Evaluation of aggregate taxes

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Introduction

Understanding the....

- **Context**
  - Countries, objectives, tax rates etc

- **System**
  - Influencing factors (PEST)

- **Causality**
  - Effectiveness of tax

- **Findings**
  - Wider policy environment
Context

20% 12% 8% 3%

Maps of different regions in Europe with percentages indicating their representation.
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

<table>
<thead>
<tr>
<th>Country</th>
<th>Companies</th>
<th>Sites</th>
<th>Production (Million t)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sand &amp; Gravel</td>
<td>Crushed Rocks</td>
</tr>
<tr>
<td>Sweden</td>
<td>170</td>
<td>1940</td>
<td>26</td>
</tr>
<tr>
<td>Czech</td>
<td>300</td>
<td>520</td>
<td>24</td>
</tr>
<tr>
<td>Italy</td>
<td>1796</td>
<td>2460</td>
<td>220</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>350</td>
<td>1280</td>
<td>79</td>
</tr>
</tbody>
</table>
Trend analysis – UK study

- Reduction in road building
- Landfill tax introduced 1996

Aggregate sales:
- 100
- 120
- 140
- 160

Construction output:
- 100
- 120
- 140
- 160

1982
1996
2001
Trend analysis – Czech Rep

Obr. B3.2.4 Těžba vybraných nerudních a energetických surovin, 1977, 1988, 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