Frakten är på väg – men varför fraktar så få via sjö och järnväg? 

Kartläggning av styrmedel för överflyttning av gods

Cecilia Gustafsson¹, Johanna Takman¹, Inge Vierth¹, Noor Sedehi Zadeh¹, 
Anastasia Christodoulou², Marta Gonzalez-Aregall², Kevin Cullinane²

¹Swedish National Road and Transport Research Institute. Stockholm 
²School of Business, Economics, and Law. University of Gothenburg
Agenda

1. Background
2. Taxonomy of policy instruments
3. Industry insights
4. Tentative conclusions
1. BACKGROUND
1. Background

Why care about a modal shift?

Emissions from domestic Swedish goods transport

- Increased use of HVO and other RES

Goods transports and CO₂-emissions by mode, 2015

- 48% Heavy Duty Vehicles
- 19% Rail
- 33% Sea

~8% of Swedish goods transports are > 300km

- Tunga lastbilar
- Lätta lastbilar
- Sjöfart
- Järnväg
- Utsläppsmål
- Prognos transportarbete, tkm
- Transportarbete, tkm
- CO₂-ekv.
- kt CO₂ ekv.
- 1 000 tkm

Increased use of HVO and other RES
1. Background

Objective

What potential does modal shift have to contribute to the fulfilment of the Swedish environmental objectives? Including the desired reduction of CO$_2$, NO$_x$, SO$_x$, PM$_{2.5}$ and noise.

Which are the most effective policies to achieve a modal shift?

1. Which policy instruments have the goal to shift goods from road to less environmentally damaging modes?  
   
2. Which policies would be most effective in a Swedish context?

1. Environmental effects

This study

Next study
2. TAXONOMY OF POLICY INSTRUMENTS
2. Taxonomy of policy instruments

Classification of policy instruments and measures
2. Taxonomy of policy instruments

Data collection

- Past, present and planned policies in Europe
- Lack of quantified targets
- Lack of evaluations
- Lack of impact assessments
- Available evaluation mainly concern EU-measures
  → Key data unavailable
  → Need for alternative method
Majority EU-grants and local port infrastructure measures
Economic policy mostly grants
70% are ports

Many local port initiatives
Other policies usually national or regional (EU)
Available evaluations and impact assessment mainly concern EU-grants.
2. Taxonomy of policy instruments

**Taxonomy of policy instruments**

Most policies target a shift to rail.
The majority of policies only target one mode

**Mode targeted for modal shift**

<table>
<thead>
<tr>
<th>Mode</th>
<th>Not port</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea</td>
<td>4</td>
<td>24</td>
</tr>
<tr>
<td>IW</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>Rail</td>
<td>27</td>
<td>71</td>
</tr>
</tbody>
</table>

Most policies are public initiatives.
13% of policies private
4% public private partnerships

**Sector behind the initiative**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Frequency</th>
<th>N = 157</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>68</td>
<td>98</td>
</tr>
<tr>
<td>Public</td>
<td>14</td>
<td>45</td>
</tr>
<tr>
<td>Public/Private</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
3. INDUSTRY INSIGHTS
Complexity of multimodal transport chains and ineffective regulation are important barriers to modal shift

- Ineffective regulation
- Tax and fee disincentives
- Low demand-side interest
- Prices / Costs
- Reliability
- Flexibility
- Poorly maintained infrastructure
- Capacity limits
- Coordination

On time! STOP
Targeted infrastructure investment and efficient regulation have great potential to alleviate barriers

<table>
<thead>
<tr>
<th>INSTRUMENT</th>
<th>BARRIER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Policy evaluation / Research</td>
<td>Regulation, Tax incentives</td>
</tr>
<tr>
<td>2. Information campaigns</td>
<td>Demand, Costs, Flexibility, Coordination</td>
</tr>
<tr>
<td>3. Ex-ante investment support</td>
<td>Costs</td>
</tr>
<tr>
<td>4. Review the structure of the authorities</td>
<td>Regulation, Costs</td>
</tr>
<tr>
<td>5. Review risk management</td>
<td>Regulation, Reliability</td>
</tr>
<tr>
<td>6. Reduced railway charges</td>
<td>Tax incentives, Costs</td>
</tr>
<tr>
<td>7. Bottlenecks / Urban focus</td>
<td>Costs, Reliability, Flexibility, Maintenance, Coordination</td>
</tr>
<tr>
<td>8. Increase environmental compensation</td>
<td>Costs, Tax incentives</td>
</tr>
</tbody>
</table>
4. TENTATIVE CONCLUSIONS
4. Tentative conclusions

Conclusions and further studies

Lack of quantified targets makes it difficult to evaluate policies and learn from experience

Most policies are economic but all decision factors matter

Lack of interest is an important explanatory for failure of EU-policies (no applications)

The nodes are important factors in an intermodal transport system

Bad reputation (well deserved?) and low knowledge about available options

What is success/effectiveness?

There are policies which do not firstly target a modal shift, but which in fact do so
- look at indirect effects

What influences the choice of transport mode of over time?
- Econometric analysis
- Literature review

Environmental effects from policy scenarios

Recommendation for most effective policy mix