Fiscal Approaches to driving the circular economy

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Aims to understand how the economic system can drive sustainability

Works to present alternative views on economy to help sound decision making
Congestion

- Used materials pile up
- Accumulation in wrong places

Practical experience shows that money stimulus works. If we have to pay enough. Pollution is like congestion. The wrong thing in the wrong place at wrong time. Charges CAN change behaviour.
The bath tub model of the economy emphasises how important it is that citizens have money in their pockets to buy products.

Economic models should ensure the overall flow of money is maintained.

For the circular economy to arise, taxes on raw materials need to be high.

Paying back levies collected directly to tax payers reduces overall negative personal economy effects.
We identified 6 categories of taxes/fees that could be surcharged:

1. VAT RATE CHANGES
2. IMPORT FEE ON POLLUTANTS
3. INTEREST RATE FEE ON MORTGAGE
4. Dividend to citizens
5. Property deed transfer fees
6. Municipal charges
Recent papers analysing the potential for taxation of non-renewable resources, including my own investigation for the Swiss Government and the Ekerman report \(^1\) for the EEA point out

- Taxation levels on non-renewables, phosphorus in particular, are currently very low in EU Member States.
- Case studies show that the price of the raw material is a small part of the final product so the tax would have to be very high to make a significant impact.
- Entry into the economy (extraction, import) is the most convenient place for the levy. Border tax adjustments can compensate secondary import (i.e. mined phosphorus in food).
- Resource levy design is politically difficult and far from simple.

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\(^1\) Eckermann, F., Golde, M., Herczeg, M., Mazzanti, M., Zoboli, R., & Speck, S. Material resource taxation.
**Price based**
Changes pricing in existing market and levers behavioural change

- E.g. changing taxes, introducing fees, giving subsidies

**Rights based**
Specifies new rights/obligations to lever behavioural change

- E.g. introducing a Cap and Trade Scheme on emissions

**Market friction**
Behavioural change from making existing private markets work better

- E.g. disclosing information by eco labeling, meat-free days

**Command and control**
Behaviour regulation through regulation and inspection

- E.g. limitations on NOx releases

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**Change type**

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**RECENT WORK:** experience with market based instruments for Swiss Gov.
CAN WE GET MODERN?

Then
- Paper document based trading, with long lead times for accounting
- Minimum of statistics
- Long and slow methods of communication (e.g. surface post)
- Labourious calculations required

Now
- Computerised trading and tax system
- Multiple statistics collection points
- Fast communication
- Calculations can be handled by modern computer technology
Put fees high up in the value chain. Raise them at regular prices until the market responds appropriately. The money collected goes back to citizens to ensure spending power retained.
Externalisation

- Buying-in fertiliser exports jobs
- Jobs exported means pollution imported (often)
- Levying fees raises prices

HOWEVER with dividend on fees redistributed people can afford the food
Systems approach

• We collated experience and ideas found in the literature in a systems influence diagram. As in all complex systems there are points to intervene that have the potential to change the whole system.

• Conclusions
  – Tax and forget must be replaced by communicate, levy a fee, monitor and adjust
  – There is no one golden solution in the form of a tax
System intervention #1
The lower nitrogen-demanding diet

The low nitrogen-demanding diet radically reduces farm emissions as meat and dairy farming emit proportionally more. A combination of price controls (e.g., higher VAT on meat products) and information campaigns could influence demand.
System intervention #2 The nitrogen-accumulating land area

Paying for the public good of nutrient capture creates jobs in rural areas and creates a potential to recycle the nitrogen and phosphorus captured.
Some take-aways

It is an economic and societal SYSTEM.

Explore a modern route with:

- Dynamic control
- Digital power
- Healthy diet
- Land function

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