

# Impact of EU Framework Programmes on Swedish R&D system

**From 1990 until today**



# Impact on Swedish R&D system FP 3-FP 6

- **First long term study to study impacts on R&D system**
- **Focus on cooperation part of FWP**
- **Covers four technology clusters; Sustainable energy, Life sciences and health, ICT and Vehicles**
- **Five Universities; Lund, Gothenburg, Växjö, Karolinska, Chalmers Inst. of Technology**
- **Impact on overall level as well as sectoral**

# How?

- **The approach has been largely qualitative**
- **Vinnova supplied databases of Swedish Participation**
- **Background from literature and other documents**
- **Interviews were held with participants in FP projects; companies, academics, public authorities**

# Representativity of study

- **Covers largest thematic areas**
- **Different types of sectors;**
  - slow (pharma) /fast (ICT)
  - old (automotive)/new (renewables)
- **Largest university (Lund)**
- **Largest participant (Karolinska)**
- **Small university (Växjö)**
- **Technical University (Chalmers)**
- **Non-technical university (Göteborg)**

# Conclusions; Universities

## Observed effects:

- Additional funding made available
- Added to robustness of research system (stability on EU-level, flexible on national)
- Strengthened quality of research groups
- Training doctoral students in internat. coop

## But:

- No influence on overall university strategy or fragmentation of research

**How to introduce structural changes in university sector?**

# Conclusions; Life science and health

- **Focus on basic research; little interest from large pharma does not participate**
- **Nature of IP in pharma is obstacle**
- **Mainly universities and SME participate**
- **Very strategic for new SME; special office started by Sweden Bio**
- **No clear national strategy gives little influence**
- **JTI IMI has changed involvement of large pharma**

## Question:

- **With health/ageing as Grand Challenge, what instrument to use to involve large pharma?**

# Conclusions; ICT

- **Dominated by universities and research institutes**
- **Ericsson has used FP to influence standards and choices of key technologies**
- **Universities mainly interested in basic research**
- **Very few SMEs participate**
- **Influence through ETP, JTI, Eureka**

## Question:

- **Have JTI like Artemis/Eniac been able to attract SMEs?**

# Conclusions; Automotive

- Dominated by industry and universities
- Long-term alliances industry/universities in strategic areas (e.g. combustion, catalysis, security)
- Large scale industry participates
- Those who participate (Volvo) are able to maintain a high level of technological capacity
- Strong successful lobby group through EUCAR
- FP complements efforts on national level

## Question:

- What can we learn from the automotive sector?

# Conclusions; Renewables

- Programmes have lead to more of the same, no break throughs
- FP has not been able to overcome fragmentation of sector
- No large supply actors participate, development mainly by small actors
- Limitations to efforts in R&D policy; other policies like industrial, energy taxation, procurement with state actors have been lacking. These are needed for break through

## Question:

- How could FP be broadened to support break throughs?

# Overall conclusions

- **FPs are open to suggestions, especially from the powerful. To influence you must know what!**
- **A bottom-up approach leads only to self reproduction!**
- **FP is weak at tackling areas of high technological uncertainty and with no dominating set of actors involved!**
- **FP is an R&D programme, sometimes you need more joined up policy (e.g. renewables)**

**Merci!**

