



Session 3

Boosting Innovation by Investing in Human Capital

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Questions

- “Investing in Human Capital”: is it really a new issue?
 - NO! ⇒ Human capital theory (Schultz, 1961), Endogenous growth theory
 - Economic performance depends on the quality of the human resources
- What happens “inside the black box”?
 - Heterogeneity of human capital!
 - Multiplicity and complexity of channels!
- When the economic performance of a nation relies strongly on its capacity to innovate . . .
 - New insight on the human resources!

Inside the Innovation Ecosystem

- Innovation Ecosystem (see 1st day's discussion)
 - “Innovation-friendly environment”
 - Interaction
 - Dynamics
 - Scope of the IES: regional, national, global
- Human resources as:
 - A key component of IES
 - Generation, accumulation, dissemination, diffusion, combination, transformation of knowledge
 - A vehicle to transfer knowledge
 - In particular embodied knowledge
 - A catalyst for interaction
 - A beneficiary of the fruits of innovation



Multifunctional
dimension!

Constraints

- Scarcity
 - For some segments of human resources
 - ⇒ Global competition?
- Quality of human resources
 - Core competencies versus Specialized skills
 - ⇒ Learning capacity matters!
 - ⇒ And what about “entrepreneurial mind sets”?
- Problem of allocation
 - Lock-in effect
 - Institutional barrier to mobility of people
 - Asymmetry of information



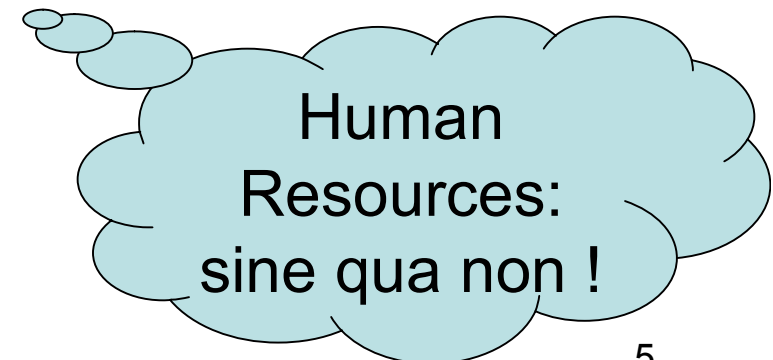
Japanese S&T Policy

3rd S&T Basic Plan (1)



(2006-2010)

- Basic stance
 - Strong emphasis on **human resources**
- Policy goals
 - Jump in knowledge discovery & creation
 - Breakthrough in advanced S&T
 - Sustainable development
 - Innovator Japan
 - Lifetime good health
 - The world's safest nation



Japanese S&T Policy: 3rd S&T Basic Plan (2)



- System reforms related to the human resources
 - Encourage **young researchers**
 - Expand opportunities for **female researchers**
 - Setting a target of 25 % share
 - Attract **foreign researchers** to Japan
 - New opportunities for excellent **senior researchers**
 - Make salary system less prejudicial to **mobility of researchers**
 - Make **research environments** more competitive
 - Better education for our **children** for developing diverse talents that can respond to social needs

Japanese S&T Policy: 3rd S&T Basic Plan (3)

- Strategies for Boosting Innovation (May 2006)
(selected items)
 - Creation of knowledge
 - Basic research
 - “Centers of Excellence” (To make Japanese universities more attractive!)
 - Incubation
 - Industry-University partnership
 - Regional innovation
 - Use
 - Supporting start-ups
 - System Reforms
 - Mobility
 - Human Resources
 - Strengthening science & math education (primary & secondary school)
 - Training of technicians

Are We Taking Full Advantage of HR?

- A key component of IES
 - Concentration of policy efforts for the creation of knowledge!
- A vehicle to transfer knowledge
 - “Mobility” concerns the entire social system!
- A catalyst for interaction
 - How this ability could be improved?
- A beneficiary of the fruits of innovation
 - Presence of experienced & demanding consumers!