



Environmental tax reform and environmental fiscal reform

Key points

- **Environmental tax reform and environmental fiscal reform (ETR/EFR) are among the most effective tools for a fundamental transformation towards a green economy**
- **ETR and EFR can be the main driver for green growth**

Environmental tax reform and environmental fiscal reform explained

Environmental taxes are defined as “any compulsory, unrequited payment to the general government levied on tax-bases deemed to be of particular environmental relevance”.¹

Environment taxes and fiscal reform policies refer to a wide spectrum of fiscal measures that have the potential to simultaneously increase revenue and foster green growth. More specifically, these include:

- A shift of the tax burden from traditional areas of taxation, such as income, savings and capital gains, to products and activities with harmful impact on the environment, like fossil fuels and waste (tax “bads”, not “goods”).
- Redirecting of subsidies from environmentally harmful activities towards activities that promote green growth and poverty reduction.

The basis for the entire reform of the fiscal system is to maintain revenue neutrality: a net-zero increase in the level of taxation on the economy, while improving its overall economic and ecological efficiency, changing consumption approaches and channelling investments towards increased resource efficiency, reduced waste, eco-efficient technological innovation and green business.

How it works

Environmental tax reform

Environmental tax reform (ETR) is essentially a restructuring of the tax system whereby the tax base is shifted from traditional taxes, such as those based around labour and income, to taxes on activities that are having a detrimental impact on the environment, such as pollution from fossil fuels use, inefficient use of natural resources and waste generation. ETR can internalize the negative external social and environmental costs, which are not usually reflected in the market price.

Labour taxes are distortive. On the other hand, low or no taxes on fossil fuels induce a highly polluting fossil-fuel dependency in the economy. Underpriced fossil fuel-based energy and natural resources often translate into higher investments in manufactured capital and less investment in labour.

The concept of environmental tax reform (ETR) is not a new idea and has been adopted by numerous countries since the late 1980s to address issues related to the environment, resource productivity and economic progress. Recently, there has been growing interest in applying similar instruments in developing countries in the Asia-Pacific region. Some examples are described in section 2.2.2 of the Roadmap.

ETR can be used to correct the system of traditional taxation while increasing the cost of inefficient resource use

¹ Organisation for Economic Co-operation and Development, Glossary of Statistical Terms, available from <http://stats.oecd.org/glossary/detail.asp?ID=6270> (accessed 12 March 2012)

and reducing that of labour to companies, thus correcting the negative distortions (and increasing eco-efficiency) of the market. This includes rationalizing prices (of utilities such as electricity and water, and waste management for example) based on the level of its respective use and by reflecting external environmental and social costs. This practice results in collecting the desired payments while also encouraging future energy-efficiency improvements and resource-saving behaviour.

Figure 1: ETR: Shifting tax base from “goods” to “bads” based on revenue neutrality²



Source: United Nations Commission for Asia and the Pacific, *Training of Trainers Toolkit: Green Growth Capacity Development Programme* (Bangkok, 2009).

Environmental fiscal reform

While environmental tax reform can greatly help governments to internalize social and environmental costs not reflected in market prices, it doesn't address the problem of environmentally harmful subsidies that can also distort prices.

Environmental fiscal reform (EFR) can remedy that shortfall. EFR refers to a range of taxation and pricing measures that raise fiscal revenues in pursuit of environmental goals.³ EFR aims to reform the structure of government's revenue allocations (including those from ETR) in a way that internalizes the social and environmental externalities.

EFR extends beyond ETR by including subsidy reforms, which entail phasing out subsidies on environmentally harmful activities and products, such as fossil fuels or pesticides, and redirecting public spending towards more socially and environmentally beneficial activities. Similar to taxation, subsidies often are skewed in a way that distorts economic activity. EFR looks to remove harmful subsidies and level the playing field so that environmentally beneficial activities are not at a disadvantage to environmentally harmful activities.

Strengths of environmental tax and fiscal reforms

- **Increases efficiency:** When well-planned and applied strategically, environmental tax and fiscal reforms can correct the market price, which will encourage desirable activities like employment and investment and will discourage undesirable activities, such as waste and pollution.

² United Nations Commission for Asia and the Pacific, *Training of Trainers Toolkit: Green Growth Capacity Development Programme* (Bangkok, 2009).

³ Organisation for Economic Co-operation and Development, *Environmental Fiscal Reform for Poverty Reduction*, DAC Guidelines and Reference Series (Paris, 2005).

- **Generates revenue:** ETR is an excellent economic instrument for raising revenue from inefficient use of natural resource and re-directing it to investments in the development of sustainable infrastructure, cleaner production technologies, green industries and even to programmes providing access to water, sanitation and energy for poor communities and to social welfare programmes. At the same time, EFR can close the “time gap” by providing public funding for green investments and thus providing another long-term price signal for investors and businesses in a country’s transformation towards a green economy. For example, revenue raised from fuel taxes can be channelled to support the development of sustainable transport and mobility.
- **Increases cost-effectiveness:** Administrative costs associated with ETR and EFR measures are important for their success. A number of studies conducted in Europe found that environmental taxes are less costly to administer than command-and-control measures and other taxes, such as corporate income taxes.⁴ Thus environmental taxes can be designed in a way that they generate revenue with little administrative costs. Cost implications may differ in developing countries, where tax and fiscal structures and implementation capacity may not yet be fully consolidated.

Challenges related to the implementation

- **ETR is often perceived as an additional tax levied over and above the already existing tax, thus adding burden on the economy and people’s livelihoods.** To change this perception, ETR is being applied based on the revenue neutrality principle. The message that the reform does not lead to any additional tax burden on the overall economy as well as a potential of a double dividend (economic growth and employments, as well as reduced environmental damages) needs to be clearly communicated to the public from the beginning.
- **ETR is perceived as income regressive and thus affecting low-income households and individuals.** However, this is not inevitable. Through mitigation measures (such as “lifeline tariff” and progressive tax design) and compensatory measures (such as a well-targeted direct cash transfer) ETR can be designed and implemented in an equitable manner. For example, Singapore introduced a water conservation tax in 1997 in which a threshold for the minimum use of 40 cubic metres per month for households was established with a flat rate, while overuse above this threshold resulted in a progressive water tax increase.
- **ETR is perceived to damage the competitiveness of companies and the economy as a whole.** The perception as such is largely inflated: Empirical evidence from countries that have introduced ETR shows that overall competitiveness was not affected significantly. To the contrary, the ETR had a positive economic effect of increasing GDP, job creation and reducing fuel demand, as well as reducing carbon emissions. More details can be found in the case study: Europe’s environmental tax and fiscal reform

Implementing strategies

Concerns over competitiveness and distributive impacts need to be actively tackled through a set of measures, and the benefits of ETR and EFR need to be clearly communicated to the public and businesses to draw the required support to sustain the reforms.

- **Utilize special arrangements for energy-intensive industries.** Sectors with exhibit a high energy-intensity, high trade-intensity, a high share of costs as energy expenditures and a low ability to pass costs on to consumers are like to have more pronounced impacts on their competitiveness.⁵ In cases of highly energy intensive industries, the use of energy is essential to the processes and therefore makes up a large portion of operating costs. This may include sectors such as aluminium, steel, cement, paper, glass, etc. Special arrangements such as tax rebates, sectoral exemptions, voluntary agreements, targeted subsidies for R&D, green job training and transition assistance can address competitiveness concerns and increase the political feasibility of ETR, as shown in the cases of European countries that have introduced ETR. The UK Climate Change Levy (CCL) and Climate Change Agreements (CCA) provide an example (refer to the case study on the United Kingdom’s Climate Change Levy).

⁴ Organisation for Economic Co-operation and Development, *The Political Economy of Environmentally Related Taxes* (Paris, 2006).

⁵ Paul Ekins and Stefan Speck, *GFC Briefing Paper 7: Competitiveness and Environmental Tax Reform* (London, Green Fiscal Commission, 2010).

- **Design ETR in a revenue neutral way, and utilize part of the revenue in a way to offset the competitiveness impacts on industries.** The effect of revenue recycling on different sectors has to be closely studied from the design stage of ETR. In the case of Europe, this revenue recycling has played a critical role in compensating for the higher energy prices and bringing about a positive GDP gain of up to a 0.5 per cent.⁶ For instance, reducing corporate taxes, as done in the case of the Netherlands as part of ETR, can partially or entirely offset increased energy costs especially for those firms with a low level of energy- or resource-intensity.
- **Gradually phase-in the reforms.** Gradually increasing tax rates over a set time period can ease the initial burden of compliance and provide financial flexibility to retool the production capacities. Relevant policy options include providing lead-in times, announcing the level and implementation date in advance and enacting a relevant law.
- **Ensure predictability and consistency of reforms.** Credible, clear and concrete future policy directions and goals within a firm legal and regulatory framework enables businesses to make long-term strategic and investment decisions.
- **Involve affected industries and other stakeholders in the design stage.** Widely consulting and involving industries and other stakeholders will make them not only effective partners but also genuine supporters for the reform measures. The stability and consistency of the ETR policies are shown to be positively related to firms' willingness to invest in low-carbon technology.
- **Introduce mitigation and compensatory measures to offset the income regressiveness effect of the reforms.** Studies indicates that well-targeted, coherent and transparent compensation measures that support real incomes of the poorest households tends to be more effective in mitigating the immediate negative impacts on low-income households than other measures.⁷ Indonesia's direct cash transfer during the 2005 fuel subsidy reform is an example (refer to the case study on Indonesia's Bantuan Langsung Tunai cash transfer programme).
- **Phase out environmentally harmful subsidies and increase the share of subsidies for green transformation.** Redirect subsidies from environmentally harmful activities and products, such as pollution, carbon emissions, resource inefficiency, overdependence on non-renewable fossil fuels to more environment-friendly ones, such as renewable energy development.

⁶ *ibid.*

⁷ Dana Krechowicz, *The Effect of Carbon Pricing on Low-income Households, and its Potential Contribution to Poverty Reduction, Sustainable Prosperity* (Ottawa, University of Ottawa, 2011) available from <http://www.sustainableprosperity.ca/article1398> (accessed 15 March 2012).