

科学技術イノベーション政策研究  
事例研究・科学技術イノベーション政策研究  
Case Study (Science, Technology, and Innovation Policy)

演習資料

Guidance Material

テーマ2 「学術研究が育むイノベーション」  
Theme 2: Innovations Driven by Academic Research

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## Abstract

「イノベーション」には研究開発型の大企業からベンチャー企業、個人発明家に至るまで様々なプレーヤが関与し、それを育むシステムも多種多様である。本演習では中でも公的研究機関(主に大学)から生み出される技術や人材に焦点を当てたい。学生諸君にとって大学は最も身近な場の1つのはずだが、大学教員がどのような活動をしているのか、ごく身近にいる教員を除いては殆ど知り得ないのが実情であろう。一括りに「大学研究者」と言っても、様々な人種が存在し、彼らのイノベーションへの関与も様々である。いずれにしても彼らが直接的・間接的にイノベーションの一旦を担っていることは事実であり、その研究成果が明確に社会還元されている事例も少なくない。大学を含む公的研究機関は当然のことではあるが政策の極めて強い影響下にあり、公的研究セクターに毎年投じられる巨額の税金がイノベーションに結び付くか否かは科学政策のデザインに拠るところが大きい。本演習では、フィールドスタディを通じて公的研究の現場を取り巻く環境を理解し、解決すべき課題を見出した上で、科学技術政策に対する提言を行うことを目的とする。

“Innovation” involves a wide range of players such as large R&D-intensive firms, venture businesses, and individual inventors, and the system sustaining innovation is also diverse. Among others, we will focus on the process of innovation occurring at or starting from the public sector (i.e., universities and public research organizations) and its output such scientific knowledge, technologies, and intelligent workforce. For you students, a university is supposed to be one of the most familiar places, but most of you probably have very little idea about how university staff, apart from your direct supervisors, is working and might contribute to innovation. While there are various types of academic researchers, their effort somehow directly or indirectly leads to some sorts of innovation. Apparently, the public sector is under strict influence of science & technology policies, or broadly of economic policies, and it depends on the design of those policies whether or not the large sum of tax money invested every year on academic research leads to innovation. In this group work, students will conduct a field study to understand the policy/organizational environment around the public research, identify some problems to be solved, and propose policy actions to address the problems.

## Overview of Project

**Goal:** To identify issues related to innovation originating from academia, and to propose policy actions to solve the issues. The *issues* can be either the following [1] or [2]:

[1] General problems about public S&T system – Why cannot the public sector produce scientific knowledge and technologies effectively? What are the obstacles? What policies can help overcome the obstacles?

[2] Role of public S&T in specific societal issues – Why cannot the public sector effectively contribute to solving practical problems (say, global warming) through its S&T production? How can it do better job?

**Approach:** Field study (interviews, review of policy reports, etc.) of research activities in university/public organizations, etc.

## Logistics

### 1. Work Group

- TBD

### 2. Schedule & Milestone

Date	Activity	Milestone
Nov 9	Group work 1	Direction & schedule determined
Nov 16	(Lecture)	
Nov 23	(Holiday)	
Nov 30	Group work 2	Subject to be determined
Dec 7	Group work 3	
Dec 14	Group work 4	
Dec 21	Group work 5	
Jan 11	Final presentation	
Jan ??		Submit final report

### 3. Working place and time

- School of Law Building 203/204

- 16:50-18:35 on Wed
- For Nov 30 – Dec 21, you do not have to come to the class because you might need to spend some time on field work during the weeks. Decide your schedule in each group and let the instructor know it.
- The instructor will be in class.

#### 4. Output

- **Output 1:** Final presentation on Jan. 11 (not for grading)
- **Output 2:** Final report (Detail to be announced later)
  - 4-page writing
  - Written on an individual basis (for grading)
  - Due sometime in January

#### 5. Language policy

- In group work, use the designated language.
- For the presentation and report, you may use either English or Japanese

#### 6. Announcement from and contact to instructor

- E-mail + announcement in class (let me know your e-mail address)
- You may ask me questions in class or whenever you want with e-mail:  
[shibayama@tmi.t.u-tokyo.ac.jp](mailto:shibayama@tmi.t.u-tokyo.ac.jp)

### **Group work**

#### 1. Output (Final presentation/report)

- Include the following information
  - Focal problems to be solved: find a not too big but not too minor problem.
  - Background of the problems: explain why the problems must be solved.)
  - Method of your study: what kind of study (interviews, usually) you did?
  - Findings: the breakdown of the original problems, what the real problem is, etc.
  - Proposal of policy actions: what should we do to address the problems?
- Evaluation criteria
  - Well-defined problems

- Logical consistency
- Originality
  - \* Precision is not of importance.
- Guidance will be given later.

## 2. Scope of group work

- “Innovation” could mean many different things. It can be “basic research”, “applied research”, or “technology development”, even in academia. We assume that all of these can somehow, directly or indirectly, be related to the process of innovation starting from basic discoveries and leading to social benefit. You may focus on only part of the process or broadly cover the entire process. Anyway, within group members, agree on what kind of “innovation” you are talking about.

## 3. Milestones

- Discuss directions and schedule for coming weeks (Today, Nov 9)
  - Brainstorm:
    - If you choose [1] or [2]
    - If you have someone you want to interview; someone you can interview
    - What subjects may be of your interest
  - To decide actions for coming few weeks
- Decide your subject broadly (by Nov 30)
  - Direction: [1] or [2]
  - Broad subject
  - Potential interviewees
  - Consult with the instructor on Nov 16 (before/after class) if necessary.
- Arrange interviews (as soon as possible)
- Complete one or a few interviews (in Dec)
- Final presentation (Jan 11)

## 4. Approach

- Direction [2]
  - Interview
    - One or a few researchers
    - Someone connected to the researcher(s); e.g., industry collaborator

- Someone relevant to focal issues you find; policymakers, university administrator (see [1])
  - Survey public information about the researcher.
- Direction [1]
  - Interview
    - A few researchers (to find some patterns)
    - Policymakers, university administrators (TLO, URA)
  - Survey policy reports, etc.

## 5. References

- NISTEP: [科学技術・学術政策研究所](#)
  - [科学技術の状況に係る総合的意識調査：報告書; データ集](#)
  - [NISTEP ブックレット](#)
    - [1: 日本の科学研究力の現状と課題](#)
    - [2: 科学技術イノベーション人材育成をめぐる現状と課題](#)
    - [3: 産学連携と大学発イノベーションの創出](#)
  - [大学の基礎研究の状況をどう考えるか、これからどうすべきか?](#)
  - [研究論文に着目した日本の大学ベンチマーキング 2011](#)
  - [産学官連携と知的財産の創出・活用 報告書](#)
- Other governmental organization
  - [科学技術振興機構 研究開発戦略センター](#)
  - [日本学術会議](#)
  - [総合科学技術会議](#)
- Policy discussions
  - [科学技術・学術審議会](#)
    - [学術分科会](#)
    - [産業連携・地域支援部会](#)
  - 中央教育審議会
    - [大学院部会](#)