

Energy Taxation Roundtable

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I Congratulations

- CTCI
- Congressman Chen
- Intellectual Platform – universities, Chung-Hua Institution for Economic Research
- Civil Servants

Unique opportunity

Importance of independent, informed debate, and freedom of expression for informed decisions.

Humility Check

An Economic forecaster is like a cross-eyed javelin thrower: he doesn't win many accuracy contests, but he does keep the crowd's attention

II. Do it

- The step from talk to action is the most difficult.
- Any signal is better than no signal

Shakespeare. *There is a tide in the affairs of men/Which taken at the flood leads on to fortune;/Omitted, all the voyage of their life/Is bound in shallows and in miseries./On such a full sea are we now afloat;/An we must take the current when it serves, or lose our ventures.*

Clement Attlee: *Democracy is government by discussion, but it is only effective if you can stop people talking.*

PROFESSOR HUANG'S ISSUES

III. Rationale – Why?

Archimedes: *Give me a fulcrum and I will move the world.*

Diogenes: *Will it be better off in some other place?*

A. Energy Intensification of Taiwan economy is anomalous

Underlying causes need to be understood

Need a menu of sectors, energy use trends, and ranking of lowest cost reduction options

B. Tax is needed to break this strange trend and bring Taiwan into the international mainstream

External costs – those borne by society as a whole - associated with very cheap energy include:

- Heightened vulnerability to price spikes and supply interruption
- Heightened exposure to local pollution – particulates, SO_x, NO_x etc.

Boyle Roache (Irish 18th century politician): *Posterity be damned! What has posterity ever done for me?*

Taiwan as antidote to Boyle Roache:

- Rising greenhouse gas emissions – opportunity to say to the World:

We are not in Kyoto, but we are unilaterally taking our global responsibilities seriously by using tax to help break the link between rising economy and rising greenhouse gas emissions; we care about posterity. This will command attention on the global stage.

IV. Choice of Tax Base

As wide as possible.

- If you want consumers of energy to know that they are paying a tax, and how much, and why, then go downstream. But higher transactions costs
- Upstream- lower transactions costs, but lower transparency. Taiwan preference?
- Aviation Fuel – feasible?

V. Optimal Tax Rate

The Pigouvian ideal – where marginal costs of abatement equal marginal benefits thereof

There is no known example in the world where this ideal has been computed and acted upon....

However, as regards CO₂, price or tax in range 10-30 Euro (\$13-40) per CO₂ equivalent seems about right.

VI Disposal

Camus: *We are all special cases*

A. Key issue for small open economy.

Competitiveness of the exposed sectors.

Solution: Ring fence payments from these sectors and return them, not based on current energy use, but on (say) some combination of energy efficiency investments and investments in R&D – reward innovation

Example: NOx tax in Sweden

B. Public like ‘ring fencing’ for good environmental and energy conservation purposes

Return revenue to households and commercial for investment in ‘towards zero energy’ buildings

Result: Get an unambiguous energy and environmental double dividend.

VII. Double Dividend (Economy)?

'Tax 'bads' (pollution) and reward 'goods' (more employment)

Depends on situation of local economy

If economy is at full employment or close to it, unlikely to be any dividend.

i.e. Viability depends on market failure in the macro and especially the labour economy.

Notable that this debate in Europe was only lively in high unemployment economies

Not an issue in the US, Ireland (full employment economies)

If there is such market failure, then there is likely to be a short-term dividend

Can be important

Keynes; *In the long run, we are all dead.*

But if mainly recycled to industry and households, not available to reduce labour taxes.....

VIII Efficiency and Equity

A. Big advantage of tax is that it allows actors to respond as they judge to be most effective

By definition, least cost response will be achieved

May also get some dynamic efficiency – **an innovation dividend**, and new techniques and technologies are developed to reduce energy consumption – see recycling for R&D above.

B. Key issue is short term (< 2 years) and long term elasticities (response of consumers to higher prices.

C. Also income elasticities need computing

Income growing at 4% per year?

These depend also on complementary instruments - see later

IX Impact Evaluation

Ex post evaluation is important, and modification to reflect new knowledge

Review after 3 years, but take care not to incentivise 'gaming' where key stakeholders have incentive to influence outcome of review.

X Integration

‘Complementarity’ perhaps better term

Tax should be the fulcrum, around which other instruments are designed to enhance energy and environment outcomes.

Other instruments as complements:

- Voluntary Approaches – UK provide tax exemption to energy levy for companies ‘voluntarily’ entering energy efficiency agreements.
- Command and Control: High performance standards for new buildings
- Information – high quality and timely – eg Energy Performance in Buildings Directive (Europe), Toxics Release Inventory (US)
- Green Purchasing
- Removal of Perverse Subsidies

XIII Encourage Astonished Women (and men) and be unreasonable

Irish Saying: *Behind every successful man,
stands an astonished woman*

George Bernard Shaw: *The reasonable man
adapts himself to the world. The
unreasonable one persists in trying to adapt
the world to himself. Therefore, all progress
depends on unreasonable man.*