007 – before the crisis – for a range of countries. The chess-board filled columns show mean income (national accounts household disposable income per head, excluding the value of public services). The solid columns show the effect of removing the top 1 per cent. All countries show a reduction but the extent varies considerably, with the Anglo-Saxon countries showing a noticeably larger reduction. Leaving aside the UK, we see that the gap with the US is reduced by around a third in most countries.

Wider concepts of fairness

Income inequality is an important, but only one, part of the story about the uses of growth. Inequality is multi-dimensional. We need to look at consumption as well as income; we need to look at stocks of wealth as well as flows of income. In the study of poverty, it has been recognised that measures of income, or consumption, poverty need to be accompanied by broader indicators of social exclusion. A wider concept of fairness leads us to look at opportunities and capabilities as well as results. It points to the importance of processes as well as outcomes. In considering fairness, we want to consider groups as well as individuals. Are the fruits of growth being distributed fairly between men and women, or between ethnic groups in the population, or between North and South? There are many issues to discuss. Here I examine only one – of particular relevance when considering economic growth – the distribution between generations.

The model of growth with overlapping generations, due to Samuelson and Diamond, is a work-horse of modern macro-economics, but its distributional implications receive scant attention. Consideration of inter-generational equity raises serious questions – in terms both of conception and implementation. But it has important consequences for the design of policy at a point in time. If the distributional impacts of a policy are being weighted according to the social marginal valuation of income, then this should take account of differences in the lifetime well-being of individuals.

The measurement of the lifetime well-being clearly involves forming a view about their likely future circumstances, including of course their length of life. This is even more difficult to forecast than the aggregate economy. Looking backwards, we have to ask how the current social valuation should depend on past

[5] http://g-mond.parisschoolofeconomics.eu/topincomes/

experiences. Implicitly some would argue that the costs of downward adjustment mean that *more* weight should be given to those who have fallen. In the UK, the Distressed Gentlefolk's Aid Association was founded in 1897 by Elizabeth Finn and her daughter Constance, "after learning that gentlefolk – a British class description for "people of the better sort" – were living destitute" (Wikipedia, downloaded 30 October 2011). In contrast, the common assumption, in macro-economics, that lifetime well-being is additive (i.e. the sum of functions of income or consumption in each period), implies that the marginal valuation is *unaffected* by past – or expected future – experiences. It should be noted that additive separability is not enough. Where the social objective is concerned with the distribution of lifetime well-being (for example, a concave function of the sum of functions of single-period incomes), then we should attach *less* weight to those who previously enjoyed higher incomes. There are radically different options.

Faced with these challenging questions, what can we say? First, I have argued that we need to revise downwards our aspirations for the growth of household disposable incomes. This means that we should give greater weight to future incomes/consumption. The social discount rate should be lowered (with obvious implications for, for example, the amount invested in combating climate change). But it also means that we should reconsider the weights given to the incomes/consumption of different cohorts alive today. On the last of the approaches listed in Table 1, the lowering of our aspirations for future disposable income means that we should give more weight to younger cohorts. The balance of the financing of investment necessary to provide infrastructure, to facilitate education, and to tackle climate change should be switched towards older cohorts.

Secondly, the formulation of our social goals has implications for economic stability. It may seem that the third form of weighting would favour the averaging implied by income mobility. If the rewards to different positions are fixed, then it would be equitable to rotate their occupation. The costs of economic crises would be smoothed out. We have however to move beyond objectives formulated purely in terms of individual utility from consumption. Lifetime opportunities are particularly affected by events during crucial periods – early years, schooling, entry to the labour market. Economic crises may have a markedly different effect on individual age groups. In his book *Dollars and Dreams*, Levy highlights the significance of the second part of his title: "as I was beginning this book, I had a conversation with an old friend about his early career … he twice repeated elementary school grades. 'I always thought … that the two lost years hurt my early career. … I graduated college in 1932. In 1932 you couldn't find a job. The boys who got out in 1930 had a much easier time and by '32 they were far enough up the ladder to hang on'" (1987, page 213). The costs of instability may need to be measured in terms of the impact on life chances and capabilities, an impact that cannot be simply averaged across time.

Conclusions

The main conclusions of this paper are:

- Immediate changes can and should be made in the measurement of prosperity, to bring it closer to the experiences of individual citizens (Stiglitz recommendations 1 and 2). The recent interest in measuring happiness should not stand in the way of giving a more human face to the national accounts. It is regrettable that growth is still being discussed solely in terms of GDP, and that the experience of household incomes is not being highlighted.
- The measures of economic performance should incorporate equity concerns (Stiglitz recommendation 4) in a distributionally-adjusted measure of national income; this does not mean isolating inequality as a separate element, since it is the conjunction of growth and inequality that is of interest.
- We should recognise that household spendable incomes cannot be expected to grow at the same rate as national income; indeed we should be doing well if we achieve a *responsible stewardship* that ensures that future generations enjoy the same living standards as today; at the same time, we should give greater priority to stability of living standards;
- This does not mean that growth in GDP is not necessary – quite the reverse, in addition to helping to ensure the sustainability of government debt, growth is essential in order to be able to invest in infrastructure, in education, to deal with climate change, and to provide for ageing population;
- Income inequality at a point in time is an important aspect of fairness, but it is only part of the story; a broader concept of fairness takes us beyond standard welfare economics, as illustrated by the case of inter-generational equity and the impact on life chances.

At the beginning of the paper, I pointed out that I was concerned with the uses, rather than the sources, of growth. Yet the two sides are evidently inter-connected. There has been much debate about the impact of inequality on growth, and this debate has brought out the importance of distinguishing between different types of inequality. Wider concepts of fairness are equally relevant. A sense of unfairness may weaken solidarity and reduce effort. The same applies to economic stability. Inequality may have contributed to the increased occurrence of economic crises. One needs to look at both sides.

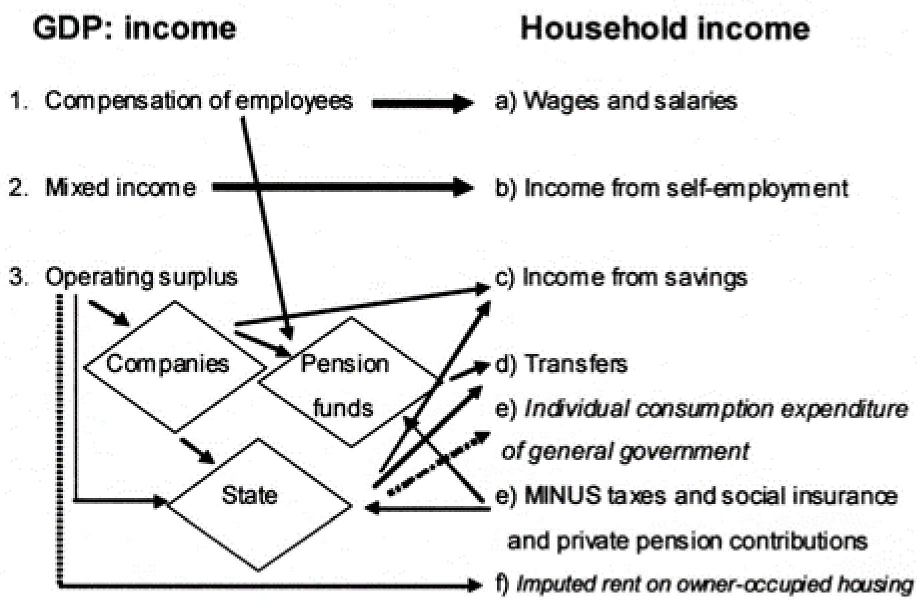


Figure 1 Linking national income flows to household income

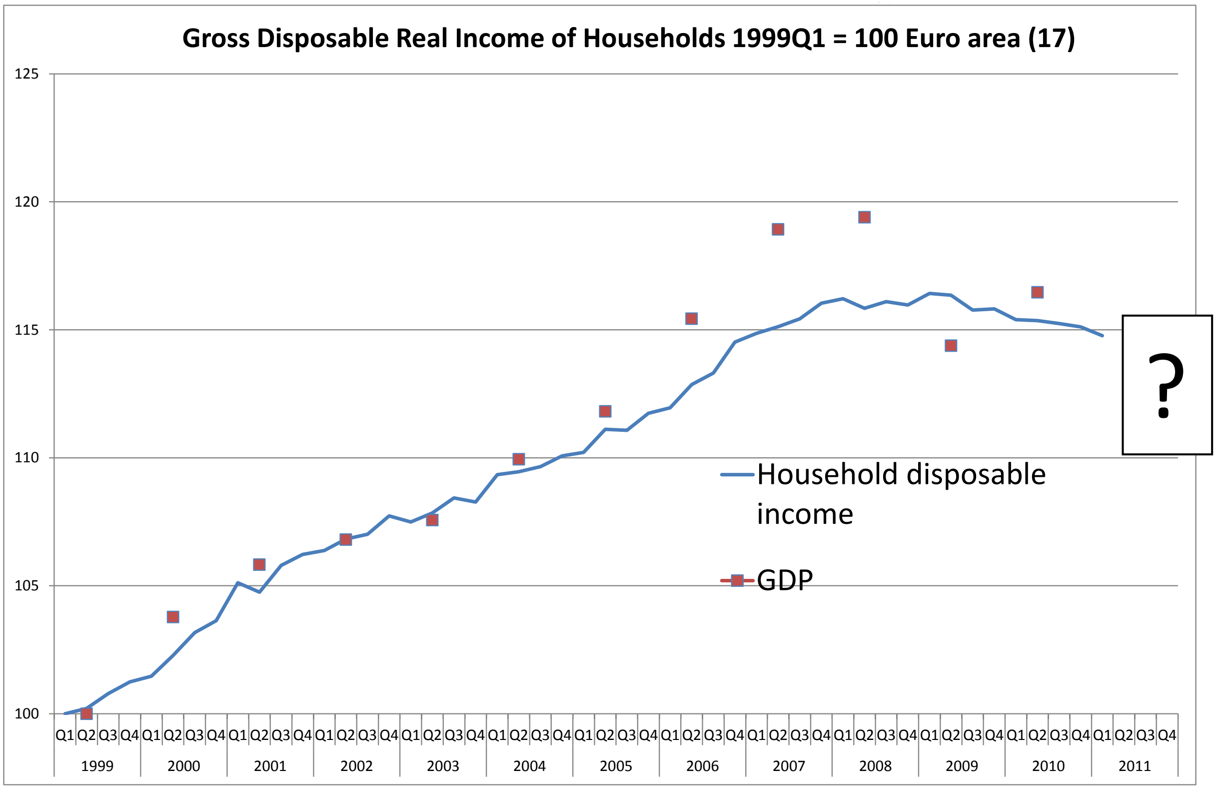
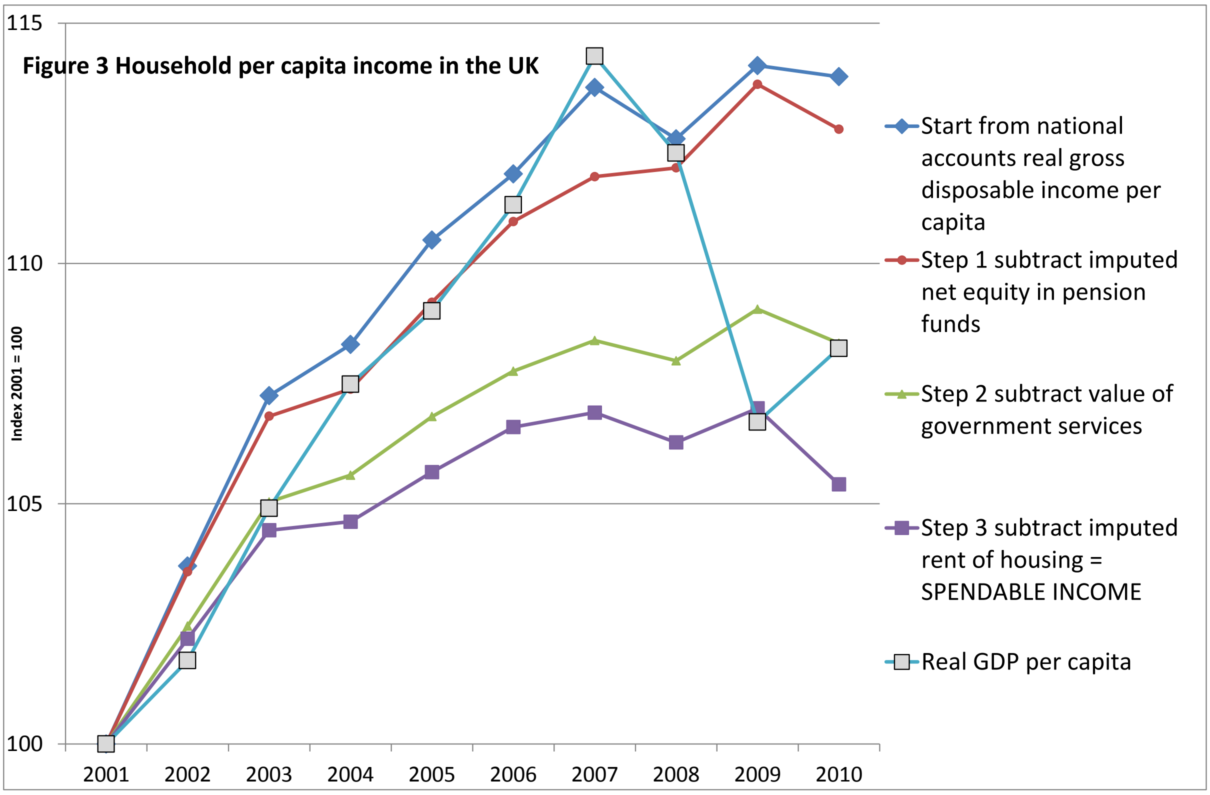


Figure 2



Source: Office for National Statistics, 2011, Tables 1.5, 6.1.6 and 6.4

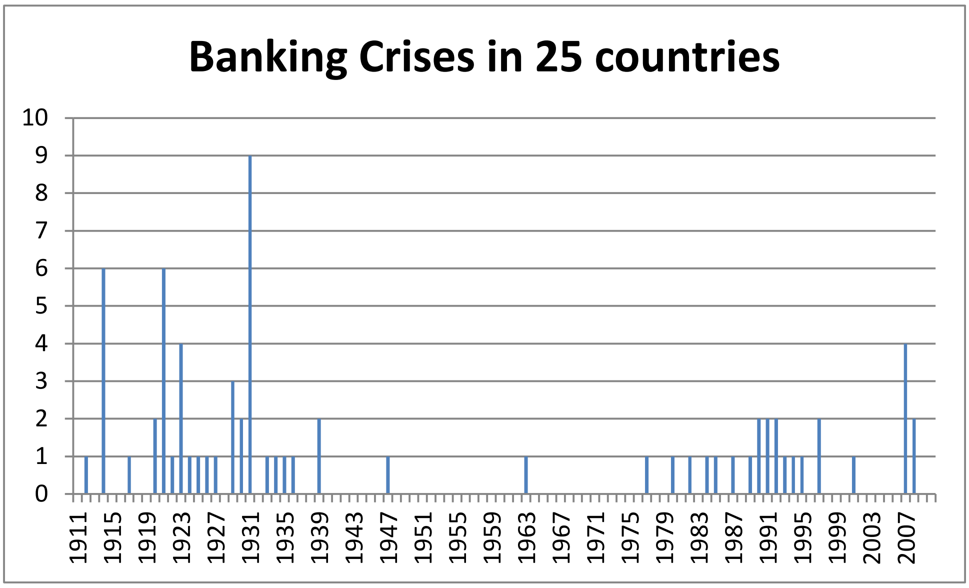
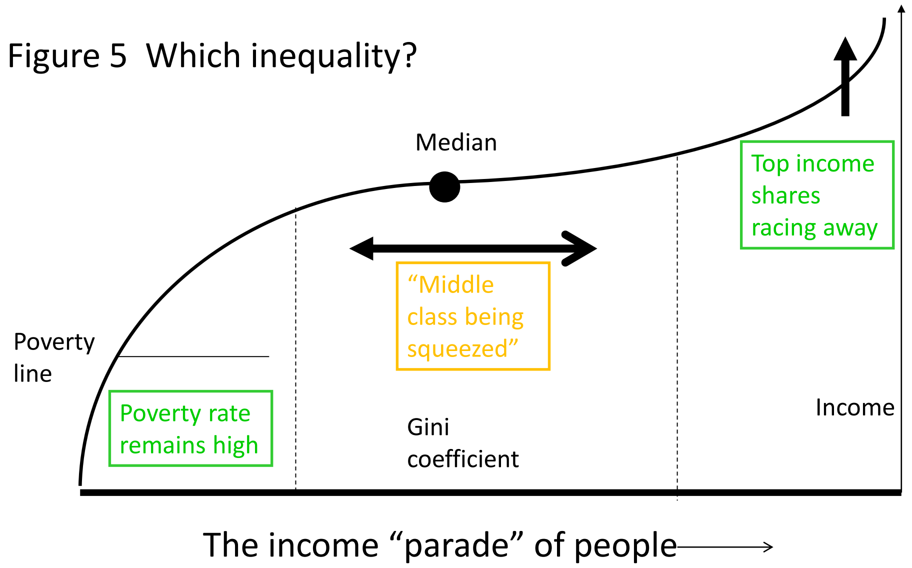


Figure 4

Source: Atkinson and Morelli (2010 and 2010a).

Figure 5 Which inequality?



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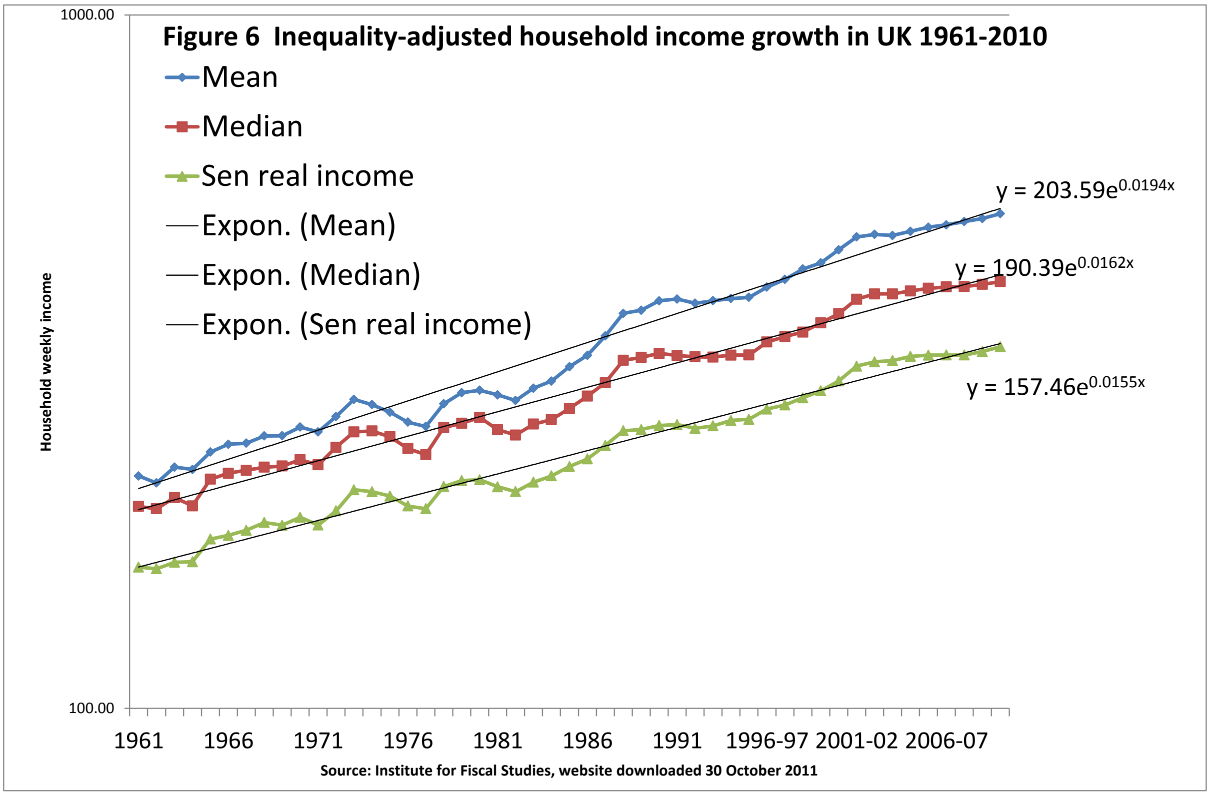

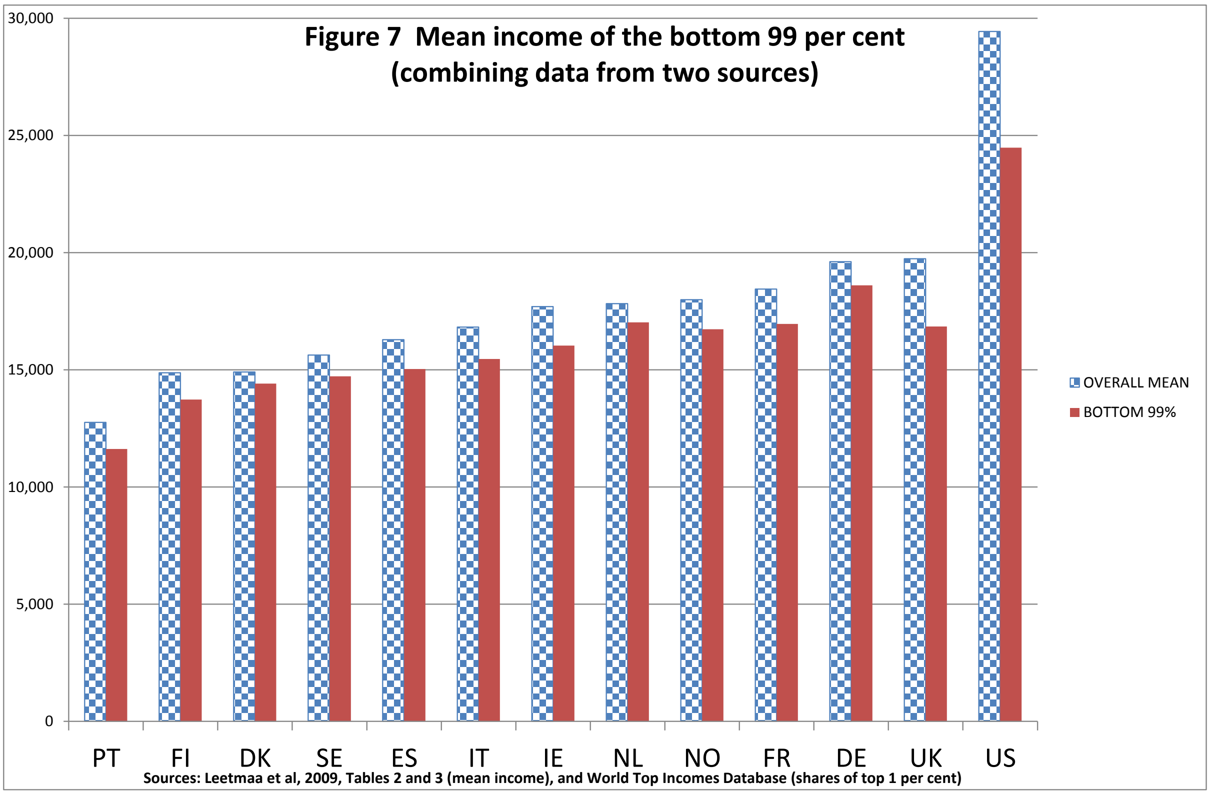

Table 1 When assessing lifetime well-being, how should we weight income/consumption?

1.	Concern for falls in income/consumption;
2.	Independent of previous or expected future income/consumption;
3.	Less weight to those higher income/consumption in past or with higher expected future income/consumption.

References

Atkinson, A B, 2008, "From national accounts to household welfare", paper for Stiglitz Commission.

Atkinson, A B and Brandolini, A, 2011, "On the identification of the 'middle class'", Bank of Italy discussion paper.

Atkinson, A B and Morelli, S, 2010, "Inequality and banking crises: A first look", paper prepared for the International Labour Organisation.

Atkinson, A B and Morelli, S, 2011, "Economic crises and inequality", Background paper for the 2011 Human Development Report, United Nations Development Programme, New York.

Atkinson, A B, Piketty, T and Saez, E, 2011, "Top incomes in the long run of history", *Journal of Economic Literature,* vol 49: 3-71.

Conseil d'Analyse Economique, 2010, *Evaluer la performance économique, le bien-être et la soutenabilité*, La Documentation Française, Paris.

Jenkins, S, Brandolini, A, Micklewright, J and Nolan, B, 2011, "The Great Recession and the distribution of household income", Fondazione Rodolfo Debenedetti, Milan.

Leetmaa, P, Rennie, H and Thiry, B, 2009, "Household saving rate higher in the EU than in the USA despite lower income", *Statistics in Focus,* 29/2009.

Levy, F, 1987, *Dollars and dreams,* Russell Sage Foundation, New York.

Leythienne, D, 2011, "Emphasise the household perspective in national accounts through social statistics", report of the Task Force "Household Perspective", presented at annual conference

Office for National Statistics, 2011, *United Kingdom National Accounts,* Palgrave Macmillan, London.

Sen, A, 1976, "Real national income", *Review of Economic Studies,* vol 43: 19-39.

Stiglitz Commission, 2009, Report on the measurement of economic performance and social progress, www.stiglitz-sen-fitoussi.fr.