

Climate change

– the need for public funding of mitigation and adaption measures

**Swedish Fiscal Policy Council
2022**

Background

- The Swedish fiscal framework is reviewed every 8th year
 - Current framework was settled 2019, next review should be done 2027
 - Main parts: surplus target, debt anchor
 - Calls for a earlier review, partly using climate change-arguments
- **How should the Council – as the "watchdog" – deal with this call?**

A narrow perspective of a BIG question

- The need of public funding requires a thorough analysis of
 - **proper emission goals**, taking international commitments into account
 - **effective means** to achieve the chosen goals
 - **share of private vs public funding** of these means
 - share of public funding carried by **current vs future generations**
- The Council takes a narrow perspective
 - take the goals and current means as given
 - compile existing **partial** attempts to assess the need of public funding
 - identify knowledge gaps

Need of funding in three main areas

- **Mitigation** of carbon dioxide emissions
 - Goal: Net-zero emissions in 2045
- **Adaption** of public and private property
- **Remedy** in case of extreme weather events

Mitigation – current public funding

- Subsidies 0,3% of GDP
 - Investments 0,3% of GDP
(exkl. infrastructure 1% of GDP)
 - Research funding 0,1% of GDP
- In sum << 1% of GDP
- Credit guarantees 1% of GDP



Mitigation (cont'd)

- Energy production and transmission
 - Energy production needs to double
 - Huge investments; 30-40% of GDP to 2045
 - Private corporations and state-owned enterprises

→ higher energy prices for end customers
- Industry
 - Various subsidies exist
 - Manageable; extra 1% of GDP in total to 2045

In general, more public funds **are not** requested

Mitigation (cont'd)

- Transportation – more public funds needed
 - Various subsidies exist
 - Funding **charging posts** and **hydrogen stations** where no market solutions
 - Electric roads (perhaps)
- Carbon Capture and Storage (CCS)
 - Biogen CCS imply negative emissions; positive externality
 - Subsidies exist and are motivated

Adaption

- Public property
- Private property
 - adaption measures optional
- Knowledge gap about costs
 - partial estimate in 2017:
<0,1% of GDP per year



→ The Council calls for a public inquiry

Remedy

- Limited expected cost per year of weather-related events in Sweden
- Functional insurance markets
 - limited government involvement
- Great uncertainty of **indirect** effects of weather-related events elsewhere
 - Conflicts
 - Migration flows
 - Trade disruptions



Not likely in the coming decades

In sum

- Rough approximation: 0.5-1% of GDP in government funding
 - Mainly **mitigation**
 - **Adaption measures** most uncertain
- The Council:
 - 0.5-1% of GDP is **not enough** to motivate a earlier change in the framework
 - need for **public inquiry**, mainly concerning adaption measures

Thank you!