

Evaluation of aggregate taxes

European Environment Agency

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Under contract with
the European
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Waste Management



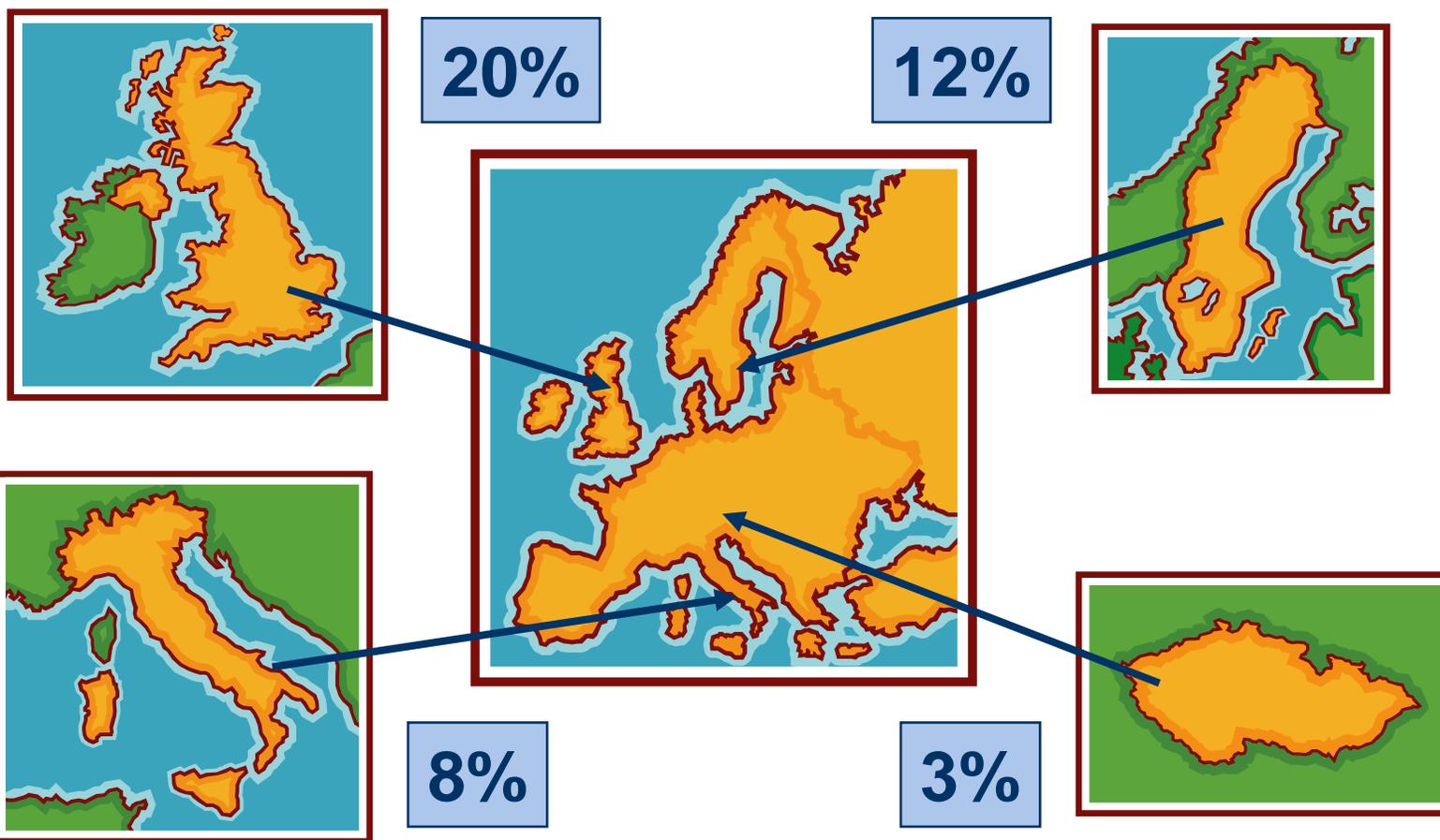
Introduction

Understanding the....

- **Context**
 - Countries, objectives, tax rates etc
- **System**
 - Influencing factors (PEST)
- **Causality**
 - Effectiveness of tax
- **Findings**
 - Wider policy environment



Context





Objectives

UK

1. To compensate for environmental externalities
2. To reduce demand for aggregates and encourage recycling / substitutes

Italy

1. To compensate for the environmental costs caused by quarry activity

Sweden

1. To safeguard gravel resources & water quality
2. To preserve the landscape

Czech Republic

1. To raise revenue
2. To encourage deep mining instead of surface mining.

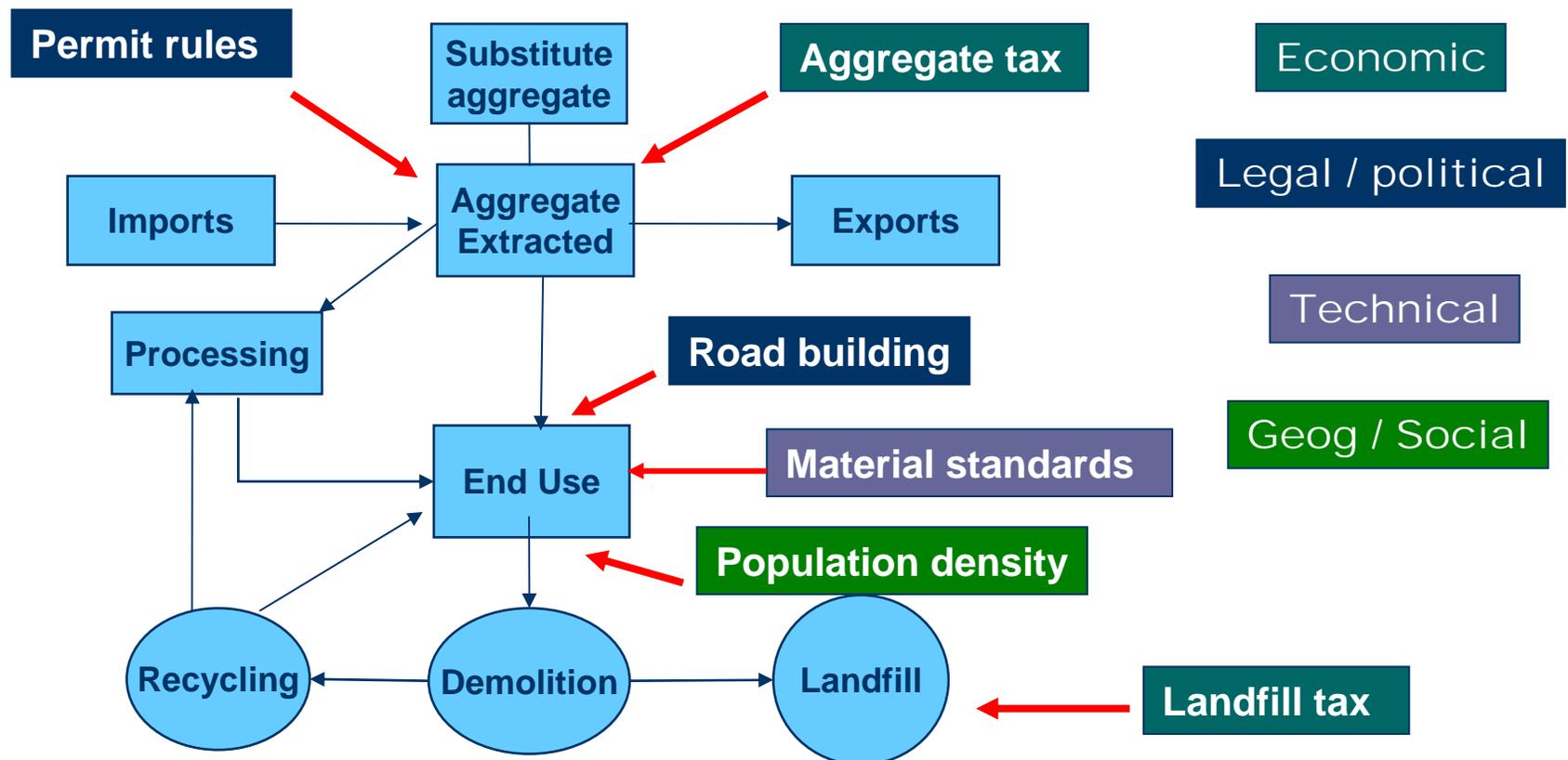


Aggregate statistics

Country	Companies	Sites	Production (Million t)		
			Sand & Gravel	Crushed Rocks	Recycled Aggregates
Sweden	170	1940	26	41	8,2
Czech	300	520	24	25,5	2,5
Italy	1796	2460	220	135	3
United Kingdom	350	1280	79	124	54

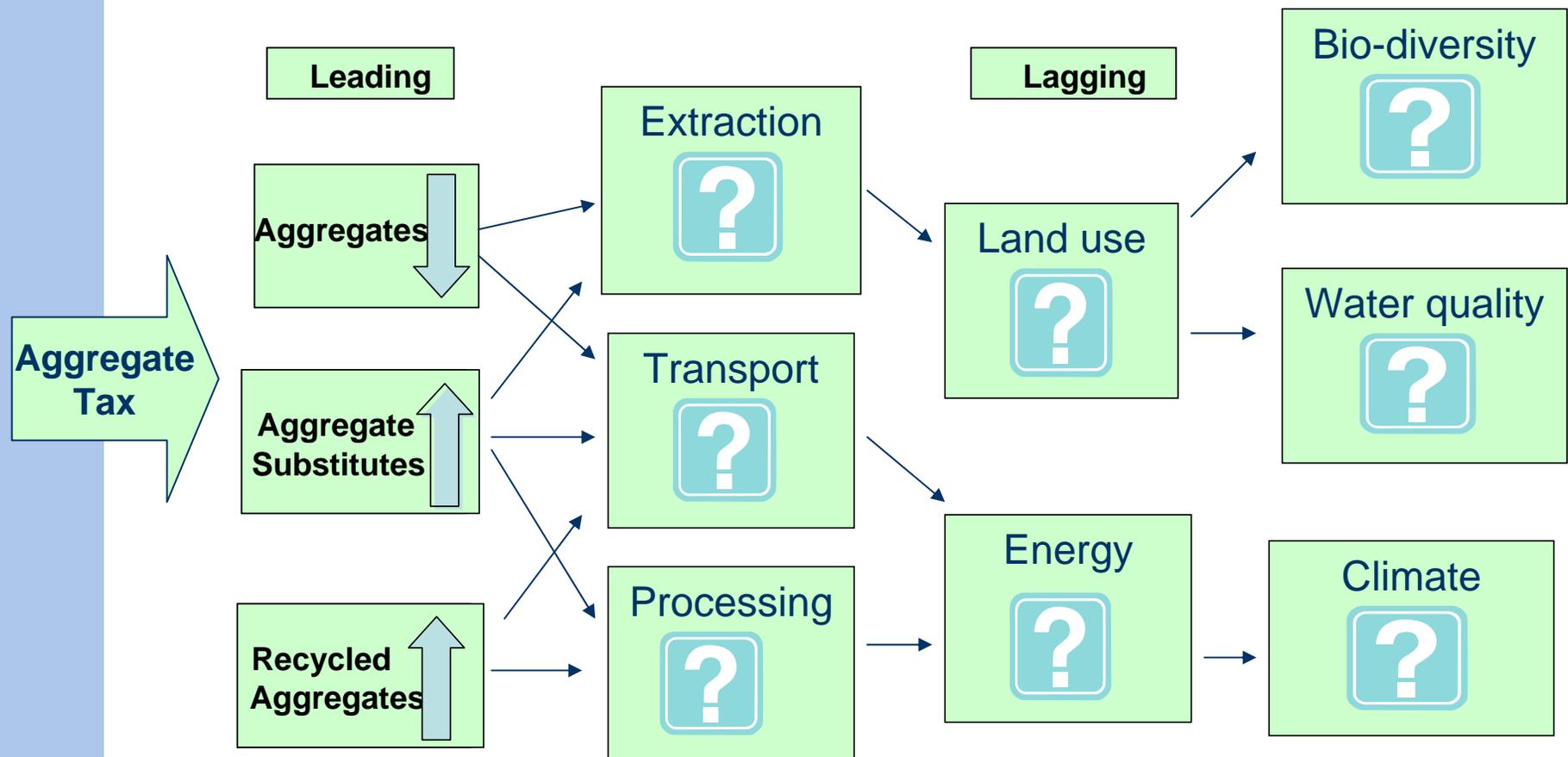


System analysis



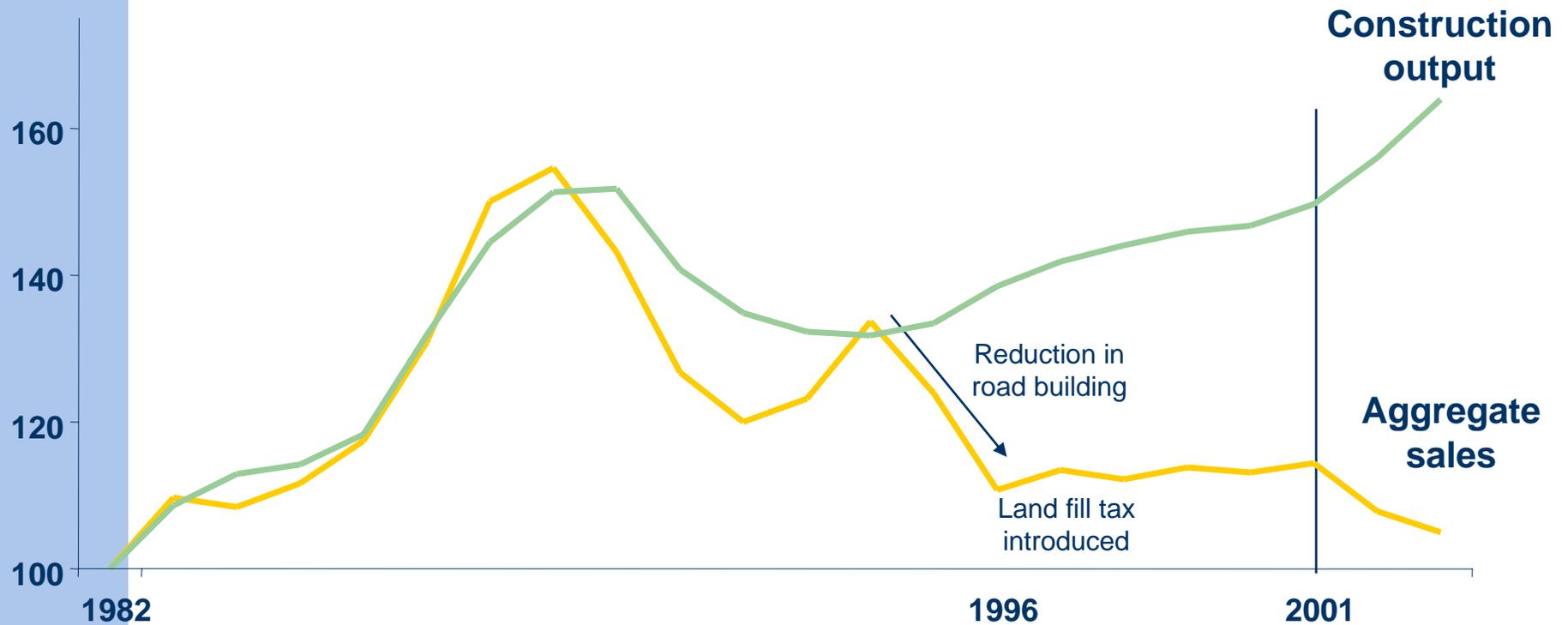


Causality hypothesis



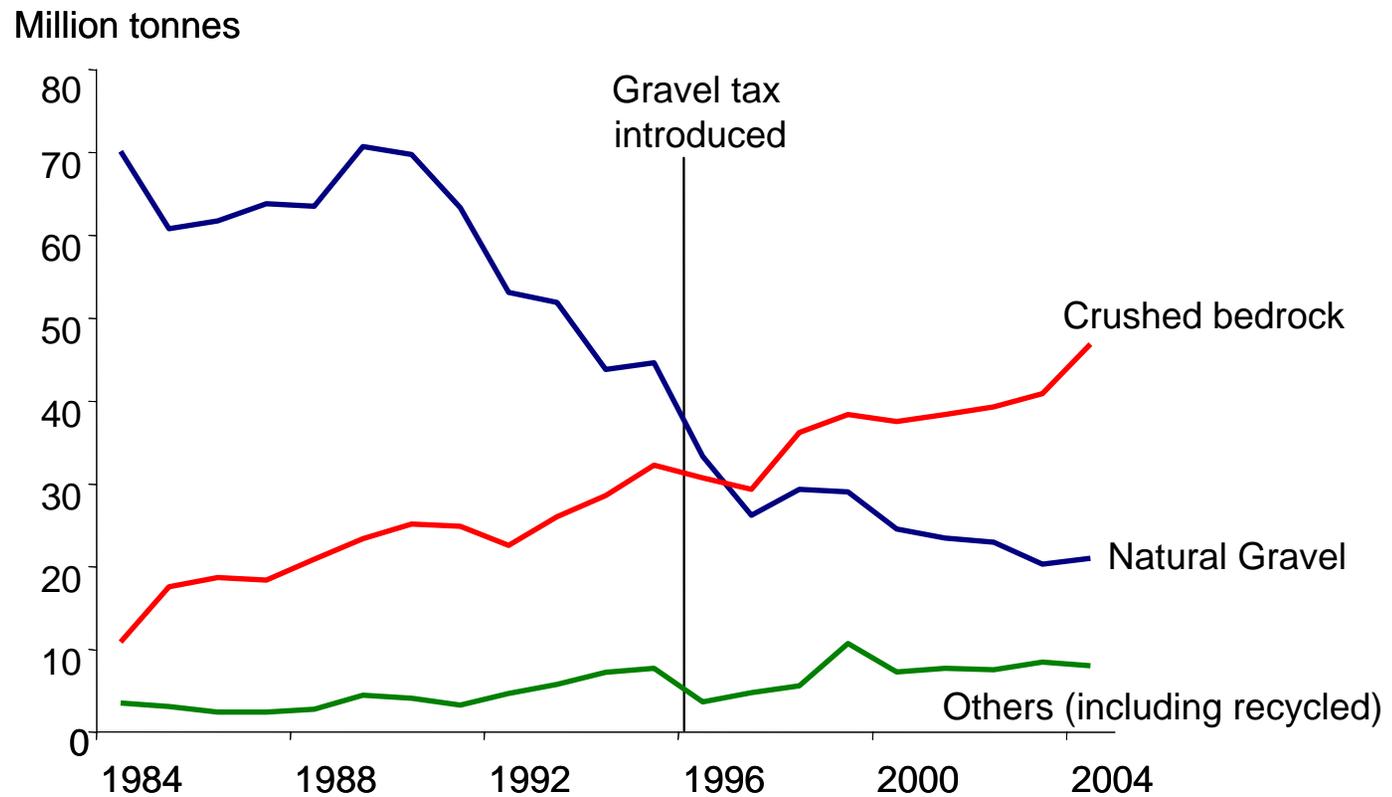


Trend analysis – UK study





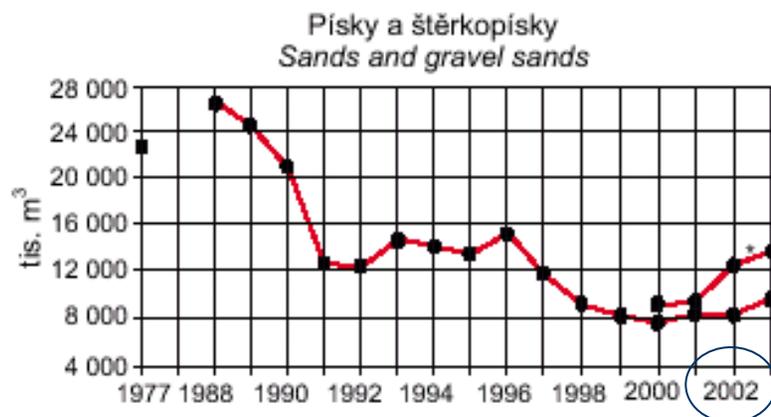
Trend analysis – Sweden





Trend analysis – Czech Rep

Obr. B3.2.4 Těžba vybraných nerudných a energetických surovin, 1977, 1988, 1990–2003
Extraction of selected industrial minerals and mineral fuels, 1977, 1998, 1990–2003



* těžba i na nevýhradních ložiskách
mining including nonreserve deposits

Zdroj: MPO ČR, MŽP ČR – OG
Source: MPO ČR, MŽP ČR – OG



Findings - Czech Republic

Effectiveness of tax

1. Tax set very low and no evidence to show that it has had any effect
2. Proposal to change the tax basis with an “ecological impact formula”. Concern that this will increase the admin complexity.
3. No earmarking from revenue

Wider policy issues

1. Complexity of admin process is major weakness e.g. reserved vs unreserved
2. Policy goal of improving infrastructure and housing requires significant quantities of aggregate materials



Findings - Italy

Effectiveness of tax

1. Tax is set at too low a level to influence producer demand.
2. Complexity of administrative process is major weakness
3. No earmarking from revenue

Wider policy issues

1. Greater influence from strong planning controls
2. Weak incentives for recycling. Producers preference is for new aggregate material



Findings - Sweden

Effectiveness of tax

1. Mixed views on effectiveness
2. Acted as a signal
3. Facilitated a gradual restructuring process
4. Regional variation not been taken into account
5. Energy use has increased
6. No earmarking from revenue

Wider policy issues

- Other factors contributed to the shift away from natural gravel use:
- Road building quality standards and procurement
- Permit licences e.g. banning new gravel pit permits in some locations



Findings - UK

Effectiveness of tax

1. Mixed views on effectiveness
2. No measurement of impact on environment externalities
3. Increase in recycling?
4. Sustainability Fund shown positive results
5. Trade distortion in Northern Ireland
6. Stockpiling at quarries

Wider policy issues

- Other factors also contributed to a change in aggregates:
- Road building policy
- Landfill tax



Implications

- **Original objectives achieved**
 - Mixed evidence
- **Package of policy instruments**
 - Stronger effect
- **Unintended effects**
 - Need to be considered



Aggregate tax across Europe

- UK
- Czech Republic
- Sweden
- Italy
- Bulgaria
- Denmark
- Estonia
- Finland
- France
- Hungary
- Latvia
- Lithuania
- Poland