

Driving a Green Economy through Fiscal Policy Reform & Public Finance

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Outline

- Introduction & framework issues
- Role of fiscal policies
- Green taxes & charges
- Expenditure & subsidy reform
- Conclusions

Introduction

- The debate on environmental sustainability and appropriate policy responses takes place amidst efforts to recover from the crisis and address fiscal challenges ahead.
- How should these challenges influence environmental policy? How should sustainability issues be reflected in macro fiscal policies over the short and particularly longer terms?
- “Driving a Green Economy through Fiscal Policy and Public Finance”, *Journal of International Economics, Commerce and Policy*, 2011

Why a green economy?

- Evidence on the economic consequences of environmental sustainability issues have been growing across both industrialized and developing countries in recent years.
 - Declining fish stocks – 25% of marine stocks “collapsed”
 - Land pressures from rising population
 - Global challenge of climate change – costs equivalent to 5-20% GDP
- At the same time, the economic crisis has generated heightened demand for new sources of sustainable growth and job creation.
- Green Economy is an emerging concept linking economic growth and environmental sustainability. It focuses on economic opportunities, including from:
 - New green technologies and sectors
 - More efficient resource use
 - Reversal of environmentally harmful policy distortions, eg energy subsidies
 - Avoid sustainability related growth impediments

Some policy evaluation issues

- The economic case for environmental measures is typically complex to evaluate, and often only weakly understood by policy makers:
 - Non market valuations
 - Overlapping policy instruments, unobservable baselines
 - Intertemporal mismatch between costs & benefits
- Understanding the distributional implications are critical to managing an equitable transition, but, once again, are difficult to appraise:
 - Consumption patterns vary across households
 - Time frame for evaluation?
 - Indirect effects on wages, asset prices
 - Distribution of environmental benefits?
- Indicators desirable to help measure key interactions between the environment and economy and guide policy management:
 - Investment, employment & output in key sectors
 - “Green” National accounting

A central role for fiscal policies

- Fiscal policies are key to robust, fair & sustainable economic growth
- Taxes and charges aimed at “getting the prices right” – necessary (but not sufficient) to encourage less pollution/ resource intensive economy.
- Sound revenue potential, and a relatively efficient base: environmental taxes raise around 2 percent GDP on average across OECD countries. Huge international revenue potential from carbon pricing!
- Targeted expenditure measures can harness private “green” investment (e.g. significant environmental consequences from infrastructure projects); & protect the incomes of the most vulnerable from higher prices.
- But spending policies should not substitute for more efficient pricing of pollution — especially given the intense fiscal challenges many countries now face.
- Careful consideration of interactions between environmental and wider fiscal and regulatory policies important: e.g. income taxes/ renewable energy subsidies.

Environmental taxes and charges

- Taxes bearing on environmental sustainability include:
 - Environmentally damaging products (e.g. fossil fuel excise)
 - Natural resource extraction (e.g. royalties on minerals, oil & gas)
 - Harmful by-products of consumption/ production (e.g. SO_x/NO_x charges)
 - User charges on basic services (e.g. electricity, water and sanitation)
- Concrete policy evaluations remain scarce: energy tax reforms in EU countries (e.g. Germany, Denmark & Sweden) during the 1990's estimated to have reduced GHG emissions by around 2-6 percent.
- Despite this, it is clear that many reforms have been weakened by exemptions and rate reductions, motivated by concerns over the competitiveness of trade exposed industries.
- The economic effects of such levies depend on how revenues are used: Germany recycled energy excise revenues to reduce income and social security payments amounting to 3% GDP 1996-99
- Widespread earmarking of environmental tax revenues observed in both developed & developing countries

Some key tax reform priorities

- More rational taxation of fossil fuels
 - Removal of excise exemptions (e.g. to coal)
 - Systemizing rates reflecting environmental and social harm (e.g. limit preferential treatment of diesel).
 - Reforming VAT arrangements where relevant.
 - More fundamental excise restructuring? Congestion charging / road pricing.
- Strengthen international carbon markets
 - More robust and stable prices (tighter constraints, expanded coverage)
 - Incentives to limit tropical deforestation
 - International aviation and shipping
 - Mobilize revenue opportunities e.g. through auctioning permits
- Improved cooperation on international tax competition.
 - Minimum rates?
- Robust and stable fiscal frameworks to capture natural resources rents
- Investment in tax administration critical to successful environmental fiscal reform, particularly in developing countries.

‘Green’ fiscal Stimulus

- Environmental measures formed a valuable part of fiscal stimulus packages: \$430 billion (roughly 15%) of stimulus expenditure of 20 countries allocated to climate-related investment themes.
- But much stimulus spending is on “dirty” investments (e.g. \$270 billion allocated to road building projects in the G-20) — risked entrenching inefficiencies from the under-pricing of emissions.
- No rigorous ex post analysis on employment effects from environmental stimulus programmes undertaken. Ex ante preference for measures which reduce, rather than raise, prices (e.g. energy efficiency).
-and for labour intensive programmes such as in building insulation and environmental clean up. Impacts of renewables support likely to differ substantially by technologies (both quantity and nature of jobs).
- Some evidence of financial disbursement issues: UN estimated less than 10 percent of allocated funds came online in 2009. US experiences suggested such issues most significant for renewables.

Subsidy reform (I)

- The precise magnitude of green subsidies is unclear, but likely to be high and rising: support to biofuels, for example, estimated at around \$11 billion in 2006.
- The cost effectiveness of many such programmes has been substantially weakened by difficulties targeting financial support, given household/firm level incentives to seek rent.
 - Pfaff (2008) finds little effect of payments for avoided deforestations in Costa Rica largely went to owners of land not subject to clearance risks.
 - Joskow and Marron (1992) study energy efficiency programmes in the US and find “free rider” rates on the order of 50 percent.
- It may be easier to direct investment in the development of the most socially beneficial environmental technologies through research and development rather than tax credits.
- There may thus be a case for heightened R&D expenditures, for example in improving agricultural yields; and basic energy research (while shifting its composition away from conventional technologies).

Subsidy reform (II)

- Subsidies are fuelling unsustainable economic activity: support to fossil fuels, for example, is estimated at \$550 billion in major developing countries in 2008, raising global GHG emissions by 5-10 percent.
- The majority of benefits do not accrue to poor households: Over 80 percent of the benefits from fuel subsidies commonly go to the top three income quintiles.
- Failure to recoup the cost of supplying basic services, including water and electricity, limits resources available to improve service quality and expand access (typically to the poorest households).
- Eliminating harmful subsidies in agriculture, energy, fisheries, forests and water is thus a top priority, but reforms need to be carefully designed, implemented and monitored.
- Significant opportunities for more targeted compensation arrangements likely: e.g. fuel price increases in Indonesia supported by conditional cash transfer schemes for poorest households.

Conclusions

- Realizing opportunities from green growth & environmentally sustainable job creation an important macroeconomic priority
- Fiscal policies an essential part of a coordinated strategy to improve resource efficiency, reduce environmental risks and scarcities
- Taxes fundamental to structure of incentives facing households and businesses
- Fiscal treatment of environmentally harmful & natural resource intensive consumption and production generally too favorable
- Green subsidies likely to be less effective than pollution pricing measures. Targeted, transitional measures!
- Reform of environmentally harmful subsidies, including removal of fossil fuel price support, pesticide subsidies, a key priority
- Better information on distributional effects of fiscal reform needed to better inform targeted compensation for most vulnerable households
- Public expenditure plays an important role in shaping the environmental consequences of private sector investment