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PAPER TITLE: A rule-of-thumb Basic Income model for the UK, with and without an earnings/income disregard. (Design and cost your own Basic Income scheme).

ABSTRACT

A basic income (BI) scheme (Miller, 2009) based on the benchmarks provided by the *Minimum Income Standards*, (Centre for Research on Social Policy, 2008) for the UK, yielded Full, Partial and Child BIs that were 0.56, 0.26 and 0.26 proportions respectively of average income per head of man, woman and child (Y-BAR) in the UK in 2007.

A rule-of-thumb model (for illustrative purposes), with the amounts for the BIs at 0.50, 0.25 and 0.25 of Y-BAR respectively, could be financed from a new flat-rate income tax (replacing the current income tax system and National Insurance contributions) of 40% on all sources of income and without tax loopholes. Those above pension-entitlement age, those with disabilities, carers-of-last-resort and the responsible parent of a dependent child would receive the Full BI, which would enable them to live modestly without having to top up their incomes from earnings, but they could undertake paid work if they wished.

However, it would be preferable on both equity and efficiency grounds, if there were an earnings/income disregard (no income tax paid) for those receiving the Partial BI, until their net income schedule meets and merges with the Full BI schedule. This will occur when the gross income is equal to 0.50 of Y-BAR, and the net income is then 0.75 of Y-BAR. (Y-BAR in 2010 was £17,288.54 pa, or £331.56 pw, and this would determine the amounts for the BIs for the fiscal year 2012-13). This more progressive income tax version is more expensive, requiring an income tax rate of 50% on all other income. However, the effective tax rate (Marginal Deduction Rate) has been dramatically reduced for most people on low incomes. The redistribution effects and labour market incentives of each version are explored.

Disclaimer: This scheme is not necessarily the policy of the Citizen's Income Trust.

Note: Exchange rates on 30 July 2012. Source: www.x-rates.com

	£	Euro	US \$
£1	1.00000	1.28229	1.5703
€1	0.77985	1.00000	1.2246
US \$1	0.63682	0.81659	1.00000

Note: The terms 'Basic Income' (BI) and 'Citizen's Income' (CI) will be used interchangeably.

A rule-of-thumb basic income model for the UK, with and without an earnings/income disregard. (Design and cost your own Basic Income scheme)

by
Anne G. Miller

Fifty delegates from 16 countries voted for the final draft of a ‘European Citizens Initiative’ entitled ‘Unconditional Basic Income’ (UBI) on 27 April 2012. This will be presented to the European Parliament after a year-long campaign to obtain one million signatures on a petition to be launched in September 2012. It will request the European Parliament to do all in its power to speed up the introduction of a UBI in the European Union. It lists, on page 2, the defining characteristics of a BI as: 1. universal, 2. individual, 3. unconditional, and 4. high enough to ensure a dignified material life allowing participation in society. These represent the key characteristics that are necessary to define an income maintenance system as a Basic Income (BI) scheme, but by themselves do not describe a complete system. For instance, the method of delivery of the BI must be specified, also the method for monitoring and compliance, and of course, the source for financing the scheme. Further, the level(s) of the BI must also be specified.

Depending with what other instruments it is coupled, a basic income scheme can give rise to a wide variety of welfare systems. In planning a particular scheme, it is safer to start with defining what type of society one is aiming to create, what individual objectives would help to bring about such a society, and then finally how to design a system that will achieve these objectives. (A list of potential objectives that a BI can help to fulfil can be found in Appendix A). Each scheme will represent a particular set of priorities for the objectives, and the proposed levels of Citizen’s Income will reflect this, as will the proposed method of financing them.

It is usually anticipated that the defining characteristics of the CI will fulfil certain objectives. For instance, universal, non-selective, unconditional benefits will help to achieve the objective, “to remove the stigma and low take-up of means-tested benefits, helping to create a more united and inclusive society”. However, without specifying the source of funding, it will not necessarily achieve the objective of redistributing income from rich to poor, men to women or geographically.

In this paper, it is assumed that the source of finance will be via a proportional (flat-rate) or a progressive income tax system. This allows for the possibility of redistribution of income from rich to poor. The benefit and income tax systems are reverse sides of the same coin, and it is appropriate to consider them together, and it seems reasonable that one should finance the other, producing a ‘velvet revolution of income’. The main features of benefit and income tax systems that must be addressed, to define a benefit and income tax scheme, are listed in Appendix B. Appendix F provides some recent basic figures about UK population, GDP, benefit rates, and income tax thresholds and rates.

* * * * *

The following is assumed about the Basic Income scheme for the UK, for this exercise:

A. It is **universal** to everyone who is legally resident in the UK, and is not withdrawable;

B. The tax and benefit assessment unit is the **individual**, and not on a couple or household basis;

C. It is **non-selective** and **unconditional** – the amount could be age-related, but certainly would not vary by race, creed, gender, sexual orientation, marital status, cohabitation, household composition or past work record. The entitlement would not be means-tested on his/her own income or wealth, nor on that of another household or family member. Nor will the right to the BI depend on any preconditions, such as an obligation to work, being involved in community service, or behaving according to traditional gender roles.

D. In this paper, the amount of the BI to be paid to every man, woman and child will **not be enough** for a single person to live on, and would have to be topped up by other income, usually earnings. This is a **Partial BI**, (as opposed to a **Full BI**, that would be enough to live on modestly and allow participation in society).

E. The CI will be **delivered automatically** to those who qualify, in the form of a regular payment to the account of a named single holder (as opposed to a joint account), including the responsible parent of a dependent child – as now. This is in contrast to a Negative Income Tax (NIT), which is a net benefit equalling the transfer payment minus any (lesser amount of) income tax due on gross income, or a Tax Credit (TC), which is a payment equal to the tax due on gross income minus the (lesser amount of) benefit. Some advocates favour a TC system because it would make for an easier transition from their current system. The CI payment should be simpler and therefore cheaper to administer than a NIT, TC or the current system, and should ensure that everyone can rely on receiving a regular, predictable income. It involves large gross-transfers of income within society, but the net amount transferred (the total amount of payments paid net by the tax payers, or the total income received by the net recipients) will be much less, and will depend on the degree of inequality of income in society.

In this paper, the BI system has been modified slightly, since only a Partial BI is assumed universally, (although some people will be entitled to a top up to a Full BI), and the system is extended in order to address the following particular objectives:

1. To redistribute income from rich to poor (and thus from men to women and geographically).
2. The BIs should reflect the prosperity of the economy.
3. To prevent the poverty of financially-vulnerable adults.
4. To reduce the incidence of financial poverty of all other working-age adults.
5. To provide a benchmark, using Minimum Income Standards.
6. To provide a method of calculating a ball-park figure for the standard rate of income tax required to finance a particular scheme.
7. To provide a Rule-of-Thumb to enable quick calculations, and to use as an illustrative example.
8. To restore incentives for those on Partial BIs (adults aged 16-64 inclusive, who are not financially vulnerable) to seek paid work.
9. Ensure that the BI system does not lead to a downward spiral of the economy, and that economic cycles are stabilised.

1. In order to **redistribute income from rich to poor**, the BI scheme will be financed by a new hypothecated income tax system. Most of the current National Insurance (NI) benefits and Means-Tested Benefits (MTBs) will be replaced by **tax-exempt BIs**, and the source of finance will be via either a **proportional (flat-rate) or a progressive income tax system** (replacing both the current UK income tax and employees' National Insurance contributions systems). There will be no personal allowances, tax reliefs or exemptions, (tax loopholes which enable legal tax avoidance to occur, and which subsidise the wealthier sections of the nation). The same rate of

tax will be levied on all sources of income: wages and salaries, income from self-employment, company perquisites (perks), pensions, interest and dividends, capital gains, rental income and gifts. The fact that the income tax system is hypothecated and is used to finance only the BIs and other transfer payments, and the administration costs associated with it, implies that it will be simple, more transparent, and therefore accountable. It also implies that there will be a standard rate of income tax that will be required to finance the BI scheme, together with a margin for administration, a safety net, costs of disabilities, and other associated costs. It also implies that all government expenditure, (as opposed to transfer payments), will be funded out of the revenue from other income and expenditure taxes, which is feasible in the UK. Redistribution from rich to poor will also bring about redistribution from men to women within a household, and from areas of the country that are thriving to those that are deprived. This could help to regenerate economically deprived areas and, in time, build up the national economy so that it is less dependent on imports and exports.

2. The amount of the BIs should **reflect the prosperity of the economy**. In spite of the inadequacies of GDP as a measure of economic activity, expressing the Full, Partial and Child BIs for each country as **proportions of GDP per capita**, based on the most recent figures available, would enable international comparisons to be made as to the generosity of a particular scheme. However, in order to calculate the cost of the scheme in terms of a flat-rate income tax, they would have to be expressed as **proportions of average income per capita, Y-BAR**, of man, woman and child, based on the most recent figures available, which in the UK would be for the calendar year ending fifteen months before the intended benefit period or fiscal year. (\bar{Y} is a common symbol for average income)

3. To **prevent poverty in financially vulnerable adults**: these are groups that in a compassionate society would not be compelled to top up a Partial BI with earnings, and so will receive an extra amount of BI to make up their Partial BI to a **Full BI**, which the recipients could increase further with earnings, if they wished. These will comprise people above pension-entitlement age, those with disabilities, unpaid designated carers-of-last-resort, and the responsible parent of a dependent child (aged 0-15 inclusive, in the UK). These are not necessarily mutually exclusive groups. People with disabilities will receive tax-exempt payments to cover the costs of their disabilities (for care, mobility, special equipment, special diets, extra fuel, extra laundry, etc.), in addition to their Full BIs.

4. To **help to reduce the incidence of financial poverty of all other adults of Working-Age**: they will receive their **Partial BI**, and would be expected to top it up with earnings, but a safety net (probably of an individualised, means-tested, unified Housing-and-Council-Tax-Benefit) would have to be retained for those who were in economically depressed areas, where there was a shortage of paid work, and for those in other areas who were unable to find suitable paid employment.

5. To **provide a benchmark, using Minimum Income Standards**. An early official benchmark was based on **0.6 of average earnings**. However, it was difficult to define: whose earnings are used to define the population, does it include part-time work and over-time workers, those who are currently out of work, or those who have never worked? This was then replaced by **0.5 of average income**. However, the current official poverty benchmark for the European Union is given as **0.6 of the national median net household equivalent income**, which was found to be almost co-incidental with 0.5 of average income. This is a very confusing benchmark. The first point is that the net household equivalent implies that it has already been decided what the equivalent amounts for members of the household should be, and that those household members

had access to the incomes with which they are imputed. It can be very difficult to find out exactly how this benchmark has been calculated, and different teams seem to use different methods. As a benchmark for a BI scheme, since it is based on the individual, the only relevant figure to use would be **0.6 of gross median income**, where median income had been calculated from the distribution of the gross (pre-tax-and-benefit) non-equivalised incomes of all the individuals in the country, at the point where there are as many individuals receiving more than the median income, as those below it, including those with zero gross income.

In 2010-11, about 30.6 million individuals, about half the population of around 62 million people paid some income tax. This should imply that the median income for a single person was at roughly the level of the personal allowance, (£6,475 in 2010-11). Roughly 30 million people, including about 11.5 million children aged 0-15, and a further 7 million pensioners, did not pay income tax. This means that, in the fiscal year 2010-11, there were a further 11.5 million working-age people with incomes of less than £6,475, many of whom were financially dependent spouses/cohabit ees, who, despite the ubiquitous reference to the common purse, are not entitled by law to any of their spouse's/partner's income, although the law requires the partners to 'aliment' them. They have no legal access to an income of their own. This is unacceptable in the modern world. Why is the median offered as the benchmark, rather than **average income**? The median of a skewed distribution is always less than the mean, and the more skewed the distribution, the greater the difference. Whether or not this was designed to produce a lower standard of living for poorer people, which would be cheaper to finance, or to let richer people off the hook of actually paying their fair share of taxes, it certainly seems as though this could be the case.

In 2006, the Family Budget Unit at York University and the Centre for Research in Social Policy at Loughborough University combined resources to produce a set of Minimum Income Standards (MIS), funded by the Joseph Rowntree Foundation. Its final report, *Minimum Income Standards*, was launched in July 2008. It is based on 39 focus groups, involving more than 200 people, in combination with input from experts in heating and nutrition. It established the income levels required in 2007 to provide Low Cost but Acceptable (LCA) standards of living for 13 different household configurations. A table presenting this information is presented in Appendix C.

Using this new benchmark, a simple BI scheme for the benefit year 2009-10 was designed (Miller, 2009), which would provide a Full BI for financially-vulnerable adults, a Partial BI for others adults of working age, and a Child BI, which enabled all families, (whether headed by a single parent or by two parents) to attain their LCA income. Each parent receives a BI that is independent of whether they were living on their own or with another adult. The present system penalises parents who live together. The amounts for the benefits were then calculated as a proportion of average income per head of man, woman and child (Y-BAR) for the calendar year 2007, (Office of National Statistics, *Blue Book*, 2008 edition). The proportions for the FBI, PBI and CBI came to 0.56, 0.26 and 0.26 of Y-BAR respectively. Unusually, the PBI and CBI came to the same amounts. Comparing column 5 with columns 1 and 6 of appendix C reveals how successful the scheme is at meeting the objectives of protecting financially-vulnerable adults and families with children.

6. To **provide a method of calculating an approximate figure** for the standard rate of income tax to finance a particular scheme.

Table 1 below illustrates the method used to estimate an approximate figure for the rate of income tax that would have been required to finance the Basic Income scheme put forward for 2009-10, based on the benchmark provided by the *Minimum Income Standards* (MIS) figures as calculated

TABLE 1. PERSONAL INCOME TAX RATE: QUICK-CALCULATOR TABLE

SUMMARY OF THE INFORMATION REQUIRED TO ESTIMATE THE PERSONAL INCOME TAX RATE WHICH COULD FINANCE A BASIC INCOME SCHEME, SHOWING THE EXTRA COSTS OF FULL BASIC INCOMES FOR SOME.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Col.8 = col.3 x col.5
	Population, UK* 2007,	Proportion of population	Proportion of GDP*** per capita	Proportion of average gross income, Y-BAR	Y-BAR** 2007 £ pa.	Y-BAR** 2007 £ pw.	Cost of BI in terms of income tax rate
TOTALS:	60,975,400	1.0000	0.77	1.00	£17,695	£339.35	1.00000
					BI pa	BI pw.	
Total population	60,975,400	1.0000	0.2002	0.26	Partial BI £4,600.56	Partial BI £88.23	0.26000
People aged 65 +	9,779,100	0.1604	+ 0.2310	+ 0.30	Full BI +£5,308.50	Full BI +£101.81	+0.04812
people, 16–64, with disabilities	c.5,500,000	0.0902	+ 0.2310	+ 0.30	+£5,308.50	+£101.81	+0.02706
Carers, aged 16-64	c.4,290,000	0.0704	+ 0.2310	+ 0.30	+£5,308.50	+£101.81	+0.02112
Responsible parents, aged 16-64	c.6,800,000	0.1115	+ 0.2310	+ 0.30	+£5,308.50	+£101.81	+0.03345
Children, aged 0-15	11,509,400	0.1888	- 0.00	- 0.00	Child BI -£0.00	Child BI - £0.00	- 0.00000
						TOTAL	0.38975
					Disability benefits, Add margin for admin, safety-net, etc.		+0.00972 +0.02053
			TOTAL INCOME TAX RATE REQUIRED TO FINANCE BIs				0.42

Note: The data for 2007, (the then most recently available figures), were abstracted from the following sources:

* Mid-year population estimates for 2007 were obtained from:

www.statistics.gov.uk/statbase/Product.asp?vlnk=15106.

** ‘Total Resources of Households and Non-Profit Institutions Serving Households’, 2007, (QWMF), = £1 078 911 m. (*Blue Book 2008*, Table 6.1.3).

Thus, average gross income (Y-BAR) = £17 695 pa; multiplying by 7/365 = £339.35 pw,

***GDP (output method) at market prices, 2007, (YBHA) = £1 401 042 m

(*Blue Book 2008*, Table 1.2)

GDP per capita, 2007, (IHXT) = £22 977 pa; multiplying by 7/365 = £440.65 pw, (Table 1.5)

Disability benefits, 2007, (EKY6) = £10,486 m, would add about 0.01 to the tax rate,

(*Blue Book 2008*, Table 5.2.4S).

To access the *UK National Accounts, the Blue Book*, follow the instructions in the bibliography.

This table appeared originally in the *Citizen’s Income Newsletter*, 2009/1, p. 10.

for 2007. Column 2 gives the figures (or estimates from other sources) for the different sections of the population, which are expressed as proportions of the total population for the UK in column 3.

Y-BAR *per capita* for 2007 was calculated to be £17,695 pa. The proportions of Y-BAR for the BIs already calculated, based on the MIS benchmark (0.56, 0.26, and 0.26), are noted in column 5. Columns 6 and 7 contain the amounts that the FBI, PBI and CBI represent in annual and weekly figures, (which would then be implemented in the fiscal year 2009-10). The product of columns 3 and 5 is noted in column 8. The fifth row of column 8 gives the cost for the whole population, man, woman and child to receive a Partial BI (including a Child BI) of 0.26 of Y-BAR, and this gives a base figure for the income tax rate of 0.26. On each of the subsequent rows, the extra amount that each of the groups who receive a Full BI contributes to the required total income tax rate, can be easily calculated and is noted in column 8. This also makes it easy to calculate the cost of increasing or decreasing a BI for a particular group. The table could have been laid out differently, giving each group a separate row. The figures in column 8 are added to give the TOTAL.

A figure has been added to estimate the payments required to cover the cost of disabilities, and a **margin** has been added to cover **administration costs** and a **safety-net**: for those in poverty, in spite of the BI scheme; to cover a residual National Insurance scheme for those not eligible for a BI in UK (ie. those living abroad); grants to replace some tax expenditures (such as grants to supplement all charitable donations, in place of the current Gift-Aid scheme for tax-payers). The flat-rate tax required to finance this scheme is 42%.

While an income tax rate of 42% might sound quite high, it is economically feasible. Those above the higher rate tax threshold have been paying this tax rate in 2011-12 and in 2012-13 anyway, (40% income tax plus 2% employees' National Insurance contributions). On the other hand, many people on means-tested-benefits, who are trying to earn their way out of poverty, not only have to pay income tax of 20% and National Insurance of 12%, but often face multiple benefit-withdrawal rates leading to a Marginal Deduction Rate (effective income tax rate) of nearly 96%. The proposed introduction of a new Universal Credit system in 2013 aims to reduce these levels to 76 and 65%, depending on whether one's income is above or below the personal allowance (income tax threshold) respectively. The greater reduction in Marginal Deduction Rates for poorer people from 96% to only 42% is a major achievement, and most of those people will be materially better off with this BI scheme than under the present system.

Even a proportional tax linked with a BI scheme can be very redistributive. (For instance, it can be shown that for a skewed distribution of income, a proportional income tax rate of $t = \beta$, where $0 < \beta < 1$, coupled with a $BI = \beta \times Y\text{-BAR}$, reduces the Gini coefficient (a measure of inequality of a distribution) by β). This costing method has the advantage of providing a single figure to summarise the gross cost. A progressive tax schedule will redistribute income to an even greater extent, but it is much more difficult to calculate the gross cost of a progressive scheme, because it requires details about the distribution of gross income. Costing a BI scheme based on a proportional tax would not preclude a government of the day from implementing a progressive income tax system when the time came. However, a flat-rate tax might reduce the opposition to a BI scheme from current and aspiring higher rate taxpayers.

7. To provide a **rule-of-thumb to enable quick calculations, and to use as an illustrative example.**

The above scheme, devised from the information provided by the *Minimum Income Standards*, provides the **first rule of thumb**, where the **Partial BI and Child BI are equal**, and this provides the basis for a Partial BI for everyone, and the **Full BI is twice the Partial BI**. The required income tax rates were calculated for a range of BI schemes, where the Full BI lay between 0.30 and 0.60 of Y-BAR. The table giving these results (part of which is shown in Appendix D) also includes the original MIS-based scheme. The Full BI = 0.55 and Partial BI = 0.275 Y-BAR matched up with it very well. The margin that was applied diminished as the scheme became more generous, on the assumption that the need for the safety net would become less as the scheme became more generous. The corresponding required tax rates lay between 0.27 and 0.45.

On examining the amounts of the BIs and the corresponding tax rates, it was found that the range for the FBI of $0.45 \leq \text{FBI} \leq 0.55$, with $0.225 \leq \text{PBI} \leq 0.275$, gave feasible values for the BIs. In other words, the amounts of the BIs should be within this range. The corresponding income tax rate, t , would be $0.36 < t < 0.42$. Appendix D gives this information in the form of a Table, that also shows which households would receive more than their Minimum Income Standard, and which ones would receive less, for the different levels of Basic Income. It was noted that the scheme where $\text{FBI} = 0.43$, $\text{PBI} = 0.215$ Y-BAR and $t = 0.35$ matches up with the amounts for the means-tested Pension Credit and the Jobseeker's Allowance introduced in the UK in the 2012-13 fiscal year.

A **second rule of thumb** proposes that the **Full, Partial and Child CIs are 0.50, 0.25 and 0.25 of average income per head (Y-BAR) respectively**, and that these can be used for illustrative purposes and has the extra advantage of providing easy calculations. The calculated tax rate was 39%, but in order to over-estimate, rather than under-estimate it, the more generous Margin of 0.05 of Y-Bar was adopted, and the tax rate is assumed to be 40%. The graph of net income plotted against gross income gives two parallel lines with an inclination of 0.60. A recipient of the higher Full BI does not become a net tax-payer until a gross annual income of £21,610 is reached, and s/he will have a greater net income than under the single person's current income tax schedule for 2012-13, over the whole range of gross income. A recipient of the lower Partial BI becomes a net tax-payer at a gross income of £10,805 and becomes worse off under the Partial BI schedule, compared with the 2012-13 income tax system, at a gross income of £21,613. These BIs are only slightly less than those devised from the benchmarks provided by the *Minimum Income Standards* for those with no source of income other than their BI. The downside of this rule of thumb is that, if one relaxes the benchmark of the MIS, then there is a temptation for others to reduce the levels even more.

[Figure 1 near here]

The exercise was repeated using a **third rule of thumb**, where **approximate proportions for the population of 0.2, 0.2, 0.4 and 0.2 were assumed**, for the population aged 65 and over, for the financially-vulnerable adults, the rest of the working-age population (aged 16-64), and children (aged 0-15), respectively. Using the same diminishing margin, the tax rates were the same for all of the first and second rule-of-thumb schemes. See Appendix E. On the assumption that population proportions will change relatively slowly, - an assumption that can be tested at regular intervals - this seems to be a reasonable rule-of-thumb to adopt for the UK for the foreseeable future.

FIGURE 1. NET ANNUAL INCOMES FROM 2012-13 INCOME TAX SCHEDULE AND BIS WITHOUT AN EARNINGS DISREGARD: Average Income (2010) Y-BAR = £17,288; PARTIAL BI = 0.25 Y-BAR; FULL BI = 0.50 Y-BAR; Income Tax Rate = 40%.

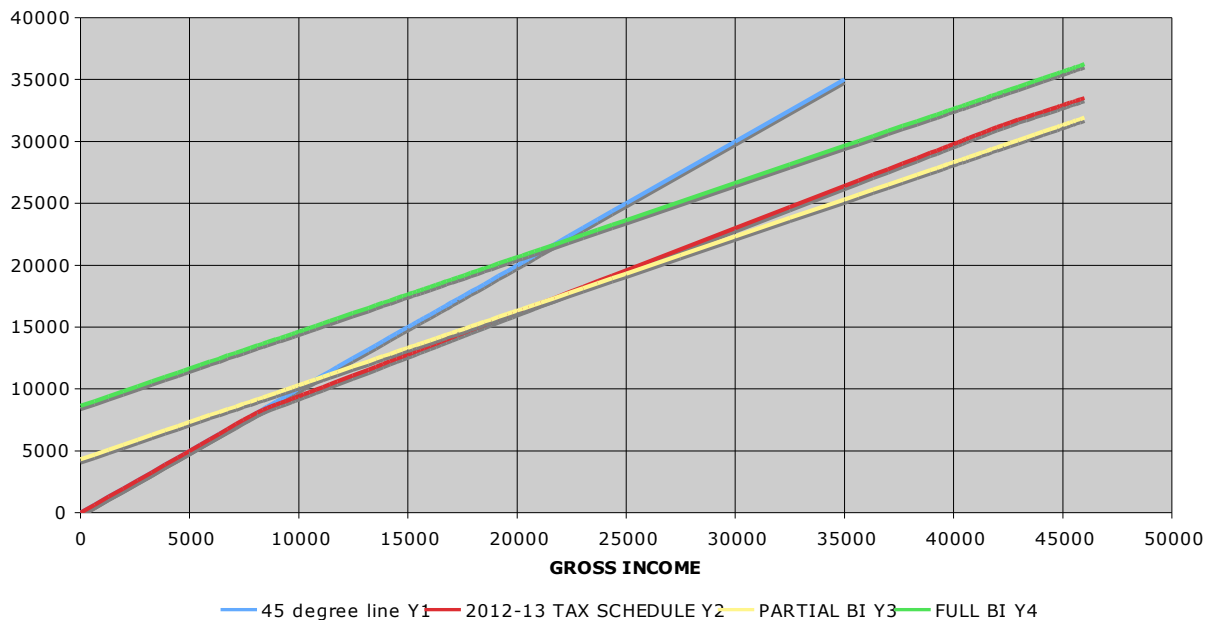
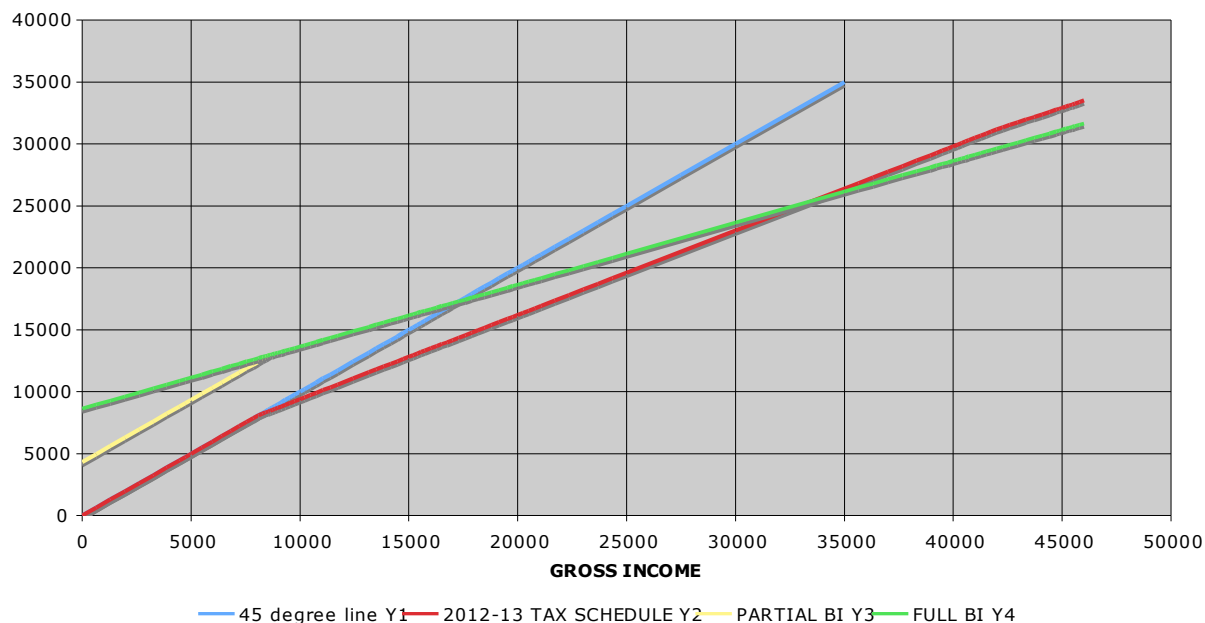


FIGURE 2. NET ANNUAL INCOMES FROM 2012-13 INCOME TAX SCHEDULE AND BIS WITH AN EARNINGS DISREGARD: Average Income (2010) Y-BAR = £17,288; PARTIAL BI = 0.25 Y-BAR; FULL BI = 0.50 Y-BAR; Income Tax Rate = 50%.



8. To restore incentives for paid work, via an earnings/income disregard, for adults of working age who are not financially-vulnerable and who are receiving Partial BIs.

One of the strange effects of any BI scheme which includes both a FBI and a PBI, and where every one pays the same rate of tax on all other sources of income, is that the graph of net income plotted against gross income, reveals the two schedules to be parallel lines over the whole range of gross income. (See figure 1.) This implies that at any given gross income, a financially-vulnerable adult will always require the same extra amount of net income more than any other working-age adult receiving a PBI. Yet, on both equity and efficiency grounds, it will be preferable for there to be an **earnings/income disregard (EDR) (tax-rate of 0%)** for each person receiving the Partial BI, until his/her net income schedule meets and merges with the Full BI schedule.

Let a Full BI = $\beta_F \cdot Y\text{-BAR}$ and a Partial BI = $\beta_P \cdot Y\text{-BAR}$. It can be shown that a Full BI schedule with tax rate, t_F , and a Partial BI schedule with a lower tax rate, t_P , where $t_F > t_P$, will meet at gross income Y_o , where

$$(1) \quad \text{Full BI} + (1 - t_F) \cdot Y_o = \text{Partial BI} + (1 - t_P) \cdot Y_o$$

$$Y_o = (\text{Full BI} - \text{Partial BI}) / (t_F - t_P)$$

$$Y_o = (\beta_F - \beta_P) Y\text{-BAR} / (t_F - t_P)$$

Substituting for $\beta_F = 0.50$, $\beta_P = 0.25$, $t_F = 0.5$ and $t_P = 0$ gives

$$\begin{aligned} Y_o &= (0.50 - 0.25) Y\text{-BAR} / (0.5 - 0) \\ &= 0.5 Y\text{-BAR} \end{aligned}$$

Even a proportional tax linked with a BI scheme can be very redistributive. However, a progressive tax schedule will redistribute income to an even greater extent. Having a zero tax rate on the initial tranche of gross income introduces a simple method of making the income tax schedule progressive.

Since this second, more progressive, Partial BI schedule foregoes all of the income tax revenue from the first tranche of income, it is more expensive to finance. In fact, it is almost as expensive as granting a Full BI to all adults. The amount saved by granting only a Partial BI to the working-age, non-financially-vulnerable adults, who constitute approximately 40% of the population, is,

$$(2) \quad \text{Amount saved} = (\text{Full BI} - \text{Partial BI}) \times \text{number of recipients receiving the Partial BI}$$

$$= (0.5 - 0.25) Y\text{-BAR} \times 0.4 \times \text{population}$$

$$= 0.10 \times Y\text{-BAR} \times \text{population.}$$

The maximum amount of income tax revenue foregone from granting a lower tax rate, t_P , on the first tranche of income, Y_o , to those people granted the Partial BI, assuming that all those receiving a Partial BI would have taken full advantage of the tax-free concession, is:

$$\begin{aligned}
(3) \quad \text{Max tax revenue foregone} &= (t_F - t_P) \times Y_o \times \text{number of recipients receiving the Partial BI} \\
&= (t_F - t_P) \times \{(\text{Full BI} - \text{Partial BI}) / (t_F - t_P)\} \times 0.4 \times \text{population} \\
&= (0.50 - 0.25) Y\text{-BAR} \times 0.4 \times \text{population} \\
&= 0.10 \times Y\text{-BAR} \times \text{population}.
\end{aligned}$$

The product of the proportion of the population of working age who receive a PBI (0.4) multiplied by an increase in the PBI to a FBI (0.25 Y-BAR) is 0.10, which added to the previous income tax rate of 0.40 implies that this BI scheme could be financed adequately by an **income tax rate of 50%**, ($t_F = 0.50$), which is probably the maximum that the UK could stomach as the standard rate of tax. (See Appendix D.)

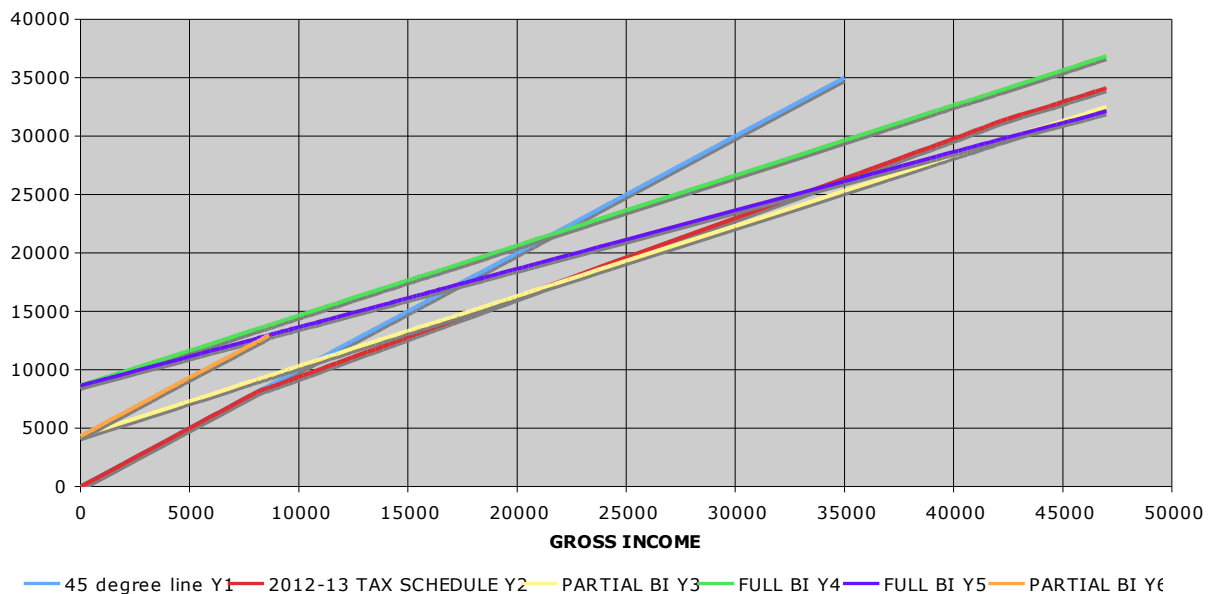
The key features of this BI scheme are very easy to work out. The Full and Partial BI schedules of this illustrative example will meet when gross income, Y_o , reaches 0.5 of Y-BAR, at which point, net income will be 0.75 of Y-BAR. A working-age adult receiving a Partial BI will only **start to pay income tax** when his/her gross income exceeds 0.5 of Y-BAR. Further, no adult will become a **net income tax payer** until his/her income is greater than Y-BAR. (See Figure 2 above. Figure 3 below combines figures 1 and 2.) Might this be a simple but useful way to define the richer and poorer sections of the nation: a ‘poorer’ person is one who receives a net benefit, while a ‘richer’ person is one who pays net income tax, ie. defined by whether their gross income is less or greater than Y-BAR. This is distinct from the super 1% richest of the population, or even the top 10%. Almost all those with a gross income less than £33,615, (which is almost twice Y-BAR from 2010), would be better off with the BI scheme than under the current 2012-13 income tax regime. The difference in net income for someone at the higher tax threshold (£42,475 in 2012-13) is only £1,595, (£31,477 under the current 2012-13 income schedule, and £29,882 with the BI scheme).

Again, an income tax rate of 50% may seem high, but it is still much lower than the current marginal deduction rates (MDRs) facing those who try to return to work while receiving means-tested benefits. A reduction of the MDR from nearly 96% to 0% on the first tranche of income for those receiving a PBI is a major achievement. Currently, in tax year 2012-13, those with incomes greater than £42,475 pay 42% (40% income tax plus 2% employees’ National Insurance contributions), while those with more than £158,105, are currently expected to pay “the additional income tax rate” of 50% (plus 2% National Insurance), but have been promised a reduction in their additional tax rate in 2013-14 from 50% to 45%. These latter could hardly demur at paying 50%, if all citizens, except the poorest, paid the same rate. A universal non-stigmatising BI scheme based on citizenship and a common tax rate will help to create a very inclusive society. Income tax at 50% is the price of creating and maintaining a compassionate and harmonious society. It is analogous to “One hand for the ship and one hand for oneself”. Again, this rate might sound very high, but if the idea is repeated often enough, it becomes more familiar, acceptable and realistic.

It is often claimed that people would not be prepared to pay a high marginal income tax rate (of 50%) by choice. Have any experiments been carried out to see whether they would, if they could be convinced that they will be better off? In the 2010-11 fiscal year, some 300,000 people paid the additional income tax rate of 50%, and about 4 million paid the higher rate tax. Just to give an approximate figure, roughly another 28 million people were standard rate tax-payers, with gross incomes of between £6,475 and £43,875. About 4/5 of the way along this range is the point

where people would have become worse off under the BI scheme at a gross income of £36,620 in 2010-11, so perhaps another 6 million standard rate tax payers would be worse off, (but other members of their families could be better off). It is possible, given the extremely skewed nature of the gross income distribution in the UK, that only some 10 million people out of 50 million voters would have been worse off in 2010-11, and another 40 million could have been better off with the rule-of-thumb BI model described above.

FIGURE 3. NET ANNUAL INCOMES FROM 2012-13 INCOME TAX SCHEDULE, AND BIS WITH AND WITHOUT AN EARNINGS DISREGARD: Average Income (2010) Y-BAR = £17,288; PARTIAL BI = 0.25 Y-BAR; FULL BI = 0.50 Y-BAR.



One of the potential weaknesses of the rule-of-thumb BI schemes put forward here is that the Partial BI = 0.25 Y-BAR could leave some working-age adults in poverty. However, it is worth noting that equations (1), (2) and (3) above imply that different levels for the Partial BI, with different income tax rates, t_p , are possible, while levying the same standard rate of tax, t_f . See Table 2 below. However, increasing the Partial BI will change the total income of the two-adult households with children.

Of course, the question also arises of whether children receiving their Partial or Child BI should also be entitled to the earnings / income disregard, thus allowing them to earn from paper rounds or Saturday jobs without having to submit tax returns. There are two differences between children and adults being entitled to a tax-free tranche: (i) the income of children in aggregate is negligible, and so, therefore, is the income tax revenue foregone, and (ii) wealthy parents might be tempted to allocate some of their income to their children to extend their own tax-free earnings / income disregard. How much would be the extra income tax revenue foregone? What constraints, if any, should be placed on this tendency?

Table 2. Examples of different Partial BIs and income tax rates, t_p , which are possible while levying a standard tax-rate, $t_F = 0.50$, ($t_F \geq t_p$).

Proportion of Y-BAR for Partial BI	income tax rate, t_p , for those with Partial BI	Gross income, Y_o , where schedules meet
0.25	0.00	$Y_o = 0.5 Y\text{-BAR}$
0.25	0.25	$Y_o = Y\text{-BAR}$
0.30	0.00	$Y_o = 0.4 Y\text{-BAR}$
0.30	0.25	$Y_o = 0.8 Y\text{-BAR}$
0.30	0.30	$Y_o = Y\text{-BAR}$
0.375	0.00	$Y_o = 0.25 Y\text{-BAR}$
0.375	0.25	$Y_o = 0.5 Y\text{-BAR}$
0.375	0.375	$Y_o = Y\text{-BAR}$
0.40	0.00	$Y_o = 0.2 Y\text{-BAR}$
0.40	0.25	$Y_o = 0.4 Y\text{-BAR}$
0.40	0.40	$Y_o = Y\text{-BAR}$
0.50	0.50	$Y_o = 0.00$

9. Ensure that the BI system does not lead to a downward spiral of the economy.

It is sometimes feared that when people receive a BI, it will provide a large disincentive for them to take or increase their paid employment. However, the incentive to take paid employment comprises two parts: the income effect (the unearned income, which will have increased) and the substitution effect (the Marginal Deduction Rate or effective tax rate, which will have decreased for many of the poorest people). It is also feared that the wealthier section of society will emigrate, taking their job-creation schemes with them, - or at least threatening to do so. It is the government's job to protect all of its people, but especially the poorest, who are unable to protect themselves, and it should not submit to blackmail from people who are not committed to creating an inclusive society. Some wealthy people may leave, despite the fact the UK has many attractive features, being stable politically, and having a temperate climate.

If the BI is a fixed proportion of Y-BAR, and Y-BAR were to decrease, then the BI would decrease also, and will act as a self-stabilising mechanism, preventing any tendency towards a downward spiral of the economy. If the BIs are sufficiently generous in the first place, then small reductions in the amount could be tolerated. It is important that **the BIs remain as fixed proportions of Y-BAR**, for at least the term of a government's administration, (and should be announced in each party's manifesto beforehand), or this important stabilising effect will be lost.

Another important outcome of pegging the proportions for a fixed period is that it will create fiscal drag. The fact that the BIs are distributed in the current fiscal period, but are based on Y-BAR from the calendar year ending at least 15 months earlier, will provide a slight fiscal drag, which will provide a stabilising influence on the country's economic cycles by reducing their amplitude. It will reduce demand when Y-BAR is increasing, and increase demand when Y-BAR is diminishing, in much the same way that the present benefit and income tax systems interact. A prudent government will keep enough reserves to cover the cost of the BIs, in case the economy declines, as did GDP in the UK by 3.76% in monetary terms between 2008 and 2009.

Conclusion.

While investigations of both the intended redistributive, and labour market, effects, have not yet been carried out, the Basic Income scheme put forward here is designed to redistribute from rich to poor, and to restore incentives to work for the poorest members of society, and to provide a level playing field (all paying the same rate of tax) for everyone else.

Appendix F gives a table of some of the main figures in the UK (population, GDP, Y-BAR, BI levels, current means-tested benefit levels, and income tax-thresholds and tax-rates) used throughout this exercise, for calendar years 2007-2010, and fiscal years 2009-10 to 2012-13, together with their sources.

This exercise has demonstrated several things. Each person has his/her own ideas about the specific BI system that s/he would like to see implemented, because, in addition to the inclusion of the defining criteria for the BI with their associated advantages, each person has a different set of priorities with respect to other aspects of society and the economy. There is no single, optimum BI system. It has been demonstrated that one can design and cost one's own ideal scheme, and experiment with variations.

In order to fulfil my stated list of objectives, I have designed a universal, individual-based, unconditional, tax-exempt Partial BI scheme,

1. that is financed out of a new income tax, replacing the current income tax and employees' National Insurance contribution systems;
2. where all BIs are stated as proportions of average income per head, Y-BAR;
3. where financially-vulnerable adults are topped up to a tax-exempt Full BI; a tax-exempt payment to cover the cost of disabilities is paid in addition;
4. where all those receiving a Partial BI would have recourse to a safety net, if necessary;
5. where Minimum Income Standards provide a benchmark;
6. where a method is provided for calculating a ball-park figure for the required rate of income tax;
7. with a Rule-of-Thumb, where Partial BI = 0.25, and Full BI = 0.50 of Y-BAR respectively, and the required rate of income tax is 40%;
8. where recipients of the Partial BI pay no income tax until the Partial BI schedule meets and merges with the Full BI schedule, when gross income, $Y_o = 0.50$ of Y-BAR, and net income is 0.75 of Y-BAR. The required rate of income tax is 50%. This provides an illustrative example with easy calculations.
9. where the proportions of Y-BAR for the BIs are fixed for the term of administration of a government, to provide a self-stabilising adjustment mechanism.

I have also demonstrated that a reasonably generous BI scheme is economically feasible in the UK. A pilot study in the UK to test out some claims made for BI schemes would be very helpful, though costly initially. Any new scheme needs to be monitored, to confirm that it meets the stated objectives.

I have not dealt with the problem of the provision of day-care for the responsible parent of a dependent child, who wishes to engage in paid employment, nor with any unintended consequences, such as illegal immigration, a changing birth-rate, environmental effects, or possible inflation. Nor have I calculated the potential savings that could be obtained from the additional beneficial effects of a BI scheme leading to reductions in the costs of different social

programs, including a healthier, more trustworthy/trusting society. As with all things, not only is prevention cheaper than cure, but the prevention of poverty is a real investment in society and the economy. Of course, the specification of a better society is not complete, and needs to include other instruments, such as the provision of education, health services, social housing and public transport. A Basic Income scheme is not a panacea to cure all ills, but it is a necessary, although not sufficient, condition for a better society.

Anne G Miller

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APPENDICES:

APPENDIX A. POTENTIAL OBJECTIVES:

A Basic/Citizen's Income scheme can help to achieve several related objectives for welfare reform.

I. Equality objectives:

- (i) value all individuals;
- (ii) end dependence on past National Insurance contribution records;
- (iii) remove the stigma and low take-up of means-tested benefits (MTBs), helping to create a more united and inclusive society.

II. Financial Security objectives:

- (i) the BI should reflect the prosperity of the economy: GDP *per capita* (for international comparisons) and average income *per capita*, Y-BAR;
- (ii) help to prevent poverty for financially-vulnerable adults and children;
- (iii) help to reduce the incidence and depth of financial poverty for all other working-age adults;
- (iv) contribute to financial security;
- (v) reduce the current time-consuming personal effort required to apply for benefits;

III. Labour market objectives:

- (i) restore incentives to work-for-pay and labour market efficiency by reducing the current high marginal deductions (income tax, National Insurance contributions and accumulated benefit withdrawals) from potential earnings facing unemployed and low-paid workers;
- (ii) give employees some countervailing power in the workplace;
- (iii) give employees some choice over their type of employment.

IV. Macroeconomic objectives:

- (i) Prevent a downward spiral of the economy;
- (ii) Stabilise economic cycles, reducing their amplitude;
- (iii) Maintain incentives to save and invest.

V. Administrative objectives:

- (i) introduce simplicity and transparency.
- (ii) reduce administration and compliance costs;
- (iii) to provide a method of calculating a ball-park figure for the standard rate of income tax, thus summarising the cost of a particular scheme in terms of a single figure (via proportions of Y-BAR and thence the standard rate of income tax);

VI. Personal Choice objectives:

- (i) give financial privacy and autonomy to individuals;
- (ii) give parents and other couples the choice of living together, or not;
- (iii) help all individuals to achieve a better work-life balance;
- (iv) help all individuals to develop to their full potential, leading to greater well being, improved health, a reduction in crime, and a renaissance of the arts.

However, a Citizen's / Basic Income by itself will not:

- (i) "redistribute income from rich to poor, from men to women, and geographically, thus reducing income inequalities";

For this objective to be achieved, the BI scheme would have to be financed by an income tax system that has been restructured.

APPENDIX B. FEATURES THAT DEFINE BENEFIT AND INCOME TAX SYSTEMS.

Benefit and income tax systems are reverse sides of the same coin, and it seems reasonable that the one should finance the other, providing a 'velvet revolution or circulation of income'. The main features of benefit and income tax systems that must be addressed, to define a benefit and income tax scheme, are:

A. **Eligibility:** who is entitled, and on what basis: eg social insurance contribution record; means-tested on income, savings, property or other wealth; or universal.

B. **The benefit and tax unit for assessment, and for receipt of the benefit and/or payment of taxes.** This could be the individual, a married couple, any other cohabiting couple, or a household.

C. **Selectivity** and **Contingency:** Selectivity refers to whether recipients receive different amounts of a benefit based on personal circumstances such as their gender, age, marital status, or their household composition, (which could occur even if they have been assessed on an individual basis). **Contingency** refers to whether preconditions must be fulfilled before the recipient becomes entitled to a particular benefit, such as an obligation to work, being involved in community service, or conformity to traditional gender roles.

D. **The level of the benefit:** this could be an amount insufficient for a modest standard of living (as in a Partial Basic Income), or sufficient than this, (as in a Full Basic Income), as judged against various benchmarks.

E. **The income tax system,** comprising:

Sources of income: wages and salaries, income from self employment, company perquisites (perks), occupational and personal pensions, dividends and interest, rental income, capital gains, gifts.

Structure: Proportional (flat-rate) tax, or a progressive tax - the rates and thresholds.

Personal allowances, tax reliefs and exemptions;

F. **The method of monitoring and compliance.**

G. **The conduit for delivery of the benefit or payment of income tax:** whether the benefit is delivered as a regular *gross* payment, or as a Negative Income Tax (a transfer payment *net* of any lesser tax due), or a Tax Credit, (a tax payment *net* of any lesser benefit due), and how frequently, and how, it is delivered or received.

APPENDIX C.

TABLE. MINIMUM INCOME STANDARDS (2007) AND BASIC INCOME LEVELS (2009-10) FOR DIFFERENT HOUSEHOLD TYPES

Household Type	Col 1 MIS* inc rent £ pw.	Col 2 prop of Y-BAR	Column 3 BI for household	Col 4 BI as prop of Y-BAR	Col 5 BI for hshld £ pw	Column 6 Current State Bens, 2009-10 **
Fem, aged 65 & over	189.67	0.5589	FBI	0.56	190.04	130.00+HB
Male, aged 65 & over	178.90	0.5272	FBI	0.56	190.04	130.00+HB
Couple, aged 65 +	265.92	0.7836	2 x FBI	<i>1.12</i>	<i>380.08</i>	198.45+HB
Fem, aged 16-64	210.65	0.6307	PBI	0.26	88.23	64.30 + HB
Male, aged 16-64	210.18	0.6194	PBI	0.26	88.23	64.30 + HB
Couple, aged 16-64	309.46	0.9119	2 x PBI	0.52	176.46	100.95+ HB
LP + toddler	274.37	0.8085	FBI + CBI	0.82	278.27	137.71+ HB
LP + PRE + P	352.09	1.0375	FBI + 2 x CBI	1.08	366.50	193.82+ HB
LP + PRE + P + S	455.19	1.3414	FBI + 3 x CBI	1.34	454.73	249.93+ HB
2 adults + toddler	350.71	1.0335	FBI+PBI+CBI	1.08	366.50	174.36+ HB
2 adults + PRE + P	439.45	1.2950	FBI+PBI+2CBI	1.34	454.73	230.47+ HB
2A + PRE + P + S	540.96	1.5941	FBI+PBI+3CBI	1.60	542.96	286.58+ HB
2A+ T + PRE + P + S	583.44	1.7193	FBI+PBI+4CBI	<i>1.86</i>	<i>631.19</i>	342.69+ HB

LP = Lone Parent, A = Adult, T = toddler, PRE = Pre-school child, P = Primary school child, S = Secondary school child, HB = Housing + Council Tax Benefits.
PBI = Partial Basic Income; FBI = Full Basic Income; CBI = Child Basic Income.

Bold shows those households purely on PBI, which does not meet MIS standards.

Italic shows households that gain disproportionately from the CI scheme.

* Source: Minimum Income Standards, 2008, gives incomes for 2007; excludes child-care cost.

** Source: 'Benefit and Pension Rates, April 2009, BRA5DWP, from www.dwp.gov.uk/

These give Pensioner Credit levels, income-based Job Seeker's Allowance for those aged 25 and over, adding £56.11 for each dependent child, and a family or Lone Parent premium of £17.30 pw, where relevant. It is assumed that all Means Tested Benefits lead to HB entitlement.

Initially printed in Miller, *Citizen's Income Newsletter*, 2009/1, p.9.

APPENDIX D.

TABLE SHOWING THE BI ENTITLEMENTS FOR 13 HOUSEHOLD TYPES WITH 9 DIFFERENT BI LEVELS EXPRESSED AS PROPORTIONS OF Y-BAR, COMPARED WITH THEIR ‘MINIMUM INCOME STANDARDS’ BENCHMARK, Col.2

Household Type	Col 2 bench- mark*: prop of Y- BAR	Col 3 CI for household	maximum-----CIs as proportions of Y-BAR ----- minimum								
				MIS CI				Rule of thumb			equiv to 2012- 13 bens
Fem, aged 65 & over	0.5589	FCI	<i>0.56</i>	<i>0.56</i>	0.55	0.53	0.52	0.50	0.48	0.45	0.43
Male, aged 65 & over	0.5272	FCI	<i>0.56</i>	<i>0.56</i>	<i>0.55</i>	<i>0.53</i>	0.52	0.50	0.48	0.45	0.43
Couple, aged 65 +	0.7836	2 x FCI	<i>1.12</i>	<i>1.12</i>	<i>1.10</i>	<i>1.06</i>	<i>1.04</i>	<i>1.00</i>	<i>0.96</i>	<i>0.90</i>	<i>0.86</i>
Fem, aged 16-64	0.6307	PCI	0.28	0.26	0.275	0.265	0.26	0.25	0.24	0.225	0.215
Male, aged 16-64	0.6194	PCI	0.28	0.26	0.275	0.265	0.26	0.25	0.24	0.225	0.215
Couple, aged 16-64	0.9119	2 x PCI	0.56	0.52	0.55	0.53	0.52	0.50	0.48	0.45	0.43
LP + toddler	0.8085	FCI + CCI	<i>0.84</i>	<i>0.82</i>	<i>0.825</i>	0.795	0.78	0.75	0.72	0.675	0.645
LP + PRE + P	1.0375	FCI + 2 x CCI	<i>1.12</i>	<i>1.08</i>	<i>1.10</i>	<i>1.06</i>	<i>1.04</i>	1.00	0.96	0.90	0.86
LP + PRE + P + S	1.3414	FCI + 3 x CCI	<i>1.40</i>	<i>1.34</i>	<i>1.375</i>	1.325	1.30	1.25	1.20	1.125	1.075
2 adults + toddler	1.0335	FCI+PCI+CCI	<i>1.12</i>	<i>1.08</i>	<i>1.10</i>	<i>1.06</i>	<i>1.04</i>	1.00	0.96	0.90	0.86
2 adults + PRE + P	1.2950	FCI+PCI+2CCI	<i>1.40</i>	<i>1.34</i>	<i>1.375</i>	<i>1.325</i>	<i>1.30</i>	1.25	1.20	1.125	1.075
2A + PRE + P + S	1.5941	FCI+PCI+3CCI	<i>1.68</i>	<i>1.60</i>	<i>1.65</i>	<i>1.59</i>	1.56	1.50	1.44	1.36	1.29
2A+ T + PRE + P+ S	1.7193	FCI+PCI+4CCI	<i>1.96</i>	<i>1.86</i>	<i>1.925</i>	<i>1.855</i>	<i>1.82</i>	<i>1.75</i>	1.68	1.575	1.505
		MARGIN	0.028	0.030	0.030	0.034	0.036	0.040	0.044	0.050	0.054
		tax rate + margin	0.426	0.42	0.42	0.408	0.402	0.39	0.378	0.36	0.348
		disregard adds:	0.112	0.104	0.110	0.106	0.104	0.100	0.096	0.090	0.086
		Total tax rate	0.538	0.524	0.53	0.514	0.506	0.49	0.474	0.45	0.434

LP = Lone Parent, A = Adult, T = toddler, PRE = Pre-school child, P = Primary school child, S = Secondary school child, HB = Housing + Council Tax Benefits, * excludes child-care cost

Bold shows those households purely on PBI, which does not meet MIS.

Italic shows households that gain disproportionately from the CI scheme.

Pink figures show where the BI is closest to the MIS.

Margin includes: safety net, costs of disabilities, administration costs, etc.

APPENDIX E. TABLES COMPARING TAX RATES OBTAINED FROM ACTUAL POPULATION PROPORTIONS WITH A RULE-OF-THUMB SET

TABLE TO CALCULATE A SINGLE BALL-PARK FIGURE FOR THE RATE OF A PROPORTIONAL INCOME TAX WHICH COULD PAY FOR THE PROPOSED BI SCHEME, USING ACTUAL POPULATION PROPORTIONS

POPEN	POPEN PROPS 2007	Proportions of Y-BAR, for different schemes <-- least generous ----- most generous -->							
		0.3	0.4	0.43	0.45	0.5	0.56	0.55	0.6
65 +	0.16	0.3	0.4	0.43	0.45	0.5	0.56	0.55	0.6
Vulnerables	0.27	0.3	0.4	0.43	0.45	0.5	0.56	0.55	0.6
work-age	0.38	0.15	0.2	0.215	0.225	0.25	0.26	0.275	0.3
Child	0.19	0.15	0.2	0.215	0.225	0.25	0.26	0.275	0.3
Total*		0.2145	0.286	0.30745	0.32175	0.3575	0.38975	0.39325	0.429
+ margin		0.055	0.045	0.042	0.040	0.035	0.03025	0.030	0.025
=		0.27	0.33	0.35	0.36	0.39	0.42	0.42325	0.454
+ Earnings Disregard	0.38	0.057	0.076	0.0817	0.0855	0.095	0.0988	0.1045	0.114
		0.33	0.41	0.4317	0.45	0.49	0.52	0.53	0.57

TABLE FOR RULES OF THUMB TO CALCULATE A SINGLE BALL-PARK FIGURE FOR THE RATE OF A PROPORTIONAL INCOME TAX WHICH COULD PAY FOR THE PROPOSED BI SCHEME, USING THE THIRD RULE-OF-THUMB PROPORTIONS FOR POPULATION.

POPEN	POPEN PROPS	Proportions of Y-BAR, for different schemes <-- least generous ----- most generous -->							
		0.3	0.4	0.43	0.45	0.5	0.56	0.55	0.6
65 +	0.20	0.3	0.4	0.43	0.45	0.5	0.56	0.55	0.6
Vulnerables	0.20	0.3	0.4	0.43	0.45	0.5	0.56	0.55	0.6
Working	0.40	0.15	0.2	0.215	0.225	0.25	0.26	0.275	0.3
Child	0.20	0.15	0.2	0.215	0.225	0.25	0.26	0.275	0.3
Total*		0.21	0.28	0.301	0.315	0.35	0.38	0.385	0.42
+ margin		0.055	0.045	0.042	0.040	0.035	0.030	0.030	0.025
=		0.27	0.33	0.34	0.36	0.39	0.41	0.42	0.45
+ Earnings Disregard	0.40	0.06	0.08	0.086	0.09	0.10	0.104	0.11	0.12
		0.33	0.41	0.43	0.45	0.49	0.51	0.53	0.57

NB. *Multiply the population proportions times the proportions of Y, and add over the population.

The column for Full BI = 0.43 of Y-BAR and Partial BI = 0.215 of Y-BAR matches up with Pension Credit, (£142.70 pw.) for those over pension entitlement age, and Jobseekers Allowance/Employment and Support Allowance (£71.00 pw), introduced in 2012-13.

APPENDIX F. SOME FIGURES FOR THE UK.

	2007	2008	2009	2010
Population: total	60,975,400	61,383,200	61,792,000	62,262,000
aged 65 or over	9,779,100	9,929,900	10,105,700	10,304,600
aged 0-15 inclusive	11,509,400	11,517,200	11,549,000	11,608,100
GDP	£1,401,042m	£1,446,113	£1,393,705m	£1,458,452m
GDP <i>per capita</i> : £ per annum	£22,977.00	£23,544.00	£22,538.00	£23,527.00
£ per week	440.65	450.30	432.24	451.20
INCOME	£1,078,911m	£1,100,652	£1,044,908m	£1,076,419m
Average Income <i>per capita</i> , (Y-BAR)				
£ per annum	£17,695.00	£17,930.83	£16,910.00	£17,288.54
£ per week	339.35	342.94	324.30	331.56
BASIC INCOMES - EXAMPLE	2009-10	2010-11	2011-12	2012-13
Full BI = 0.50 of Y-BAR: £ pa	£8,847.50	£8,965.42	£8,455.00	£8,644.27
£ pw	169.68	171.47	162.15	165.78
Partial BI = 0.25 of Y-BAR: £ pa	£4,423.75	£4,482.71	£4,227.50	£4,322.14
& Child BI £ pw	84.84	85.73	81.08	82.89
MEANS-TESTED BENEFITS*, £pw:				
Pension Credit for single person	£130.00	£132.60	£137.35	£142.70
JSA / ESA Single person, aged 25 +	£64.30	£65.45	£67.50	£71.00
JSA / ESA Single person, aged 16-24	£50.95	£51.85	£53.45	£56.25
Carer's Allowance	£53.10	£53.90	£55.55	£58.45
Child Tax Credit, 1 st child (w/d 41%)		£54.66	£59.29	£62.04
Child Benefit: 1 st child		£20.30	£20.30	£20.30
subsequent children		£13.40	£13.40	£13.40
National Minimum Wage, £ per hour	£5.80	£5.93	£6.08	£6.19
INCOME TAX RATES & THRESHOLDS				
Personal allowance	£6,475	£6,475	£7,475	£8,105
Standard rate of tax	0.20	0.20	0.20	0.20
plus National Insurance contributions	+ 0.11	+ 0.11	+ 0.12	+ 0.12
Higher rate threshold (gross income)	£43,875	£43,875	£42,475	£42,475
Higher rate of tax	0.40	0.40	0.40	0.40
plus National Insurance contributions	+ 0.01	+ 0.01	+ 0.02	+ 0.02
Additional rate threshold		£156,475	£157,475	£158,105
Additional tax rate		0.50	0.50	0.50
plus National Insurance contributions		+ 0.01	+ 0.02	+ 0.02

*Recipients of Means-Tested-Benefits are usually eligible for Housing Benefit and Council Tax Benefit also.

SOURCES FOR APPENDIX F:

Mid-year UK population estimates were obtained from www.statistics.gov.uk/statbase/Product.asp?vlnk=15106

GDP = Gross Domestic Product (output method) at market prices, series YBHA, from Table 1.2 of the *United Kingdom National Accounts, The Blue Book*, 2011 edition.

GDP per capita, series IHXT, from Table 1.5, of *The Blue Book*.

Income = 'Total Resources of Households and Non-Profit Institutions Serving Households', series QWMF, from Table 6.1.3 of *The Blue Book*.

Child Benefit and Child Tax Credit rates from www.hmrc.gov.uk

Tax rates and thresholds from www.hmrc.gov.uk

'Benefit and Pension Rates', April 2009 – 2012, BRA5DWP, or DWP035, from www.dwp.gov.uk.