

Session 5 *Measuring Innovation:*

**What is the measure for “Outcome”
of Innovation” and How to evaluate
“Effect of the Policy Instruments”**

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Presentation 1:

“How to evaluate service output”

by Takanobu Nakajima, ESRI, CAO

- ❑ Some services are durable and priced as the summation of discounted benefit flow.
- ❑ The change in price of service is interpreted as the change in service flow by upward/downward shift of demand curve.
- ❑ Real service price deducting general inflation rate should be evaluated as output growth.
- ❑ Deflator is crucial to output measurement. Hedonic approach without considering demand shift is not necessary appropriate.



Presentation 2:

“The Different Effects of Intellectual Property Rights on Intra-firm and Arm’s-length Technology Transfer” by Banri Ito, JSPS

- ❑ The arm’s-length share of total technology export changes greatly with destination. Industry with higher patentability has a higher arm’s-length share.
- ❑ Stronger IPR stimulates arm’s-length technology transfer (T.T.) uniformly and may benefit developing countries in TRIPS context.
- ❑ The positive effect of IPR on intra-firm T.T. is restricted to the firms with high R&D intensity.



Presentation 3:

“TFP measurement by Sector & by Commodity”

by Masahiro Kuroda and Satoshi Nakano, Keio University

- ❑ Total factor productivity growth is one of simple measure for the outcome of innovation.
- ❑ TFP measurement by commodities based on input-output tables describes the structural changes of technology linkages from the viewpoints of productivity and finds the bottleneck in the linkage.
- ❑ Improving measurement of intangible assets and service activities is required.



Presentation 4:

“Measuring Innovation”

by Richard B. Dasher, Stanford University

- ❑ For measuring innovation, it is difficult to establish a benchmark for comparison.
- ❑ Measurement of total impact including value of indirect benefits is the crucial point. The impact can be measured up to date, but likely future impact is important.
- ❑ Measurement of impact may require subjective evaluation by external experts.



Presentation 5:

“Measuring Innovation”

by Lennart Grundberg, European Commission

- ❑ The European Innovation Scoreboard provides indicators about innovative drivers, knowledge creation, intellectual property among others.
- ❑ There remain some issues.
 - 1)how to measure new forms of innovation
 - 2)how to correctly assess innovation performance
 - 3)how to compare “real” indicators internationally



Resolution: Session 5

- ❑ Workshops mainly focused on measurement issues of innovation outcome should be held continuously.
- ❑ We should construct a research base for the measurement of innovation in Japan.
- ❑ Collaborative and continuous studies among government, businesses and academics are required.