

# Commentary on Brewer, Saez, and Shephard, ‘Optimal Household Labor Income Tax and Transfer Programs: An Application to the UK’

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Comments  
on  
Optimal Household Labor Income Tax and  
Transfer Programs  
by  
Mike Brewer, Emmanuel Saez, and Andrew  
Shephard

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Brewer, Saez and Shephard have produced a very interesting chapter which covers a lot of ground. The chapter begins with a brief description of the essential features of the UK tax system. It follows with a pedagogical presentation of the main results of the theory of optimal taxation, with extensions to account for migrations, and the treatment of families. Finally the authors use the empirical evidence which is available on labor supply elasticities to implement empirically the theory of optimal taxation and as a consequence provide both theoretical and empirical foundations for a wide ranging tax reform. This last part of the paper is particularly innovative. The application of optimal tax theory, developed more than thirty years ago by James Mirrlees, has been made difficult by a number of unpleasant properties, in particular the result that, under Mirrlees' original assumptions, there should be a zero marginal tax rate on the highest-earning individual. As far as I know, this paper is the first to bring together the theory and the empirical knowledge of the labour economists to back the proposal of an income tax reform. This is path-breaking work.

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\*I benefited from many discussions with James Banks, Richard Blundell, Anne Laferre and the authors and from detailed comments of Stuart Adam.

I shall divide my comments into two parts. The first part is devoted to the chapter itself, which studies a static model of labor supply, and focusses on family issues. I am in broad agreement with the analysis proposed by the authors, but I am unsure whether I would back their precise proposal. The second part of my comments takes a broader view, and presents some thoughts on the long run evolution of the tax system with the next thirty years of the UK tax system in mind.

## 1 The chapter itself

Income tax in the UK, seen from France, is notable for their simplicity and transparency. There are only three brackets for earned income and most taxpayers, those with an annual taxable income between 5,435 and 41,435, face a marginal rate of 20% (fiscal year 2008-09). The marginal rate on higher incomes is 40%. National Insurance Contributions (NIC) are a bit more involved. The employee rate is 11% up to an upper earning limit, where it becomes 1%, but the current plan to align this upper limit with the higher-rate income tax threshold will make things simpler.

The administrative side of income tax, the Pay-As-You-Earn (PAYE) scheme, is particularly impressive: of 31.2 million taxpayers in 2006-07, fewer than 9 million were required to complete a return.

Of course benefits and tax credits are more complex: they depend on details of the household size and structure, on top of individual incomes. The authors rightly focus their attention at the boundary between taxes and benefits where the UK welfare state may leave room for improvement.

As already mentioned, the paper matches the conditions for the optimality of a tax schedule with the available evidence on labor supply elasticities. Both the decision to participate or not in the labor force (extensive margin) and the number of hours worked in case of participation (intensive margin) are duly taken into account.

The authors discuss at length the behavior of the wage earners at the top of the wage distribution and put forward some (controversial) tentative estimates of the labor supply elasticities of the high income tax payers. At the other end of the income distribution, a lot of econometric work is available in the UK on the behavior of lone parents and is described in detail here. Comparatively, not much is said on the behavior of married mothers, nor on men.

With this partial information in hand, the authors offer a proposal in two parts. The first part consists of ‘immediate changes’ intended to reduce the

level of participation tax rates at the bottom of the income distribution. This is made through tax reductions, which are not financed at this stage. The second part of the proposal is a wide ranging reform, the *Integrated Family Support* (IFS), which integrates family benefits and housing benefits into the income tax schedule. The main aim of IFS is to simplify the distribution of family benefits, to make it more transparent and better adapted to the current situation of the families. This reform is financed largely through redistribution among low and middle income groups, lowering the income tax personal allowance, and reducing benefits for better-off families. The authors' proposals are thought-provoking and stimulating. I have a couple of remarks:

1. A motivation for the suggested 'immediate changes' lies in possible inefficiencies of the current system. The authors quote ?, who finds the effective marginal tax rates facing lone parents to be beyond the Laffer bound for most of the period since 1979 (though this does not seem to be true any more). According to ?, this inefficiency is likely to hold more specifically for lone parents with children of school age: lone parents with very young children are much less responsive to financial incentives to work. There is no doubt that, for any overtaxed segment of the population, including the lone parents with children of school age, reducing the participation tax rate should be a priority, indeed a self-financing measure.

On the other hand, the authors' suggestions are not limited to lone parents, but concern most low earners, on the grounds that they face very large participation tax rates. But large participation tax rates, including tax rates above 100/% (i.e. benefits when out of work exceeding net income when working, which typically may happen for people with very low earning capacity), are not a symptom of inefficiency (see ?). The proposed change may very well be worthwhile if one favors redistribution towards low earners but it does not follow directly from theory: it reflects the preferences of the authors.

2. As the authors mention, more studies are needed to make precise the details of the *Integrated Family Support* before implementation. Two issues in particular seem worth investigating:
  - (a) Most of the description of the reform implicitly supposes a relative permanence of the couples. It would be nice to spell out how it would fare in case of separations, formation of new couples, divorces, and in particular whether there should be some formal

links with judiciary decisions to assess periods of rights. Should one expect behavioral changes in family formation?

- (b) To achieve simplification and transparency, the proposed reform does not go in the direction of more decentralization. It is sometimes said that a close knowledge of the beneficiaries could make the welfare state more efficient. This presumably would involve leaving more decision power at the local level. Some discussion of this issue, which is likely to be important for housing and council tax benefits, would be welcome.

## 2 Insurance and intertemporal smoothing

The reform suggested by the authors is certainly to be commended in that it looks at the overall impact of the tax and benefit system. But it keeps a static viewpoint. I would like to suggest some directions for changes linked to the passing of time. The following remarks are highly tentative, if only because empirical knowledge is scarce on these issues.

The typical life cycle profile involves financing education at an early age, a fluctuating wage rate that generally increases over time, at least up to mid age, with possibly episodes of unemployment, sickness or maternity leave (involving perhaps changes in the preference for leisure or work at home instead of on the market), followed by a period of decreasing wages into retirement. Any optimal tax and benefit system involves some mutualization of risks, as indeed we see through students loans, unemployment benefits and pensions. The limits to insurance and redistribution come from the limited knowledge of governments, which leaves room for opportunistic behavior (such as the reaction of labor supply to tax rates), which is the object of study of optimal tax theory.

My aim here is *not* to come back on the lessons of optimal tax theory, which are detailed in the Banks Diamond Chapter in this book. I simply want to sketch some possible directions of integration of these intertemporal or insurance aspects into the welfare system. Such an integration may take a long time to achieve, but is likely to be a fact of life thirty years from now when the next generation of economists at the IFS discusses a follow up to the Mirrlees report!

## 2.1 Return on capital

By definition, the intertemporal aspects of the welfare state imply transfers over time, and the beneficiaries are bound to compare the returns on these transfers to the cost of credit or the (after tax) returns on savings that prevail in the market. A prerequisite is therefore to briefly review how the market works in the UK (see Banks and Diamond for a thorough study of the issues bearing on the taxation of capital).

### 2.1.1 The current state of affairs

The Meade report recommended not taxing capital, in large part on grounds of neutrality of the tax system towards diverse investments. From a consumer perspective, while progress in this direction has been made since the publication of the Meade report, there are still some differences in the tax treatment of the three main savings vehicles of the British households: housing, financial instruments and pension contributions.

Owner-occupied homes do enjoy a near absence of taxation. The services brought by the occupation of the home are not recorded as income and therefore left untaxed<sup>1</sup>. Furthermore, capital gains when selling the main home are not subject to tax either.

On the other hand, savings through financial channels are subject to taxes. The most glaring of those taxes is the corporate tax on profits, which creates a premium for debt vs. equity finance of firms<sup>2</sup>. Of financial capital income accruing to the households, currently basic savings in Individual Savings Accounts (up to the annual ceiling of 7,000 of accrual to deposits) are treated like housing: they are exempted of all taxes on interest income, dividends or capital gains. Pension contributions are deductible from current taxable income, but the pensions themselves (and therefore the returns on the pension contributions) are subject to income tax at retirement time. I am not aware of a convincing justification for this difference of treatment, which possibly pushes higher-rate tax payers to save for their pensions in the expectation that they will be basic-rate tax payers when retired.

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<sup>1</sup>The council tax is collected from the person that occupies the home. Its burden, the part of the tax that exceeds the value of the local public services, such as garbage collection, provided by the city, is likely to fall on the owner.

<sup>2</sup>One rationale for corporate taxes is that it may be a way to track the income of entrepreneurs who otherwise would evade easily other forms of taxation.

### 2.1.2 Intertemporal equity and the rate of return on capital

Idiosyncratic returns to capital in themselves create some of the most glaring inequalities: the founder of Microsoft is one of the richest persons in the world; more prosaically, the owner of a well located house can be much better off than someone who puts his savings in government bonds. A government who wants to reduce the inequalities in people life-time utilities should tax some of these very high returns on capital.

On the other hand, to maintain incentives to put capital to its most productive use, the incomes of entrepreneurs must reflect the profits that they generate. For the discussion to come, I assume that there is a normal macroeconomic rate of return, often referred to as the safe rate, that is left untaxed. The tax treatment of returns above this normal rate is immaterial for the remainder of the discussion.

## 2.2 Towards a closer intertemporal integration of taxes and benefits?

A history-dependent tax and benefit scheme could be experimented with along the following lines. Aside from private wealth or debts, any resident would hold an account with the government, retracing her/his cumulative debts or claims towards her/his fellow citizens. To fix ideas, let  $D_t$  be the balance of this *social account* at the end of year  $t$ , that is the nominal debt that the person has contracted towards society. Typically,  $D_t$  would start at zero at birth. It would decrease when the person contributes by paying high rate taxes, contributing to a public pension fund. It would increase when drawing on health and welfare benefits or receiving a pension. For instance,  $D_t$  might evolved over time through the relationship

$$D_{t+1} = (1 + \rho_t)D_t + B_t,$$

where  $\rho_t$  is the normal interest rate discussed above which would be used to update the account balance from one year to the next, and the term  $B_t$  represents private benefits obtained from society during the year  $t$  depending on circumstances, such as:

when the government finances one's education, the cost of the studies and of the possibly associated scholarship increases  $B_t$ ;

a worker who pays taxes and National Insurance Contributions sees a fraction of his payments accounted for in a reduction of  $B_t$ ; levies on educated workers might be designed so that they reimburse the education subsidies which they received earlier in life;

unemployment benefits would increase  $B_t$ ;

a retired person with a negative  $D$ , linked to contributions to a public pension fund, may draw on her/his accumulated capital;

In my opinion, the aim of such an accounting scheme would *not* be to get a precise description of all the costs and benefits of a private individual towards society. Indeed pure public services (such as police and defence,..) or infrastructures, by their very nature, cannot be easily measured. But it would be useful to keep track of the publicly provided *private* services, such as education, welfare contributions and benefits, and pensions, if only to make sure that the various benefit schemes, which are often independently designed, be evaluated with a global perspective.

The tracking over time of the social debt  $D_t$  would allow the government to make the tax and benefit rules dependent on the value of  $D_t$ . Both equity and behavioral elasticities would probably play an important role on the actual design of the rules that could be implemented. For instance, one might think of modifying at the margin the simple current income tax scheme, by having brackets and rates vary with  $D_t$ : following the above examples, this would simultaneously make students refund some of their scholarships in taxes, reduce the benefits of people who spent too long on out-of work benefits, or mimic aspects of a minimum pension.

The main advantage of such a time dependent tax and benefit scheme is to allow people to better plan the timing of their work life, bypassing some of the credit constraints. The costs of education would be supported by the students at the time where they would be able to afford them and, if appropriately discounted as in the above formula, the normal interest rate would be the benchmark return on investments in human capital. The scheduling of breaks to rear children or take care of old parents would be easier and tailored to circumstances. If the accounting were extended to pensions, it also might allow for more flexibility in the age of retirement and/or working part-time at an old age. This type of development is made possible by the information society and the low cost of computerization. One difficulty is that for such an extended welfare state to work, the rules have to be kept stable and predictable: there must exist a long run commitment of the population to the benefits of such a renovated welfare state, so that it binds successive governments independently of political changes.