## COMMENTS ON SESSION I: TAXATION AND THE LABOUR MARKET

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These papers approach the issue of taxation and the labour market from different angles. The paper by Martinez-Mongay and the paper by Gokhale and Kotlikoff elaborate indicators of the fiscal burden on labour, based, respectively, on a macroeconomic, "backward looking" approach and a microeconomic, "forward-looking" one. The paper by Nødgaard and the paper by Frederiksen focus on the efficiency effects of tax options, respectively, an increase in taxation on highearners and tax cuts on wage and capital income.

Applying a well established methodology to national accounts figures integrating OECD and European Commission sources, Martinez-Mongay breaks down total taxes into labour, capital and consumption taxes. The breakdown highlights: the steady increase in the overall taxation of labour in the industrial world, particularly in the countries of the European Union and during the 1980s; the relative stability in the overall taxation of (income from) capital and its convergence across industrial countries; the stability in the overall taxation of consumption and its convergence across EU countries.

The story told by the figures collected by Martinez-Mongay is that of the increasing revenue requirement entailed by the "maturation" of the welfare state in Europe. The same figures suggest that the increase in the need for revenues has been met, by and large, by the increase in the tax burden on labour. At the same time the non-decline in both the overall tax rate and the tax revenue associated with capital seems to suggest that the increase in the mobility of the tax base has not been such as to make the taxation of capital much more inefficient than it used to be.

I find the story on the whole persuasive, including the tentative conclusion that news of the death of the taxation of capital at the hands of tax competition have been greatly exaggerated.

Looking at the trends highlighted by this very informative paper two rather speculative questions occurred to me, for which I have no ready answer.

The first concerns the eventual place of segniorage revenue in the framework for analysing the structure and evolution of taxation, which as applied so far takes only into account explicit tax revenue. This question might appear hardly relevant in today's low inflation environment, even if one found a satisfactory answer to the question that it presupposes, namely, the allocation of segniorage to an appropriate

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tax base (should seigniorage be seen as a form of taxation of (income from) capital?). Within the time frame of the study, however, segniorage has been an important source of government revenue, at least for some countries: for example, estimates for segniorage in Italy during the 1980s come close to 1 per cent of GDP per year on average (Pench, 1993).

The second question is prompted by the observation of the relative stability of the effective tax rate on consumption since the early 1970s in contrast with the relentless rise in the effective tax rate on labour at least until the late 1990s. In the light of the theoretical equivalence between a uniform sales tax and a linear income tax with a suitably chosen exemption level and marginal tax rate, one might have expected less diverging trends between the two tax rates. The question then becomes whether a misguided preoccupation with redistribution might have contributed to an excessive weight of labour taxation in the overall tax package.

How redistribution concerns might be misguided or, more precisely, how costly might be to disregard the efficiency effects of taxation is a theme that runs through the paper by Nødgaard and also the paper by Frederiksen. Both papers highlight, based on simple but not unrealistic assumptions, how the revenue impact of tax reform at unchanged behaviour might be a poor indicator of its true effects.

Specifically, Nødgaard highlights an often neglected but potentially important effect of redistributive taxation, that is, the effect on productivity and hence (pre-tax) income of the changes in the relative supply of factors induced by the tax itself. The size of this effect depends on how it is difficult to substitute one factor for another, that is, the (inverse of the) elasticity of substitution between them . In this respect the paper reminds one of Allen's (1982) revision of the standard Mirrlees model of optimal income taxation, which is explicitly based on the relaxation of the assumption of fixed productivities and hence fixed relative pre-tax wages.

Modelling the economy as a CES production function with two factors – typified by low-skilled and high-skilled workers – and concentrating on the revenue effects due to the behavioural response of the high-skilled, Nødgaard reaches the conclusion that such effects might reduce the revenue that would obtain if behaviour did not respond by at least one third and possibly by as much as three quarters, depending on the assumptions about the elasticity of supply of high-skilled labour and the elasticity of substitution between the two types of labour.

No matter how strongly held are one's subjective preferences for equalising utility, Nødgaard's simulations are a neat illustration of the need to take into account objective (although admittedly imprecise) estimates of factor elasticities in devising tax policy.

In the same vein, the paper by Frederiksen shows that for a high-tax economy such as Denmark and plausible values of supply elasticities, the behavioural responses of top wage earners and savers can be expected to largely offset or, in the case of the latter, even dominate the direct revenue effect (*i.e.*, ignoring tax-induced behavioural changes) of tax reform. The relative weight of such direct and indirect

effects is neatly encapsulated in the "revenue recovery ratio", which Frederiksen calculates for different tax reform options.

Although explicitly based on a partial-equilibrium approach that takes (pre-tax) factor remunerations as given, I find the approach proposed very attractive from the policy-making viewpoint, especially on account of its relative simplicity compared with that of computable general equilibrium models. Its application would represent a considerable step forward compared to the prevailing crude practice of assessing tax policy options under unchanged behaviour assumptions.

The joint reading of the two papers prompts me to make few additional remarks.

Both papers assume full employment of factors at market-clearing prices – prices that respond to relative supplies in Nødgaard's analysis (limited to a two-factor economy) while they are fixed in Frederiksen's. One might speculate on the implications of releasing the market-clearing assumption. For example, if low-skilled workers in Nødgaard's model were entitled to a minimum (pre-tax) wage, the fall in their productivity resulting from the tax-induced reduction in the supply of high-skilled labour would show up in higher involuntary unemployment rather than lower wages. This would presumably reinforce the caveat on the unintended consequences of distributional policies that is at the core of the paper. At the same time, the transfer element in the tax package, which is unconditional in both Nødgaard's and Frederiksen's simple models, could take the form of an employment subsidy, thereby offsetting, to some extent, the wage/employment implications of higher taxes.

It is also tempting to combine the insights offered by Nødgaard and Frederiksen, on the importance of elasticities of substitution and capital supply distortions, respectively. Frederiksen's analysis suggests that lowering and rationalising the taxation of capital would result in increases in the quantity and the productivity of the capital stock such as to make the reform more than self-financing. In turn, if capital and high-skilled labour are complementary, as it is usually assumed, the improved supply of capital would result, applying the main insight of Nødgaard's paper, in higher productivity and remuneration of high-skilled workers and, to a lesser extent, of low-skilled workers as well. Even at given tax rates for labour, revenue would increase. The policy conclusion would be that, streamlining the taxation of capital may be the most effective policy to make the low-skilled better off, in absolute if not relative terms.

A final conclusion is that these two papers, especially Frederiksen's, bring home forcefully is that tax reform could offer the opportunity for substantial "free lunches". The question then arises why this opportunity is not seized by policy makers. I guess that the most persuasive answer can be found in the political economy of special interests.

While the papers by Nødgaard and Frederiksen aim at providing rough estimates of the efficiency effect of tax reform options, the Gokhale and Kotlikoff's analysis of the costs and benefits of working skirts explicit social welfare

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considerations. Its tone, if anything, appears to reflect the traditional policy makers' concern for maximising labour supply regardless of its social welfare cost.

The importance of the paper lies in the attempt to quantify, in the context of the US system, the lifetime tax and transfers implications of the decision to work at different points of the earning (and age) scale, in contrast with the standard approach focusing exclusively on the immediate changes in the tax/benefit position associated with the transition from non-work to work (for a review of such standard indicators see for example Carone and Salomäki, 2001).

It is generally acknowledged, for example, that the impact on labour supply of a payroll tax will depend on the degree to which workers value the benefits linked to the payment of the tax. However, the standard approach to calculating the marginal effective tax rate associated with the move from non-employment to employment typically disregards the benefits that the worker buys when paying the tax. By contrast, such benefits are incorporated in the marginal net tax rates on working calculated by Gokhale and Kotlikoff, which are based on actuarial present value of lifetime net tax payments. Their analysis however does not capture an effect of current work decision on future income, namely, the prospect of higher future wages arising from a continuous work history, and this probably represents a limitation of the approach.

The results presented are interesting, although I do not feel able, even for the US, to draw a proper comparison between the two types of indicators – those of the standard approach, which one might call 'instantaneous' and those proposed by Gokhale and Kotlikoff, which might be called the 'intertemporal' (*inter alia* because the standard indicators are typically calculated for cases that differentiate between the situation of the two earners in the household, while the data presented by Gokhale and Kotlikoff appear to assume that the same situation for the two spouses). However, a cursory look at the figures confirms a stylised fact and suggests a hypothesis.

The stylised fact confirmed by Gokhale and Kotlikoff's calculations is that it does not pay to take up part-time employment when the household is recipient of social assistance. The hypothesis concerns the extent of the work incentive problem identified by Gokhale and Kotlikoff in other industrial countries. Bearing in mind that, especially after the introduction of the Earned Income Tax Credit, the work incentive situation for the low paid appears to be more favourable in the US than in most other countries according to the 'instantaneous' indicators, one might venture that the work incentive problem highlighted by Gokhale and Kotlikoff 'intertemporal' indicators for the US is even more acute in other countries. It would be therefore interesting to see the approach implemented on a cross-country basis.

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