A Swedish Perspective on Governance of Public Research

OECD
Knowledge Triangle
Impact Assessment

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Swedish Competitiveness in the Global Knowledge Economy
A long history – in short
### 1940-1970

**"Society"**
- Sweden avoids war – institutional capability
- Rapid growth and structural change policy
- Urbanization and "urbanization policy"
- Big societal investments – infrastructures
- Development pairs state-industry – innovation

**"HEI society’s research institutes"**
- Industrial research institutes
- Defence research important focus
- Societal engineering
- Linear innovation models

**Industry**
- Innovativity – technologies and system competences
- Innovation based companies – development pairs
- Limited research connection – engineering base
- Big international demand – growth engine
- Export led growth – competitiveness

**Universities**
- Small part of society
- "Elitist" and narrow recruitment base
- Small direct industry cooperation
- Stronger relations to the state
- Education focus – emerging expansion
1970-1990

"Society"
Oil crisis – high inflation – increasing tax levels
Weak growth and decreased competitiveness
Continued urbanisations – regional cohesion policy
Societal investments – welfare
Weakening industry cooperation – exkl. defence

Education expansion in focus
Increased research resources to HEI
Weaker resource growth to research institutes
STU – industry relevant research – in HEI
"Sektor research"
Continued linear innovation models

Industry
• R&D-intensive industry – multi nationalization
• Internationalized and increasingly complex VCs
• Increasing competence demands – incl. researchers
• Increasasing cooperation needs – firms and HEI
• Strategic competence sourcing internationalizing
• Increasing servitization

Universities
• Increasing part of society – ”decreasing elitism”
• Growth challenges – primary in education
• Increasing direct industry cooperation – weak incentives
• HEI three missions in law – but weak and weightless”
• Weakly developed processes for external cooperation
• New industry relevant research areas emerging
### 1990-2015

#### "Society"
- Financial crisis and "state budget innovations"
- Stabilizing growth, state budgets and inflation
- "Jobless growth" – increased unemployment
- Demographic and integration challenges
- EU entry and better industry cooperation
- Societal challenges on the political agenda

- Rapidly increasing research resources to HEI
- Weak resource growth to research institutes
- EU’s R&D-FP’s – strong growth
- Centers-of-excellence and cooperation programs
- Reorganizations of R&D-funding system
- Linear models moving towards "systemic thinking"

#### Industry
- R&D-intensive industry no longer "Swedish"
- Globalized, complex and interdependent VCs
- Increasing competence needs – talents and researchers
- Increasing cooperation needs – firms and HEIs
- Strategic competence sourcing global
- Service economy big – strongly manufacturing linked
- Private and public "value chains" increasingly integrated

#### Universities
- Big part of society and new "regional" HEI colleges
- **Autonomous but many leadership challenges**
- Growth challenges in education and research
- **External funding vs. Block funding – governance?**
- Emphasized 3rd mission – weak incentives & processes
- Industry cooperation – with R&D intensive (MNCs) firms
- Increasing internationalization – attractiveness?
Four year Governmental prioritization and budgetary cycle

• Since the 1980s

• Broad and formal written consultation and informal seminar dialogues

• Four year signals and budgets – stability in terms of rules-of-the-game

• Challenge in (Inter)Ministry processing of consultation inputs

• Research Bills primarily address research including links to innovation

• Innovation is considerably more than research – cross-cutting issues

• Innovation and research – lacking cross-policy area strategies
HEI research income 2013

- Research councils: 18%
- Non-profit org.: 13%
- EU: 5%
- Local government: 4%
- ALF-funds (clinical research; county councils): 4%
- Other gov. agencies: 9%
- Swedish businesses: 4%
- Foreign org. & businesses: 2%
- Other: 1%
- Performance based: 10%
- Direct government funding (block grant): 40%

Total: approx. 36 billion SEK
Evaluating Governance
OECD Reviews of Innovation Policy

SWEDEN

SWEDEN 2016
The 2016 Review

• Six policy initiatives – two on strengthening university research

1. Strengthening university research

i) A significant increase in the “general university funds” (GUF) or “block funding” for university research

ii) The establishment of Strategic Research Areas (SFOs)
Theme 1. Strengthening university research

- The increase in block funding for research has not noticeably improved research performance nor changed the funding ratio

Higher education expenditure on R&D, 2013
As a percentage of GDP
Theme 1. Strengthening university research (2)

- The Strategic Research Areas programme (SFO) has been mainly successful in universities that have used additional funds *strategically*

- Research excellence and relevance have been limited by weak governance and strategic leadership within universities

- Human resource and career issues make strategic planning in universities difficult
Recommendations

Enable universities to act in more flexible and strategic ways before any new increase in block funding or extension of the Strategic Research Areas programme

1. Strengthening university research

- Amend the existing research performance assessment scheme for allocating institutional funding
- Strengthen strategic leadership in universities
- Encourage universities to increase their specialisation in research
- Encourage university management to introduce a real tenure track, as well as to be more flexible in hiring, dismissing and reassigning staff
- Strengthen the desired effects of third-party funding to universities and institutes
Formal
“Governance Consultation”
- Universities and Colleges prepared for the future
HEI facing strong change pressures – acting on a global ”market”

• Improve national and international recruitment

• Relevance in educations for future competences

• Attracting and developing business R&D

• Contributing to societal challenge solutions
Proposal to Government Bill 2016
Research, innovation and higher education

• Governance towards improved K3 performance
  ➢ Clear visions and goals – long-term and short-term
  ➢ Increased and transparent block funding competition

• Introduce block funding incentive model rewarding quality
  ➢ In research, education and cooperation and which
  ➢ Which allows HEI diversification and profiling
“Consultation” Missions
The Government Commission (14 March 2013):
The Government commissions the Swedish Research Council to investigate and submit – in consultation with Forte, Formas and Vinnova – a proposed model for resource allocation to universities and university colleges involving peer review of the quality and relevance of research

- Should enable resource allocation that rewards quality and performance in research
- Should comprise both assessment of research quality and assessment of the societal relevance and impact of the research
- May provide a good platform for long-term planning at higher-education institutions
- Should be done bearing in mind the preconditions for the respective research area
- All research should be regularly assessed in subject-area based evaluations in a cycle of four to six years
- May include indicators
- To be submitted by 31 December 2014

Government decision I:8 U2013/1700/F, 14 March 2013
Vinnova’s Mission

Design methods and criteria for evaluation of performance and quality in societal cooperation

200 MSEK for testing until 2016
The Research Council Model
The evaluation model – Elements of evaluation and suggested weighting

FOKUS – Research evaluation in Sweden
Purpose: To improve the quality of research and ensure that high quality research is of benefit to society

- Background information (not to be graded)
- 70% Scientific/artistic quality
- 15% Quality enhancing factors
- 15% Impact outside academia

All research is to be evaluated in a cohesive manner every sixth year (initially more frequently).
Summary: research area panels – data and assessment

**Background information (not to be graded)**

- Research profile, i.e. multidisciplinary research
- Vision and strategy
- Organisation, administration, management, recruitment
- Infrastructure

**Description**

- Research statement
  - Research focus, i.e. multidisciplinarity
  - Potential
  - Other

**Research statement (excellence)**

- 5% of unit’s research production reviewed by panel members

**Nominated sample (excellence)**

- 5% of nominated sample reviewed by panel members

**Scientific/artistic quality**

- Citation analysis or nominated sample (ca 50%), (“overall quality”) reviewed by panels (citation analysis) or external reviewers (nominated sample)

**Criteria**

- Novelty and originality
- Significance
- Rigour

**Assessment criteria**

- Grade profile

**Results from panel**

- Grade profile

**Productivity** (research publication volume in relation to the volume of staff and financial resources)

**Quantitative data**

- Research funding
- Teaching and research staff
- Doctoral education
- Publication profile and publication volume

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Summary: main panels – data and assessment

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Case studies
- Examples of activities:
  - Dialogue and dissemination of results
  - Collaboration
  - New products and processes
  - Application
  - Documented impact

Assessment criteria
- Reach and significance
- Potential for renewal and sustainability

Results from panel: grades and explanatory statement

Description
- Results
- Strategies
- Documentation of processes

Assessment criteria
- Grades and explanatory statement

Impact outside academia

15 %

Quality enhancing factors

15 %

Integration of research and education

15 %

Collaboration and mobility within academia (int+nat)

15 %

Gender equality

15 %

Collaboration, partnerships and mobility outside academia (int+nat)

15 %

Integration of research and education

15 %

Potential for renewal and sustainability

15 %

Dialogue and dissemination of results

15 %

Collaboration

15 %

New products and processes

15 %

Application

15 %

Documented impact
The Vinnova Model
Basic principles

- Starts with HEI own visions and aims
- Should be useful in HEI own strategy and operational development
- Cooperation has several functions and contributes to different impacts
Model for evaluating HEI cooperation

Integrated evaluation by an expert panel

Self evaluation
- Cooperation strategy & implementation
- Cooperation activities & results

Cooperation partner evaluation
- Inclusion of & results for cooperating partners to HEIs

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Processing...