COMMENTS ON SESSION II: TAXATION AND FISCAL POLICY

Pedro Duarte Neves[*]

Let me start by thanking the organizers, and Daniele Franco in particular, for having invited me to participate as a discussant in this conference. I found the six papers included in this session particularly stimulating. In the discussion, my comments will be organized in four main sections.

1. Tax reforms: two case studies

Japan and Australia are two very different economies. In Australia almost uninterrupted economic growth has been observed since the 1990-91 recession, whereas in Japan GDP growth in the last 5 years did not exceed 0.5 per cent (or 0.1 per cent per year); Australia has a balanced budget, contrasting with the 7.1 per cent deficit in Japan in 2002; (gross) public debt is 18 per cent of GDP in Australia and 157 per cent of GDP in Japan; Australia has a current account deficit, whereas Japan has a current account surplus. Finally, in Japan the intervention interest rates are virtually zero, whereas in Australia they are at 4.75 per cent. It is very interesting to compare the characteristics of fiscal reforms in these economies, with so marked differences in macroeconomic conditions.

The assessment of a tax reform in Japan has to take into consideration the present situation of the Japanese economy. In particular, two powerful forces are driving the economy in a dangerous way:

a) firstly, the vicious debt-deflation spiral, which is raising month after month the real burden of outstanding debt; deflation is also decreasing consumption, as consumers postpone purchases in a context of falling prices; these two effects together have conducted to an increase in the number of bad loans;
b) in second place, the path of the gross public debt seems to be very close to an unsustainable path, if a dramatic change in public accounts does not take place in the very next future.

The OECD estimates that a primary surplus of 1¾ per cent of GDP is necessary to attain a debt/GDP ratio at some 180 per cent of GDP by 2010. As the primary deficit is currently around 6½ per cent of GDP – the largest deficit of the OECD economies – a significant consolidation effort is required. In a clear unfavourable background – extremely low potential output growth and deflation, leaving aside, for the time being, the interest rate risk and the ageing pressures on total expenditure – I would like to raise the issue of the consolidation effort implicit

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in the recent fiscal policy changes. So, my very first question to Mr. Nagaosa is precisely the estimated impact in public accounts – either in the deficit or in the structural deficit – of the proposed reform. Can we expect that these fiscal changes will bring fiscal accounts to a more sustainable path?

I have also a specific question for Mr. Smith. The paper mentions that higher health funding costs – due to demography and the average cost of programmes (¼ and ¾ of the estimated cost, respectively) – are projected to require an increase in public spending of about 4¼ per cent of GDP, up to 2040. This figure seems to be extremely large, at least when compared with similar estimates available for Europe. For instance, a 2001 Economic Policy Committee report – "Budgetary challenges posed by ageing populations" – estimates an increase in health expenditure in the period 2000-2050 of about 1.3 to 1.7 per cent (2.2 to 2.7 per cent of GDP if long-term care is also included). It would be interesting to have your views on the likely reasons behind the discrepancies between these estimates.[1]

Moreover, I would like to raise two issues and hear the comments from our Japanese and Australian colleagues. The first one deals with consumption taxation and the second one with environmental considerations. Both countries have introduced very recently value-added taxes (in the Australian case, the Goods and Services Tax was introduced in July 2000; the Japanese VAT was introduced in 1989). In both countries, revenue generated by this tax is a small fraction of total fiscal receipts and, in both cases, it was mentioned that the weight of this tax should increase in the next future. It is also the case that a flat rate applies in both countries (10 per cent in Australia and 5 per cent in Japan). The basically proportional nature of this tax – or regressive with respect to disposable income – suggests that further increases in VAT revenue could be obtained through the existence of two different VAT rates (introducing an higher one for durables and services, for instance). Such structure for the VAT would also produce some distributional effects. How do you assess the role of consumption taxation as a mean to increase the tax burden and, simultaneously, from the perspective of its distributional impact?

Finally, at least at a first glance, it seems that environmental considerations did not play a significant role in the tax reforms carried out in Japan and Australia. Reductions in greenhouse gas emissions – in particular CO_2 – are a very important issue in international policy, being now widely accepted the use of market-based instruments. I would like to have your views on the role of such considerations in the recent tax policy changes.

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[1] Possible candidates are the high medical price inflation, the increased use of new and more expensive technology, the increased demand of health care (in line with increased prosperity) and the increased coverage of public provision of health care.

2. Tax policy analysis

In this second topic I will deal with the role of different modelling techniques in the design of fiscal reforms. In order to properly assess the impacts of a tax reform or to compare alternative tax strategies it is essential to use adequate modelling tools. One could think of, at least, three different types of modelling techniques.

A) General equilibrium models

Endogenous growth dynamic general-equilibrium models are very useful to analyse, amongst other, the following issues:

- the impact on long-term GDP growth of tax policy changes (tax policy has the potential to affect long-term growth and not just for generating temporary level effects);
- the trade-off between efficiency and welfare (taxation mix), in particular in situations where binding restrictions in public accounts apply;
- the sustainability of social security systems.

B) Macroeconometric models

Macroeconometric models are very useful to estimate the short-run (say one to two years) impact in the economy – demand components, disposable income, prices, etc. – of a given tax reform. However, in general they are not adequate to assess the impact of Keynesian-type fiscal policies (stimulus in the form of public investment or various tax incentives) in a situation where Ricardian equivalence elements are likely to play a key role in individual decisions, as it is it seems to be the case of Japan already.

C) Microeconometric models

The need for this type of models is dealt with in the paper by Hort and Ohlsson. Microeconometric models play a key role in the empirical analysis of tax changes (see for instance Blundell, 1995[2]). This type of models is very useful at least for two different purposes:

C1) Incorporating behavioural responses of individual agents:

a) the analysis of behavioural responses to changes in work incentives (labour supply elasticities), both in terms of participation and hours of work;

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[2] Blundell R. (1995), "Tax Policy Reform: Why We Need Microeconometrics", *Fiscal Studies*, Vol. 13, No. 3, pp. 106-25.

b) estimation of demand systems, allowing for the identification of the complete set of own and cross price elasticities, extremely useful to assess the impact of indirect tax changes;

c) the degree of which new savings were generated by tax-exempt savings accounts (in general, the elasticities that describe savings decisions, over the life cycle).

C2) Individual welfare and distributional issues:

a) the impact of reforms on individual welfare and distributional issues, as we have seen this morning in Kaplanoglou's paper;[3]

b) how different types of households are affected by a given tax change (by age, sex, number of children, situation in the labour market).

It would be interesting to know which role was attached to these modelling techniques in the Australian and Japanese tax reforms.

3. Taxation and stabilization

As we know, cyclical fluctuations in economic activity have a sizable influence on government budget. Such effects on balances have a stabilising influence on economic activity (that is, they fulfil the role of budgetary automatic stabilisers). The size of the automatic stabilizers is influenced by various factors:

- cyclical postioning of the economy;
- the volatility of economic cycles;
- weight of the general government sector;
- the degree of cyclical sensitivity of tax bases;
- the generosity of unemployment compensation schemes;
- the sensitivity of unemployment to output fluctuations;
- the progressivity of the tax system.

Two papers presented this afternoon deal with this last issue. Buti and van den Noord present the result that higher and strongly redistributive taxes and benefits have destabilising effects in the event of supply shocks. That is, if supply shocks do prevail, the trade-off between stabilization and efficiency does not exist. Banca d'Italia's paper indicates that there is a value of the income elasticity of the personal income tax above which its increase does not determine a higher degree of stabilisation. This result holds for the *average past shock* in the economy, either from the supply or the demand side or any combination between them. These interesting and fairly similar results were obtained using two totally different approaches.

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[3] Kaplanoglou G. (2003), "Distributional Aspects of Indirect Taxation in Greece: 1988-2002", paper presented in the first session, "*Taxation and the labour market*".

It is well known that, in the case of demand shocks, fiscal stabilisers play a very useful role as they cushion the impact both on output and prices; in the case of a temporary supply side shock automatic stabilisers do smooth output, but at the cost of higher inflation. If the supply shock is permanent, automatic stabilisers delay the necessary adjustment towards the 'new' level of potential output. As Blanchard wrote, "with respect to aggregate demand shocks, automatic stabilisers stabilise, and this is good. With respect to aggregate supply shocks, automatic stabilisers also stabilise, but this is not good: they do not allow for the adjustment of output that would be desirable in this case".[4] Buti and van den Noord go a little bit further. In their model, automatic stabilisers operate not only on the demand side but also on the supply side, as higher stabilisers make the supply schedule steeper.

On this paper, I would like to make some few comments. The model of wage setting raises some interesting issues. First, the model is not expressed in terms of hours but in terms of heads (as if labour supply were decided on the basis of a "take it or leave it decision on a fixed amount of hours of work"). However, the relevant variable to analyse progressivity is wage income and not just the wage, as adjustment through hours worked is also a key element.

The graphical analysis shows that the progressive tax system operates as an automatic stabiliser on the labour market when it takes place an increase in the demand for labour (at an initial wage of w); in the case of a negative supply shock, however, progressivity drives employment further way from the initial equilibrium. What type of relevant negative labour supply shocks do you have in mind?

The simulation provided by the authors is very illustrative; it is not clear, however, the degree of adherence of the baseline to the observed behaviour; is it the baseline a good approximation of the reality? With the current euro area macroeconomic framework how do you see the relative likelihood of demand versus supply shocks (*vis-à-vis* the previous period). Should one expect that supply shocks will be (relatively) more likely *vis-à-vis* the pre-euro period?

Turning to the paper by Marino, Monacelli and Siviero, a key aspect has to do with the PIT elasticities, as the macro estimates and the micro estimates differ significantly (1.2-1.3 in the first case, 1.8-2.0 in the second case). It is probably the case that these elasticities have different meanings. Aggregate elasticities are computed in relation to the relevant tax base (gross of tax wages and pensions) and therefore they also take into account employment fluctuations. In addition, unless a very careful identification of the relevant discretionary tax changes that took place throughout the sample period takes place, the estimation of macro elasticities, through the estimation of time series regressions, might be capturing simultaneously cyclical and discretionary effects. Micro elasticities, obtained from tax rules, have obvious advantages, as one may simulate the impact of cyclical effects for a given tax structure. It is also worth mentioning that when obtaining your micro elasticities,

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[4] Blanchard O. (2000), "Commentary", *Economic Policy Review*, Federal Reserve Bank of New York, Vol. 16, No. 1, pp. 69-74.

the tax structure changes but the population/employment structure is kept constant. So micro and macro elasticities do not have, necessarily, the same information content.

I lack the intuition for the very sharp increase in the estimated output gap variance when the income elasticity of the withholding tax on dependent labour income decreases from say 1.2 to 1.18. The modelling of the elasticity *eta* is also not very intuitive. Unfortunately I do not have any useful suggestions for the authors, but both aspects would probably deserve further research and search for deeper economic intuition.

Just to conclude, I found particularly useful – and convincing – the approach that Marino, Monacelli and Siviero followed to assess the stabilisation properties of different fiscal schemes, which basically coincides with the framework that is used to appraise the performance of computing monetary policy rules – *i.e.* replicating the mix of the relevant historical shocks – rather than just concentrating on a limited number of selected shocks.