

GREENING TAX MIXES IN OECD COUNTRIES: A PRELIMINARY ASSESSMENT

EXECUTIVE SUMMARY

Green tax reform for environmental improvement.

Environmentally related taxes have proved to be a powerful tool in environmental policy. Hence, an increasing number of OECD countries have undertaken "green tax reforms", with the primary objective to protect the environment.

Revenue neutral tax shifts and the double dividend issue.

Green tax reform has usually been introduced in a revenue-neutral context: that is taxes have been shifted to pollution while distortionary taxes on labour or capital have been cut. In practice most governments that have implemented green tax reforms have reduced the tax wedge on labour in order to reduce unemployment. Will such tax shifting provide an opportunity to realise a so called "double dividend" in terms of environmental improvements and a (second) employment dividend, flowing from lower labour taxation? This report reviews the key conditions for, and obstacles to, the realisation of an environment-employment double dividend.

A number of OECD governments have explicitly implemented tax shifts to realise some double dividend.

Tax shifts in the OECD: country experience

Denmark, Finland, Germany, Italy, Norway, the Netherlands, Sweden, Switzerland and the UK have implemented environmentally related taxation with explicit cuts in other distortionary taxation. For example, the UK the landfill tax introduced in 1996 was accompanied with a 0.2% reduction in employers' social security contributions. More recently, in 1999 the German government implemented its ecological tax reform package. Step-wise increases in environmentally motivated tax rates for fossil fuels and electricity tax rates have been pre-announced until 2003. In its introductory year the tax shift resulted in a 0.8% cut in total social security contributions and the objective is to reduce social security contributions by a further 1% by 2003.

General requirements for realising a double dividend

The existence of the second dividend is controversial and it can be realised only if a number of restrictive conditions are met. In particular, the incidence of the environmentally related tax must fall on a fixed factor with a low excess tax burden (the excess cost to society of raising an additional unit of government revenue using a particular tax) whilst the tax cut must have a high excess tax burden. For example, if the excess tax burden in an economy is lower for capital than for labour, and the burden of the tax falls onto capital and labour taxes are cut, then some double dividend is likely to result. The environmental tax should be broadly based, to avoid generating many distortions in other markets. Capital must be relatively immobile internationally, otherwise capital could avoid the tax burden by moving abroad.

Increased employment depends on a number of factors:

- The degree of *substitutability between factors of production*, i.e. if firms find it easy to switch to use relatively more labour when labour taxes are cut employment would be stimulated;
- The degree of *competition in markets for goods and factors of production*, i.e. if the labour market is competitive lower labour taxes will result in lower labour costs and increased employment;
- The *time frame of the introduction of the environmentally related tax reform*, i.e. a

phased-in implementation of an environmentally related tax gives firms and households time to respond to the economic incentives

- The *existence of a 'social consensus'* for higher environmentally related taxation would reduce pressure for wage compensation above that offered by the revenue-recycling package
- *International co-ordination* of tax reforms would weaken arguments for compensation based on stated concerns for sectoral competitiveness.

Ex ante simulations of the double dividend indicate that realising a double dividend is possible

Although the requirements can seem exacting in theory, a number of *ex ante* simulations conclude that tax shifting can result in some -- limited -- employment stimulation in practice. Furthermore, the choice of recycling mechanism is important for the size of the employment impact. Larger employment gains can be expected if employers' social security contributions -- rather than income taxes -- are cut and if tax cuts are targeted at low-skilled workers.

Green tax shifting continues.

In 1999 the Netherlands initiated a three-year policy to shift taxes to pollution and resource use (e.g. energy, wastewater, groundwater) and cut labour taxes. In the same year Italy embarked on a re-modulation of excise taxes on mineral oils according to carbon content, to be completed by 2005.

Main double dividend conclusions.

It is difficult to draw definite conclusions about the environmental and employment effects of tax shifts. The possibility to exploit a double dividend despite the uncertainties has proven attractive to a number of OECD governments faced with environmental problems and high unemployment. However, *ex post* evaluations of these green tax shifts still remain to be done.

Greening Tax Mixes in OECD Countries: a Preliminary Assessment

The paper, prepared by professor A. Majocchi (University of Pavia) reviews the theoretical background on tax shifting and the double dividend issue. It also reviews case studies of *ex ante* simulations, which illustrate the impact of tax shifting on employment and GDP in OECD Member countries. Finally, existing tax shift policies are discussed.

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Nils Axel Braathen or Jean-Philippe Barde, Environment Directorate
 Email – nils-axel.braathen@oecd.org or jean-philippe.barde@oecd.org ; Fax : +33 (0)1 44 30 61 79

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