

#### **Survey response for Sweden**

OECD database of governance of public research policy

This document contains detailed responses for Sweden to the survey on governance of public research policy across the OECD. It provides additional background information to the OECD database of governance of public research policy as described in Borowiecki, M. and C. Paunov (2018), "How is research policy across the OECD organised? Insights from a new policy database", *OECD Science, Technology and Industry Policy Papers*, No. 55, OECD Publishing, Paris, <a href="https://doi.org/10.1787/235c9806-en">https://doi.org/10.1787/235c9806-en</a>. The data was compiled by the OECD Working Party on Innovation and Technology Policy (TIP). Data quality was validated by delegates to OECD TIP Working Party the in the period between March 2017 and May 2018. Additional references that were used to fill out the questionnaire are indicated.

The data is made freely available online for download at <a href="https://stip.oecd.org/resgov">https://stip.oecd.org/resgov</a>.

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## Abbreviations and acronyms

Formas	Swedish Research Council	
Forte	Swedish Research Council for Health, Working Life and Welfare	
GERD	Gross expenditures on research and development	
HEIs	Higher Education Institutions	
PRIs	Public Research Institutes	
R&D	Research and development	
RISE	Research Institutes Sweden	
SFOs	Strategic Research Areas	
SIOs	Strategic Innovation Areas	
SMEs	Small and medium-sized enterprises	
VINNOVA	Swedish Governmental Agency for Innovation Systems	

#### Survey of public research policy

#### **Topic 1: Institutions in charge of priority setting, funding and evaluations**

Table 1. Questions on institutions in charge of priority setting, funding and evaluations of universities and PRIs

#### Question

# Q.1.1. Who mainly decides on the scientific, sectoral and/or thematic priorities of budget allocations for a) HEIs and b) PRIs?

c) Which are the main mechanisms in place to decide on scientific, sectoral and/or thematic priorities of national importance, e.g. digital transition, sustainability? Please describe who is involved and who decides on the priorities (e.g., government, research and innovation councils, sector-specific platforms including industry and science, etc.).

(This question does not refer to who sets overall science, technology and industry priorities. This is usually done by parliaments and government. The question refers to decisions taken after budgets to different ministries/agencies have been approved. Scientific priorities refer to scientific disciplines, e.g. biotechnology; sectoral priorities refer to industries, e.g. pharmaceuticals; and thematic priorities refer to broader social themes, e.g. digital transition, sustainability, etc.)

d) From 2005-16, were any significant changes introduced as to how decisions on scientific, sectoral and/or thematic orientation of major programmes are taken (e.g. establishment of agencies that decide on content of programmes)?

#### Response

a to c) The Government Research and Innovation Bill, which is the National Government's funding priorities and associated rationales, provides the basis of general Swedish priorities. The Bill is presented every four years, in the middle of the four-year term of the National Government.

The priorities in terms of specific scientific disciplines or thematic priorities are generally broad, giving room for further specifications of priorities through the Swedish Research Council, the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas), the Swedish Research Council for Health, Working Life and Welfare (Forte), and the Swedish Governmental Agency for Innovation Systems (VINNOVA). About half of the funding through the R&I Bill is channelled to the HEI in the form of block grants. The bulk of the other half is distributed to different research councils (research council dominates) and Vinnova, generally with quite open mandates, based on these organizations basic instructions. In essence, therefore the specific thematic prioritizations is primarily driven bottom-up.

#### d) Changes over 2005-16

However, in the 2008 Bill, the National Government prioritised specific funding to some 20 "Strategic Research Areas" (SRAs). In 2012, the National Government boosted funding to the "Strategic Innovation Areas" (SIOs), in which, however, the themes were bottom-up selected. In the 2016 Bill, the National Government prioritised some 10 research areas of particular importance. The SIOs were further boosted in 2016. In terms of funding, the SFOs represented about 3 percent of total Governmental R&D-funding. Corresponding shares for the SIAs is about 5 percent and the research areas in 2016 about

#### References:

EC/OECD STI Policy Survey 2016 for Sweden. Responses B4, C17 and C18.

OECD (2016). Linking Swedish research and innovation. In OECD Reviews of Innovation Policy: Sweden, p. 89-126. Paris: OECD Publishing.

## **Q.1.2.** Who allocates **institutional block funding** to a) HEIs and b) PRIs?

(Institutional block funds (or to general university funds) support institutions and are usually transferred directly from the government budget.)

- c) Who allocates **project-based funding** of research and/or innovation for HEIs and PRIs? (*Project-based funding provides support for research and innovation activities on the basis of competitive bids.*)
- d) Is there a transnational body that provides funding to HEIs and PRIs (e.g. the European Research Council)?
  e) What is the importance of such funding relative to national funding support?
- f) From 2005-16, were any changes made to way programmes are developed and funding is allocated to HEIs and PRIs (e.g. merger of agencies, devolution of programme management from ministries to agencies)?

- a) The Ministry of Education and Research allocates institutional block funding to HEIs and defines budget items, i.e. funds to be used for teaching and research (EC/OECD STI Policy Survey 2016, response B4). However, base funding is provided on a level considerably lower than in other OECD countries (EC/OECD STI Policy Survey 2016, response C6 is not explicit here). HEIs cannot move funds between those predefined budget items (see also Question 4.1).
- b) RISE (Research Institutes Sweden ri.se) receive the research budget for PRIs and allocates funds to research and innovation activities of Public Research Institutes. RISE was created 2009 and replaced the Knowledge Foundation and the IRECO Holding AB (OECD, 2016, p. 99).
- c) With regard to project-based funding, the four national funding agencies (Swedish Research Council, Formas, Forte, VINNOVA) develop programmes supporting research and innovation at HEIs and PRIs and allocate budget to them (EC/OECD STI Policy Survey 2016, response B4).
- d) In Sweden, HEIs and PRIs are also eligible for additional funding from the European Research Council and the European Commission (Framework Programmes).
- e) EU funding from the EU Framework Programme corresponds to 7% of total national public R&D-funding in Sweden.
- f) PRIs Reform 2009 (core funding went directly to newly created RISE instead through VINNOVA)

#### References:

EC/OECD STI Policy Survey 2016 for Sweden. Responses B4 and C6.

OECD (2016). Linking Swedish research and innovation. In OECD Reviews of Innovation Policy: Sweden, p. 99. Paris: OECD Publishing.

#### Q.1.3. Do performance contracts determine funding of a) HEIs?

Institutional block funds can be partly or wholly distributed based on performance. (Performance contracts define goals agreed between ministry/agency and HEIs/PRIs and link it to future block funding of HEIs and PRIs.)

- b) What is the share of HEI budget subject to performance contract?
- c) Do performance contracts include quantitative indicators for monitoring and evaluation?
- d) What are the main indicators used in performance contracts? Which, if any, performance aside from research and education is set out in performance contracts?
- e) Do HEIs participate in the formulation of main priorities and criteria used in performance contracts?
- f) Do the same priorities and criteria set in performance contracts apply to all HEIs?
- g) Are any other mechanisms in place to allocate funding to HEIs and PRIs?
- h) From 2005-16, were any changes made to funding of HEIs and PRIs?

(In case performance contracts are in place that bind funding of PRIs, please provide information about them.) a to f) No, funding of HEIs and PRIs is not subject to performance agreements between national ministry or agency level and institutions.

g) In 2009, a reform introduced performance elements in HEI funding: Between 2009 and 2013, 10% of university block funds were performance based. The share increased to 20% starting with 2014 (OECD, 2016, p. 66). The allocation of teaching funds is based on the current number of students while research funding is allocated based on the following criteria: current level of external funding, number of publications in international scientific literature, and the number of citations of these papers in international peerreview journals (Claeys-Kuli and Estermann, 2015, p. 28).

h) Introduction of performance-based funding of research at HEIs (2009) - current performance indicators determine current funding

Claeys-Kuli, A.-L., and Estermann, T. (2015). Define Thematic Report: Performance-Based Funding of Universities in Europe. Brussels: European University Association. Retrieved from http://eua.be/activities-

services/news/newsitem/2015/07/09/Report\_reveals\_performance-

based\_funding\_of\_universities\_is\_not\_a\_magic\_formula.aspx, accessed 30.09.2016.

OECD (2016). Strengthening Swedish university research. In OECD Reviews of Innovation Policy: Sweden, p. 66. Paris: OECD Publishing.

Q.1.4. Who decides on the following key evaluation criteria of HEIs and PRIs?

Who is responsible for setting criteria to use when evaluating performance of a) HEIs? Who is responsible for b) evaluating and c) monitoring HEIs' performance?

Who is responsible for setting criteria to use when evaluating performance of d) PRIs? Who is responsible for e) evaluating and f) monitoring PRIs' performance?

h) From 2005-16, was any institution created for evaluating HEIs and PRIs or were any changes made to criteria applied for evaluations of HEIs and PRIs?

a) In terms of evaluation of HEIs, the Ministry of Education and Research defines performance criteria for evaluations of institutions since 2009 (Claeys-Kuli and Estermann, 2015, p. 21).

b and c) The Swedish Higher Education Authority maintains and calculates performance indicators (i.e. citation metrics and the external funding) and sends them to the Ministry of Education and Research which conducts evaluations of HEIs.

d to f) PRIs themselves monitor their performance (OECD. 2016, p. 99). The criteria set by the Ministry for HEI performance do not apply for PRIs (OECD, 2016, p. 66).

h) Changes over 2005-2016

In 2009, performance based funding and related criteria were introduced (OECD, 2016, p. 66). The criteria were selected in consultation with HEIs.

In 2013, the Swedish Higher Education Authority was established to monitor the performance of HEIs (EC/OECD STI Policy Survey 2016, response H4).

#### References:

EC/OECD STI Policy Survey 2016 for Sweden. Response H4.

OECD (2016). Strengthening Swedish university research. In OECD Reviews of Innovation Policy: Sweden, p. 66. Paris: OECD Publishing.

**Q.1.5.** Which **recent reforms** to institutions that are in charge of priority setting, budget allocations, and evaluations of HEIs and PRIs were particularly important?

Reforms saw the introduction of performance-based funding in 2009. This was linked to an increase in generic research funds in selected fields for universities (Strategic Research Areas - SFOs). The SFOs aimed at supporting research specialisation of HEIs in selected strategic areas. Institutional funds were linked to successful acquisition of third party competitive funding in research. In terms of impact, however, HEIs did not use the additional institutional funding to increase research expenditures in selected strategic areas. The additional funds went instead to already existing activities as departments set research priorities themselves; this prevented HEI management to concentrate reReferences in selected SFOs (OECD, 2016, p. 81-84).

The Government Bill of 2012 established Strategic Innovation Areas (Strategiska Innovationsområden, SIOs) (EC/OECD STI Policy Survey 2016, responses C17 and C18). SIOs are university-industry consortia. Research organisations and industry form research consortia around research topics of strategic interest to them. Jointly, they apply for the status of a strategic innovation area which receives public funding. The consortia jointly apply for public funding and if it is granted, they themselves allocate public funds to individual research projects. SIOs resulted in an increase in the number of joint R&D projects between HEIs and industry increased in areas deemed as strategically important (OECD, 2016, p. 119-123).

PRIs reform with establishment of RISE (2009).

#### References:

EC/OECD STI Policy Survey 2016 for Sweden. Responses B4, B11, C17, C18, and H4.
OECD (2016). Linking Swedish research and innovation. In OECD Reviews of Innovation Policy: Sweden, p. 119-123. Paris: OECD Publishing.

#### **Topic 2: Policy co-ordination mechanisms**

Table 2. Questions on research and innovation councils

#### Question Response

# **Q.2.1.** a) Is there a **Research and Innovation Council**, i.e. non-temporary public body that takes decisions concerning HEI and PRI policy, and that has explicit mandates by law or in its statutes to either?

- provide policy advice (i.e. produce reports);
- and/or oversee policy evaluation;
- and/or coordinate policy areas relevant to public research (e.g. across ministries and agencies);
- and/or set policy priorities (i.e. strategy development, policy guidelines);
- and/or joint policy planning (e.g. joint crossministry preparation of budgetary allocations)?
- b) What is the name of the main research and/or innovation Council/Committee? Are there any other research Councils/Committees?
- c) Are there any other research Councils/Committees?

a and b) The National Council for Innovation and Quality in the Public Sector is the main innovation council; it provided policy advice on innovation programmes and related budgets (Edquist, 2016; Schwaag Serger et al., 2015). The National Council for Innovation and Quality in the Public Sector was established in 2015 (OECD, 2016, p. 181).

c) Missing answer.

#### References:

Charles, E. (2016). Charles appointed to the Prime Minister's National Innovation Council (Nationella innovationsrådet) (web blog). Retrieved from <a href="https://charlesedquist.com/2015/02/27/charles-appointed-to-the-prime-ministers-national-innovation-council-nationella-innovationsradet/">https://charlesedquist.com/2015/02/27/charles-appointed-to-the-prime-ministers-national-innovation-council-nationella-innovationsradet/</a>, accessed 30.09.2016.

OECD (2016). Priorities, strategies and governance of innovation in Sweden. In OECD Reviews of Innovation Policy: Sweden, p. 181. Paris: OECD Publishing.

Schwaag Serger, S., Wise, E., Anrold, E. (2015). National Research and Innovation Councils as an Instrument of Innovation Governance: Characteristics & challenges. VINNOVA Analysis VA 2015:07. Stockholm: VINNOVA. Retrieved from <a href="http://www.vinnova.se/en/Publications-and-events/Publications/Products/National-Research-and-Innovation-Counsils-as-an-Instrument-of-Innovation-Governance/">http://www.vinnova.se/en/Publications-and-events/Publications/Products/National-Research-and-Innovation-Counsils-as-an-Instrument-of-Innovation-Governance/</a>, accessed 30.09.2016.

Q.2.2. With reference to Q.2.1, does the Council's mandate explicitly include a) policy coordination; b) preparation of strategic priorities; c) decision-making on budgetary allocations; d) evaluation of policies' implementation (including their enforcement); e) and provision of policy advice?

a to e) The Council's mandate is to provide policy advice on innovation policy and policies supporting framework conditions for innovation (OECD, 2016, p. 181).

#### References:

OECD (2016). Priorities, strategies and governance of innovation in Sweden. In OECD Reviews of Innovation Policy: Sweden, p. 181. Paris: OECD Publishing.

Q.2.3. With reference to Q.2.1, who formally participates in the Council? a) Head of State, b) ministers, c) government officials (civil servants and other representatives of ministries, agencies and implementing bodies), d) funding agency representatives, e) local and regional government representatives, f) HEI representatives, g) PRI representatives, h) private sector, i) civil society, and/or j) foreign experts

representatives from HEIs, trade unions, and private business (Edquist, 2016).

a and b) The Council does not have its own staff or budget.

Q.2.4. With reference to Q.2.1.b., does the Council have its own a) staff and/or its own b) budget? If so, please indicate the number of staff and the amount of annual budget available.

The ministries represented in the Council prepare the quarterly meetings.

a to j) The Council is chaired by the Prime Minister and its

Higher Education, the Minister of the Environment, as well as

members include the Minister of Finance, the Minister of Industries and Innovation, the Minister of Research and

c) From 2005-16, were any **reforms** made to the mandate of the Council, its functions, the composition of the Council, the budget and/or the Council's secretariat? Was the Council created during the time period?

c) The Council was established in 2015.

Table 3. Questions on national STI strategies

#### Question Response

## Q.2.5. a) Is there a national non-sectoral STI strategy or plan?

b) What is the name of the main national STI strategy or plan?

**Q.2.6.** Does the national STI strategy or plan address any of the following priorities?

a) Specific themes and/or **societal challenges** (e.g. Industry 4.0; "green innovation"; health; environment; demographic change and wellbeing; efficient energy; climate action) - Which of the following themes and/or societal challenges are addressed?

- Demographic change (i.e. ageing populations, etc.)
- Digital economy (e.g. big data, digitalisation, industry 4.0)
- Green economy (e.g. natural reReferences, energy, environment, climate change)
- Health (e.g. Bioeconomy, life science)
- Mobility (e.g. transport, smart integrated transport systems, e-mobility)
- Smart cities (e.g. sustainable urban systems urban development)

b) Specific **scientific disciplines** and **technologies** (e.g. ICT; nanotechnologies; biotechnology) - Which of the following scientific research, technologies and economic fields are addressed?

- Agriculture and agricultural technologies
- Energy and energy technologies (e.g. energy storage, environmental technologies)
- Health and life sciences (e.g. biotechnology, medical technologies)
- ICT (e.g. artificial intelligence, digital platforms, data privacy)
- Nanotechnology and advanced manufacturing (e.g. robotics, autonomous systems)
- c) Specific regions (e.g. smart specialisation strategies)
- d) **Supranational** or transnational objectives set by transnational institutions (for instance related to European Horizon 2020)
- e) Quantitative targets for monitoring and evaluation (e.g. setting as targets a certain level of R&D spending for public research etc.)
- f) From 2005-16, was any STI strategy introduced or were any changes made existing STI strategies?

a and b) National Innovation Strategy (2012); Government Bill Research and Innovation (2016)

a and b) The Government Bill 2016) provides that public funds should be devoted to Strategic Innovation Areas (SIOs) but does not specify which ones (EC/OECD STI Policy Survey 2016, responses B1, C17 and C18).

The National Innovation Strategy (2012) does not addresses specific themes and societal challenges, specific scientific research, technology and economic fields, or supranational (European) objectives. It does not include quantitative targets with regard to R&D expenditures.

- c) With regard to specific regions, a number of Smart Specialisation Strategies are in place for Swedish regions.
- d) The Government Bill does not set transnational objectives.
- e) The current Government Bill sets quantitative targets for monitoring and evaluation. It has set the objective of 4% GERD as share of GDP until 2020.
- f) The Government Bill of 2012 established Strategic Innovation Areas (SIOs) (EC/OECD STI Policy Survey 2016, responses C17 and C18). As a result, the number of joint R&D projects between HEIs and industry increased in areas deemed as strategically important (OECD, 2016, p. 119-123).

#### References:

EC/OECD STI Policy Survey 2016 for Sweden. Responses B1, C17 and C18.

**Q.2.7.** What **reforms** to policy co-ordination regarding STI strategies and plans have had particular impact on public research policy?

The Government Bill of 2012 established Strategic Innovation Areas (SIOs) (EC/OECD STI Policy Survey 2016, responses C17 and C18). As a result, the number of joint R&D projects between HEIs and industry increased in areas deemed as strategically important (OECD, 2016, p. 119-123).

#### References:

OECD (2016). Linking Swedish research and innovation. In OECD Reviews of Innovation Policy: Sweden, p. 119-123. Paris: OECD Publishing.

#### Table 4. Questions on inter-agency programming and role of agencies

#### Question

## **Q.2.8.** Does **inter-agency joint programming** contribute to the co-ordination of HEI and PRI policy?

(Inter-agency joint programming refers to formal arrangements that result in joint action by implementing agencies, such as e.g. sectoral funding programmes or other joint policy instrument initiatives between funding agencies.)

#### Response

University-industry consortia, the Strategic Innovation Areas (Strategiska Innovationsområden, SIOs) were established in 2012 to jointly set scientific, sectoral and thematic strategic priorities that guide research funding. Research organisations and industry form research consortia around research topics of strategic interest to them. Jointly, they apply for the status of a strategic innovation area which receives public funding. The consortia jointly apply for public funding and if it is granted, they themselves allocate public funds to individual research projects. SIO funds are managed by Sweden's innovation agency VINNOVA (OECD, 2016b). Its programme "Internet of Things", for instance, includes Uppsala University as leading institution and programme officer, large companies such as Ericsson, and SMEs such as Sigma Connectivity, and Teyi Services, and a number of other HEIs and actors from government and civil society (e.g. Teknikföretagen, the Royal Institute of Technology, Malmö University, and the Swedish Electronics Trade Association). (OECD, 2016, p. 119-123).

#### References:

EC/OECD STI Policy Survey 2016 for Sweden. Response B6.

OECD (2016). Linking Swedish research and innovation. In OECD Reviews of Innovation Policy: Sweden, p. 119-123. Paris: OECD Publishing.

**Q.2.9.** a) Is co-ordination within the **mandate of agencies**?

a) Missing answer

b) From 2005-16, were any changes made to the mandates of agencies tasked with regards to inter-agency programming? Were new agencies created with the task to coordinate programming during the time period?

b) Missing answer.

References:

**Q.2.10.** What **reforms** of the institutional context have had impacts on public research policy?

The four-year Research and Innovation Bills include institutional reforms, notably increased HEI autonomy.

### **Topic 3: Stakeholders consultation and institutional autonomy**

EC/OECD STI Policy Survey 2016 for Sweden. Responses C4, C6, C17 and C18.

#### **Table 5. Questions on stakeholder consultation**

Question	Response
Q.3.1. a) Do the following stakeholders participate as formal members in Research and Innovation Councils?  (i.e. Formal membership as provided by statutes of	a) Representatives from the private sector and HEIs/PRIs are formal members of the National Innovation Council (EC/OECE STI Policy Survey 2016, responses C17 and C18).
Council)  - Private Sector  - Civil society (citizens/ NGOs/ foundations)  - HEIs/PRIs and/or their associations	b) Private sector and civil society representatives participate in governing boards of HEIs and PRIs.
o) Do stakeholders participate as formal members in council/governing boards of HEIs? (i.e. Formal membership as provided by statutes of Council)	
<ul><li>Private Sector</li><li>Civil society (citizens/ NGOs/ foundations)</li></ul>	
References: EC/OECD STI Policy Survey 2016 for Sweden. Responses C	C17 and C18.
Q.3.2. a) Are there online consultation platforms in place to request inputs regarding HEI and PRI policy? b) Which aspects do these online platforms address (e.g. e.g. open data, open science)?	a to c) Missing answer.
c) From 2005-16, were any reforms made to widen nclusion of stakeholders and/or to improve consultations, ncluding online platforms?	
Q.3.3. Which <b>reforms</b> to consultation processes have proven particularly important?	The National Innovation Strategy (2012) established Strategic Innovation Areas (SIOs) (EC/OECD STI Policy Survey 2016, responses C17 and C18). SIOs are defined based on a bottom-up process where consortia consisting of HEIs, PRIs and industry submit their proposals to funding agencies. During the elaboration of performance criteria for HEIs 2009, there was a process of consultation of HEIs (EC/OECD STI Policy Survey 2016, response C4 and C6).
References:	

#### Table 6. Questions on autonomy of universities and PRIs

#### Question Response

## **Q.3.4.**Who decides about **allocations of institutional block funding** for teaching, research and innovation activities at a) HEIs and b) PRIs?

(National/regional level: If HEIs face national constraints on using block funds, i.e. funds cannot be moved between categories such as teaching, research, infrastructure, operational costs, etc. This option also applies if the ministry pre-allocates budgets for universities to cost items, and HEIs are unable to distribute their funds between these.

<u>Institutions themselves</u>: If HEIs are entirely free to use their block grants.)

- a) The Ministry of Education and Research allocates funds to teaching and research at HEIs. HEIs cannot move funding between those categories.
- b) PRIs are not subject so such restrictions.

#### References:

Data on institutional autonomy is based on a survey conducted by the European University Association between 2010 and 2011 across 26 European countries. The answers were provided by Secretaries General of national rectors' conferences and can be found in the report by the European University Association (Estermann et al., 2015).

Estermann, T., Nokkala, T., and Steinel, M. (2015). University Autonomy in Europe II The Scorecard. Brussels: European University Association. Retrieved from <a href="http://www.eua.be/Libraries/publications/University\_Autonomy\_in\_Europe\_II\_-">http://www.eua.be/Libraries/publications/University\_Autonomy\_in\_Europe\_II\_-</a>
The Scorecard.pdf?sfvrsn=2, accessed 19.09.2016.

European University Association (2016). University Autonomy in Europe (Webpage). Retrieved from <a href="http://www.university-autonomy.eu/">http://www.university-autonomy.eu/</a>, accessed 19.09.2016.

## **Q.3.5.** Who decides about **recruitment** of academic staff at a) HEIs and b) PRIs?

(National/regional level: If recruitment needs to be confirmed by an external national/regional authority; if the number of posts is regulated by an external authority; or if candidates require prior accreditation. This option also applies if there are national/regional laws or guidelines regarding the selection procedure or basic qualifications for senior academic staff.

<u>Institutions themselves</u>: If HEIs are free to hire academic staff. This option also applies to cases where laws or guidelines require the institutions to publish open positions or the composition of the selection committees which are not a constraint on the hiring decision itself.)

Who decides about **salaries** of academic staff at c) HEIs and d) PRIs?

(<u>National/regional level</u>: If salary bands are negotiated with other parties, if national civil servant or public sector status/law applies; or if external authority sets salary bands

<u>Institutions themselves</u>: If HEIs are free to set salaries, except minimum wage.)

Who decides about **reassignments** and **promotions** of academic staff at e) HEIs and f) PRIs?

(National/regional level: If promotions are only possible in case of an open post at a higher level; if a promotion committee whose composition is regulated by law has to approve the promotion; if there are requirements on minimum years of service in academia; if automatic promotions apply after certain years in office, or if there are promotion quotas.

<u>Institutions themselves</u>: If HEIs can promote and reassign staff freely.)

a to f) HEIs and PRIs in Sweden are free to hire academic staff, to set salaries, and they can promote and reassign staff freely. National guidelines and laws exist that require institutions to publish open positions or the composition of the selection committee. But these guidelines or laws do not constraint HEIs and PRIs.

Q.3.6.Who decides about the **creation of academic departments** (such as research centres in specific fields) and functional units (e.g. **technology transfer offices**) at a) HEIs and b) PRIs?

(National/regional level: If there are national guidelines or laws on the competencies, names, or governing bodies of internal structures, such as departments or if prior accreditation is required for the opening, closure, restructuring of departments, faculties, technology offices, etc.

<u>Institutions themselves</u>: If HEIs are free to determine internal structures, including the opening, closure, restructuring of departments, faculties, technology offices, etc.)

Who decides about the creation of legal entities (e.g. **spinoffs**) and **industry partnerships** at c) HEIs and d) PRIs? (<u>National/regional level</u>: If there are restrictions on legal entities, including opening, closure, and restructuring thereof; if restrictions apply on profit and scope of activity of non-profit organisations, for-profit spin-offs, joint R&D, etc.

<u>Institutions themselves</u>: If HEIs are free to create non-profit organisations, for-profit spin-offs, joint R&D, etc.)

Q.3.7. Who earns what **share of revenues** stemming from IP (patents, trademarks, design rights, etc.) created from publicly funded research at a) HEIs and b) PRIs?

- HF
- Research unit / laboratory within HEI
- Researchers

c) From 2005-16, were any reforms introduced that affected the institutional autonomy of HEIs and PRIs?

a and b) HEIs and PRIs themselves decide about internal academic structures, such as the creation of departments and technological transfer offices. There are national guidelines on competences, names and governing bodies of internal academic structures but they are not binding. HEI and PRIs are free to determine their internal structures.

c and d) With regard to the creation of legal entities and industry partnerships, only selected HEIs as laid out in national law can create for-profit spin-offs. PRIs are not subject to such restrictions.

a) In Sweden, researchers have full ownership rights to their research results. The Swedish Patent Act from 1967 establishes that 100% of the revenues from IP should be allocated to inventor (professor's privilege). Currently, the Swedish government is committed to introduce a legal obligation for academic staff to notify their institution of any research result having commercialisation potential. The overall objective of this measure is to foster commercialisation of research results (EC/OECD STI Policy Survey 2016, response C19 and F5).

b) At PRIs, the employer has a right to an "option". That means that the employer is given priority to agree with the employee to acquire the entire, or parts of, the invention but the researchers has a right to compensation (Act on the Right to Inventions by Employees, 1949).

c) With regard to university funding, reforms saw the introduction of performance-based funding in 2009 (EC/OECD STI Policy Survey 2016, response C4). Between 2009 and 2013, 10% of university block funds were performance based. The share increased to 20% starting with 2014 (OECD, 2016, p. 66). Criteria applied for the allocation of institutional funds were selected by the Ministry of Education and Research in consultation with HEIs.

#### References:

Act on the Right to Inventions by Employees (1949). Retrieved from <a href="http://www.wipo.int/wipolex/en/details.jsp?id=10702">http://www.wipo.int/wipolex/en/details.jsp?id=10702</a>, accessed 30.09.2016.

EC/OECD STI Policy Survey 2016 for Sweden. Response C19 and F5.

Swedish Patent Act (1967/2014). Retrieved from <a href="http://www.wipo.int/wipolex/en/text.jsp?file\_id=129531">http://www.wipo.int/wipolex/en/text.jsp?file\_id=129531</a>, accessed 30.09.2016.

EC/OECD STI Policy Survey 2016 for Sweden. Response C4.

OECD (2016). OECD Reviews of Innovation Policy: Sweden. Paris: OECD Publishing.

**Q.3.8.** Which **reforms** to institutional autonomy have been important to enhance the impacts of public research?

The Research and Innovation Bill 2016 introduced university autonomy reforms.

Already in 2009, reforms saw the introduction of performancebased funding.

#### References:

EC/OECD STI Policy Survey 2016 for Sweden. Response C11.

OECD (2016). Strengthening Swedish university research. In OECD Reviews of Innovation Policy: Sweden, p. 81-84. Paris: OECD Publishing.