

3rd Ibero-American Forum on Innovative Public Procurement

Inaugural presentation

by

Charles Edquist

CIRCLE, Lund University, Sweden

on

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<http://charlesedquist.com>

Innovations are:

- The most important source (75 – 90 %) of **productivity growth** in society
 - This growth creates increased salaries, higher profits and more taxes = social and economic welfare
- A very important potential source of increased **sustainability** and **decreased CO2** emissions – both are important objectives in **Agenda 2030**

Background definitions

Innovations = new creations of economic and societal significance primarily carried out by firms (but not in isolation). They include **new products** and **new processes**.

Innovation system = The **determinants** of innovation processes.

Holistic innovation Policy = All actions by public organizations that influence innovation processes, i.e. the development and the diffusion of innovations.

Part 1: Holistic Innovation Policy

- a short introduction

Based on:

Susana Borrás and Charles Edquist:

“Holistic Innovation Policy: Theoretical Foundations, Policy Problems and Instrument Choices”. [Oxford University Press](#), 2019.

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In the beginning there was **the linear model**

- Innovations generated by a process consisting of well-defined, consecutive stages, e.g.
 - Basic research
 - Applied research
 - Development work
 - Resulting in new products and processes
 - Growth, employment, etc
- It was **supply-push** and **partial**
- It is **stressing mainly research** as a determinant of innovations, i.e. it is **linear**
- However, **research does not automatically lead to innovations**, and research is **never sufficient** to achieve innovations

Then came the **Systems of Innovation (SI) approach**

- The different SI approaches usually defines innovation in terms of **determinants** of innovation processes, although **different determinants** are emphasized in different versions:
- **My definition** (Edquist 1997, 2005, 2011, 2019) of systems of innovation includes:
 - “**ALL** important economic, social, political, organizational, institutional and other **factors/determinants** that influence the development, diffusion and use of innovations”.

More instrumental: 10 Important Activities/Determinants in Systems of Innovation (SI)

1. R&D
2. Education and training
- 3. Formation of new product markets**
- 4. Articulation of quality requirements**
5. Creation and changing organizations
6. Interactive learning
7. Creating and changing institutions
8. Incubation
9. Financing of innovation processes
10. Consultancy services

(Edquist 2005)

These **activities** are the **hypothetical determinants** of the development and the diffusion of innovations. Together they may be said to **define** an innovation system.

With the SI approach **DEMAND started to be stressed** as a determinant of innovation = important to balance supply push linearity.

Policy is not a separate activity – but a part of **all** the ten activities

A Holistic Innovation Policy

- Integrates **all** *public* actions that influence or may influence innovation processes – their **speed** and their **direction** – see our **book**
- Also the **demand side** is central – not only supply-push and linearity (R&D)
- Can rely on the **systems of innovation approach** as its theoretical basis
- Requires a very **broad** and **general** definition of systems of innovation

But policy is still linear in most countries

- Innovation **researchers** have **abandoned** the **linear view** since decades and **completely replaced it by the systems approach**.
- But **innovation policies pursued** in practically all countries are **still**:
 - **partial** (captures only few determinants),
 - **and linear** (strongly emphasizes research)
- Indicated by the dominance of the expression "**science and technology policy**", "**research and innovation policies**" and or "**Innovation, Science and Technology policies**"
- Also: often said that provision of R&D results is the most important **innovation** policy instrument – this is not correct
- Innovation policy is **far behind** innovation research

Part 2: Functional public procurement and innovation (main part)

Based on:

- Edquist, Charles and Jon Mikel Zabala”**Functional procurement for innovation, productivity and the environment: A mission-oriented approach**”, CIRCLE, Lund University, 2020. (**Download** at: <http://charlesedquist.com>), published in *Science and Public Policy* in July 2020
- Edquist/Borrás 2019: ”**Holistic Innovation Policy....**”(chpt 6) (**Download** at: <http://charlesedquist.com>)

Public Procurement (PP)

- PP is when **public agencies** (national, regional, local) **buy goods and services**
- It is an **interactive relation** between public buyers and private suppliers
- **Very large:**
 - The World Trade Organization covers public procurement of **1.7 trillion dollars every year**. (1 trillion is written with 12 zero's)
 - In general 15 % or more of GDP which is **many times** the global **expenditures on Research and Development**
- If public procurement can lead to innovation this is **a several times more powerful innovation policy instrument than R&D**

Product procurement vs functional procurement

– a simple and important distinction

- **“Product procurement”**:
 - the buyer describes an existing **product** that he wants to buy.
- **“Functional procurement”**:
 - **Problems** are described - not products.
 - Products which perform **functions** that provide **solutions to the problems** are bought.

Currently: Description of **products**

- Most public procurement is currently done in a **routine-like manner**: the same product as last year is described and demanded: often cut-and-paste. Even **obsolete** products may be described.
- To **describe an innovation** (a non-existing product) is **impossible**.
- **Only existing** products can be described, since we cannot predict the characteristics of innovations. If a product can be described *ex ante* (before it exists), it is not an innovation.
- Hence product procurement cannot lead to innovations.

Functional procurement – in its infancy

- The buyer describes a **problem** that shall be solved or **functions** that the products wanted shall fulfill.
- The buyer describes **what** shall be achieved, not **how** it shall be done.
- The functions must be fulfilled – it does **not** matter how this is achieved!

The **example** of noise reduction

- Motor way – apartments = noise problem
- The authorities **describe** and order a **noise fence** (beton or wood)
- They should **not**!
- Instead they **should order 62 decibel** in the first apartment
- **Alternatives**: lower speeds, electric cars, more quiet asphalt, bend sound waves upwards, etc

Functional Procurement opens for:

- **Innovations** (new products) based on creativity
 - **Higher quality public services** based on the new products procured
 - Some of the new products may change the **direction** of innovation processes
- **Higher productivity** in the society, leading to increased welfare
- **Increased competition:**
 - **between** different **suppliers**
 - **between** different **products** intended to solve the same problem

Transform product procurement into functional procurement!

- Public procurement is large in **all** countries, **much larger than R&D**
- The very large sums spent on procurement are **available every year** = already allocated in the budget on January 1st
- If a **substantial proportion** of public procurement is **transformed** this may be a **much more powerful innovation policy instrument than R&D**

Resources available for innovation policy

- Only few (very rich) countries can spend 3-4 % of GDP on R&D
- Most countries spend less than 1 % on R&D and only parts of that lead to innovations
- Relatively speaking poorer countries spend much more on public procurement than on R&D
- If used to enhance functional procurement, this may mean more innovation, productivity gains and climate improvements in less advanced countries

Is functional procurement allowed?

“Drawing up the technical specifications in terms of functional and performance requirements generally allows that objective to be achieved in the best way possible.

Functional and performance-related requirements are also appropriate means to favor innovation in public procurement and **should be used as widely as possible.**”

(EU Procurement Directives 2014: Recital 74)

Is functional procurement allowed?

The new Prime Minister in Sweden from September 2014 appointed a **minister responsible** for procurement. He created a public agency for "procurement support" in Sept 2015.

Functional procurement was discussed at the **first meeting of the Swedish National Innovation Council** in February 2015.

This minister then developed a **National Government Procurement Strategy, decided by the government as a whole in June 2016.**

Innovation-related procurement in the form of **functional procurement is encouraged in that strategy.**

Functional procurement – further characteristics

- Innovations do not have to be the result of functional procurement, but **old products are forced to compete with new products** when it comes to fulfillment of functions (and cost).
- But the process **can end with** procurement of **the old product**. Functional procurement makes innovations possible, but does not necessarily require them.
- However, functional procurement **can also require an innovation** – if the functional demands exclude supply of the old product. (Larger risk)

The public sector **IS** the market in public procurement

- **Therefore politics and policy are governing** – not private actors
- Based on superior objectives the public organizations can choose which specific problems and challenges that shall be mitigated
- They can influence the **direction** of innovation processes and fulfill objectives for climate, environment, health, etc

Significance of functional procurement – in summary

- Functional procurement can influence the **rate** ('number', 'speed' and 'importance') AS WELL AS the **direction** of innovation processes: it can **shape** innovation, i.e. create **new innovation trajectories**.
- Functional procurement can be used to solve problems and satisfy needs related to the *environment, climate, energy, urban development, health, transports, security*, etc = functional procurement has a large potential as a part of **mission-oriented** policies to mitigate **Grand Challenges**.

Proposal for the future

- The proportion of the regular procurement that is performed in functional terms shall be increased by 5 percentage points per year during the next 5 years.
- When 25 % has been achieved after these 5 years, the programme should be evaluated and new decisions taken.
- This would **liberate creativity and innovation** in a very large part of the economy, since **it would concern 5 % of GDP!!!** This is **five times** the public R&D budget in Sweden.
- It would also **increase competition - between suppliers and between products.**

Consequences:

- If implementation works well, Sweden will be the first country to **systematically use functional public procurement as an innovation policy instrument.**
- This will be a major step towards a **holistic innovation policy** – since this instrument works from the demand side and accounts for 15 - 20 % or GDP.

Part 3: The Swedish National Innovation Council (concluding part)

Based on:

“Towards a holistic innovation policy: Can the Swedish National Innovation Council (NIC) be a role model?”,
Research Policy, Volume 48, Issue 4, March 2019

Download at <https://doi.org/10.1016/j.respol.2018.10.008>

Alternative link: <http://charlesedquist.com>

The Swedish **National Innovation Council (NIC)**

From 2015 Sweden has a **National Innovation (Policy) Council (NIC)** – created and chaired by the Prime Minister

- The NIC consists of **10 external advisors** from industry, unions and academia + five ministers: PM, Finance, Industry, Research and Environment/Climate
- The NIC Secretariate is placed in the office of the PM, i.e. **above** all Ministries

The **operation** of the National Innovation Council

- The PM is **personally chairing** the **4 – 7 hour meetings**
- **No reports** are written by the members of the Council
- The **agenda** is created by the PM and his staff – in interaction with other ministers and also, sometimes, with external members of the Council
- **Presentations** at the meetings are held by ministers (council members and others), external council members and invited experts

Follow-up after meetings

- **No official minutes** are taken, but informal notes are made.
- The State secretaries (deputy ministers) of the five Ministers have **meetings after Council meetings** to discuss what to implement and how. The state secretary of the PM is chairing these meetings.
- Between NIC meetings individual council members are sometimes involved in discussions with the administration or with ministers on specific issues.

Issues discussed in the Council

- A very **wide range of issues** have been discussed, related to innovations and to **many** determinants of innovation processes
- In the **Research Policy article** I show that two major issues have led to decisions in Parliament and in Government:
 - **State risk capital provision**
 - **Innovation-enhancing public procurement** (addressed later)

Two Councils in Sweden!

- A **Research Policy Council** exists since **decades** (just like in many other countries)
- This Council has **marginally** addressed innovation policy and only in a **linear** manner (as an 'appendix' to research)
- The National **Innovation** Council is **not** a science and technology/innovation (STI) policy council
- NIC **focuses** on innovation and deals with research only as one of **many** determinants
- NIC is a means to **escape the linear model!**
- The **Councils existing in other countries** are **partial and linear**, i.e. dominated by research policy.

Separate policies for innovation and research!

- The **dominance of the linear view** in the research policy community cements the linear approach to innovation policy
- Also: In those (20-30) countries with a "Council" in this policy area, the councils cover **research** as well as innovation policy (but to a very small extent).
- In this way research policy continues to dominate over innovation policy – and **innovation policy is considered to be a 'footnote'**.
- One way to increase the degree of holism in innovation policy is to **separate innovation policy from research policy.**

Some results of the Swedish NIC

- Swedish innovation policy has become **more holistic** during the last five years.
- The **Swedish NIC** has played a major role in this transition.
- **Conceptual specifications and advancements** have played a role in this process (e.g. innovation systems, additionality, holistic innovation policy, functional procurement).
- Sweden can **serve as a role model** for other countries in these respects.

Thanks a lot!

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