Driving a Green Economy through Fiscal Policy Reform & Public Finance

Benjamin Jones
University of Birmingham
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?

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. SOx/NOx 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.

• 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.
  – 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 carefully designed, implemented and monitored.
- Significant opportunities for more targetted 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