

University-industry relationship in Post catch-up Japan

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2013 ASIALICS

Structure

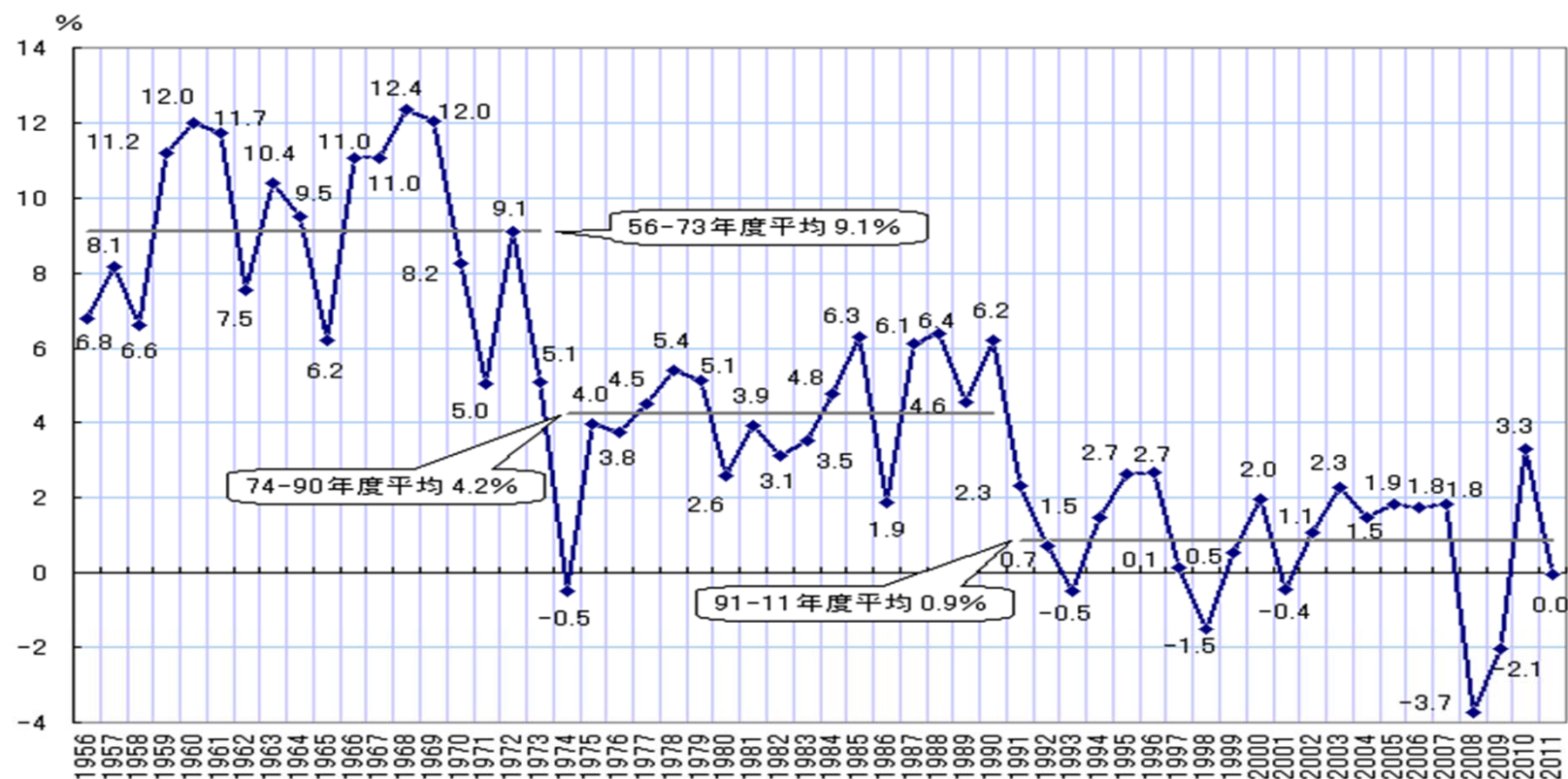
1. Introduction ; Changing Japanese Economy and NIS
2. Recent policies to promote university-industry collaboration
3. Impact of policies
4. Conclusion

1.Introduction ;

Changing Japanese Economy and NIS

Slowdown of economic growth in Japan

経済成長率の推移



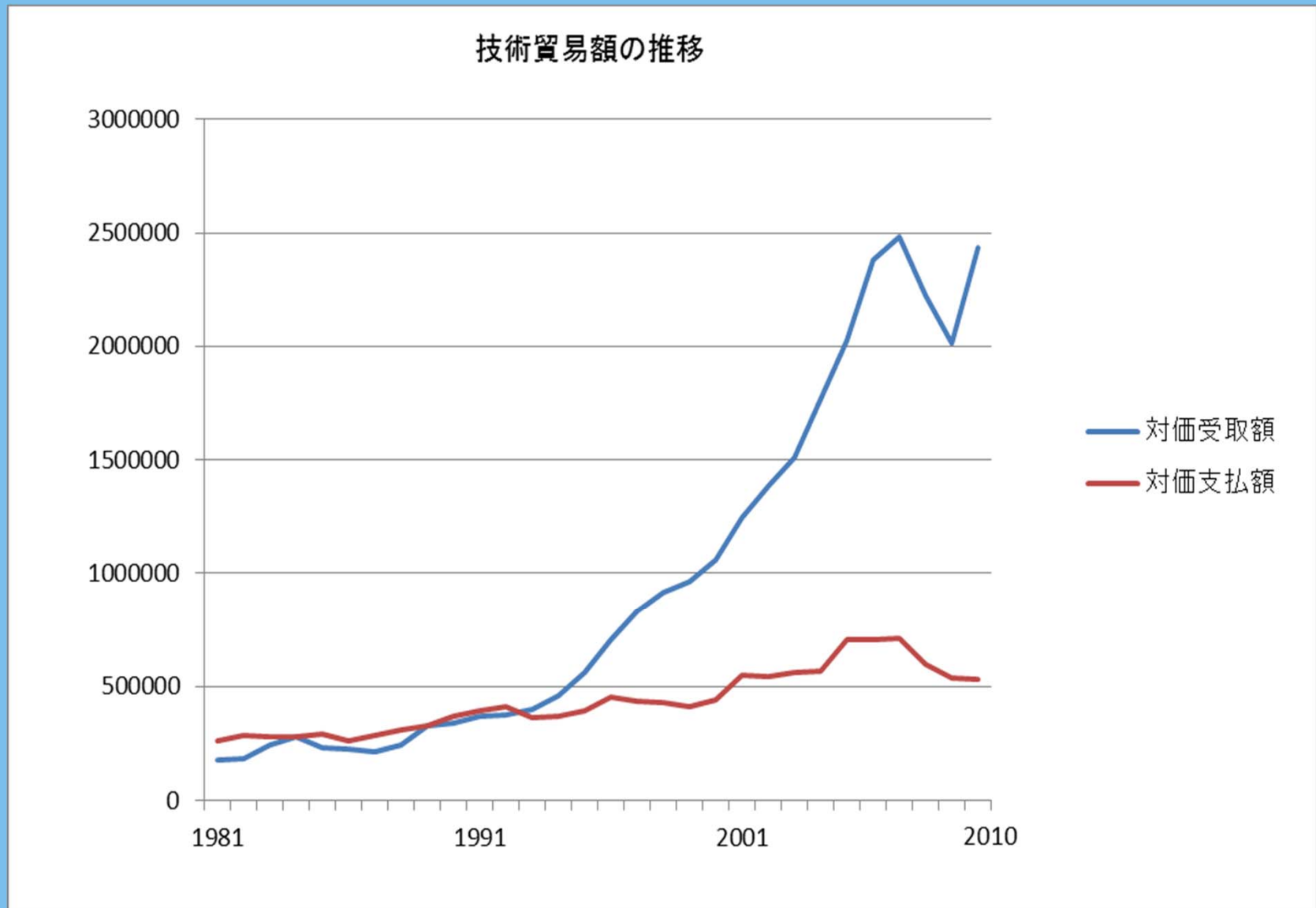
(注) 年度ベース。93SNA連鎖方式推計。平均は各年度数値の単純平均。1980年度以前は「平成12年版国民経済計算年報」(63SNAベース)、1981~94年度は年報(平成21年度確報)による。それ以降は、2012年7-9月期1次速報値<2012年11月12日公表>。

(資料)内閣府SNAサイト

Slowdown of economic growth

- ❖ Low growth and deflation since 1990's ; lost decades
- ❖ New policy is needed to revitalize economy
 - Monetary policy to stop deflation
 - Technology policy to promote innovation

Technology balance of payments



The end of catch up era

- ❖ Japan became net technology exporter in early 1990s
 - Reached technology frontier
- ❖ Need for new technology policies for post catch-up era

New emphasis on the role of Universities

- ❖ Traditional role of university in NIS
 - education--train scientists and engineers
 - research--create and pool knowledge
- ❖ New emphasis on the “third role” of universities
 - commercialization of its technology
 - help industry to innovate
- ❖ Emulation of the (perceived) US model

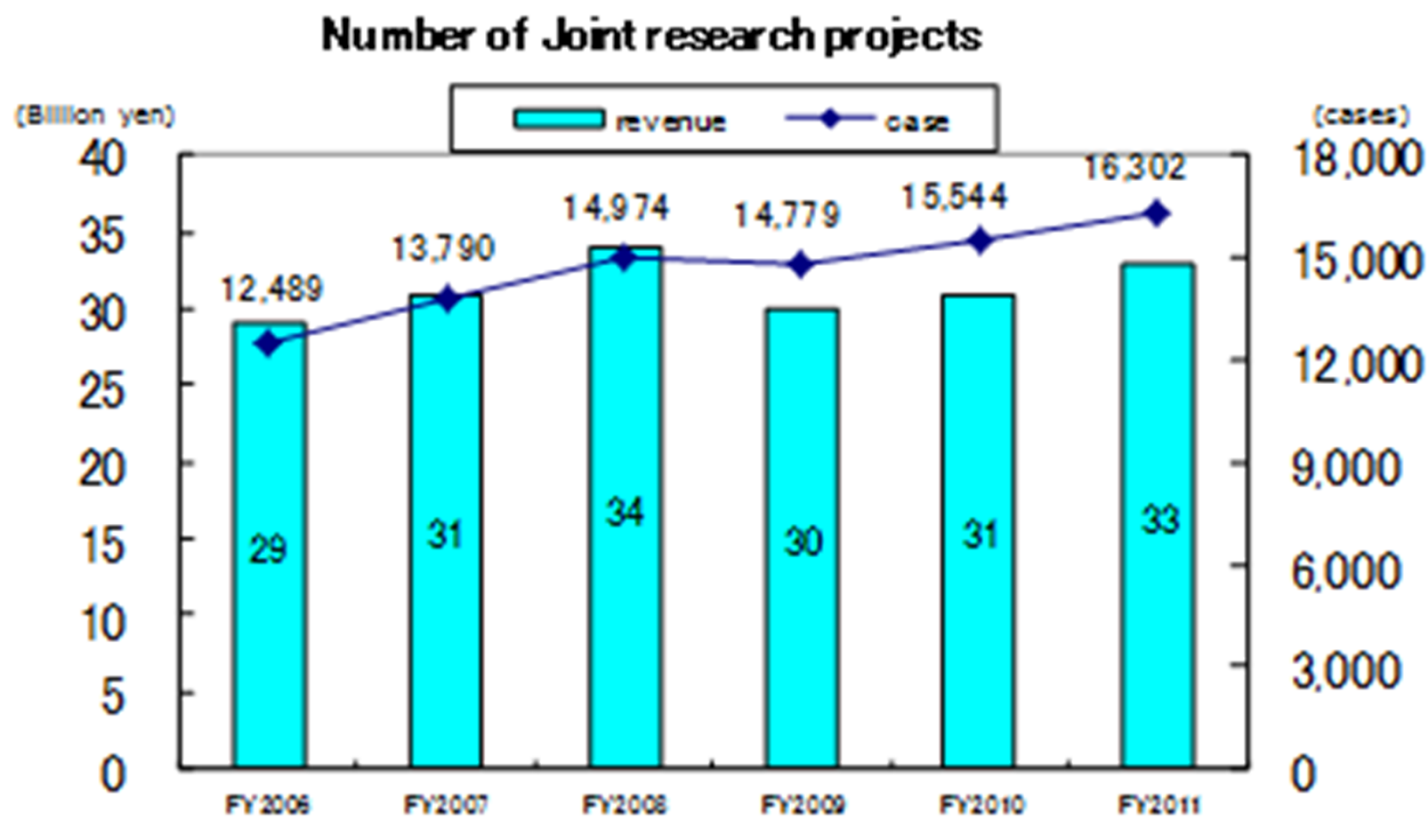
2. Recent policies to promote university- industry collaboration

- ❖ Subsidies for joint university-industry research(1983)
- ❖ Establishment of cooperative research centers at national universities (1987)
- ❖ Establishment of TLOs (1998)
- ❖ Japanese version of Bayh-Dole act(1999)
- ❖ Relaxing restrictions on consulting and business activity by faculty (1997, 2000, 2002)
- ❖ Incorporation of national universities(2004)

3. Impact of policies

Trends in University-Industry Collaboration (Cont'd)

- The number of research projects implemented jointly by universities and private-sectors etc. exceeds 15,000 cases



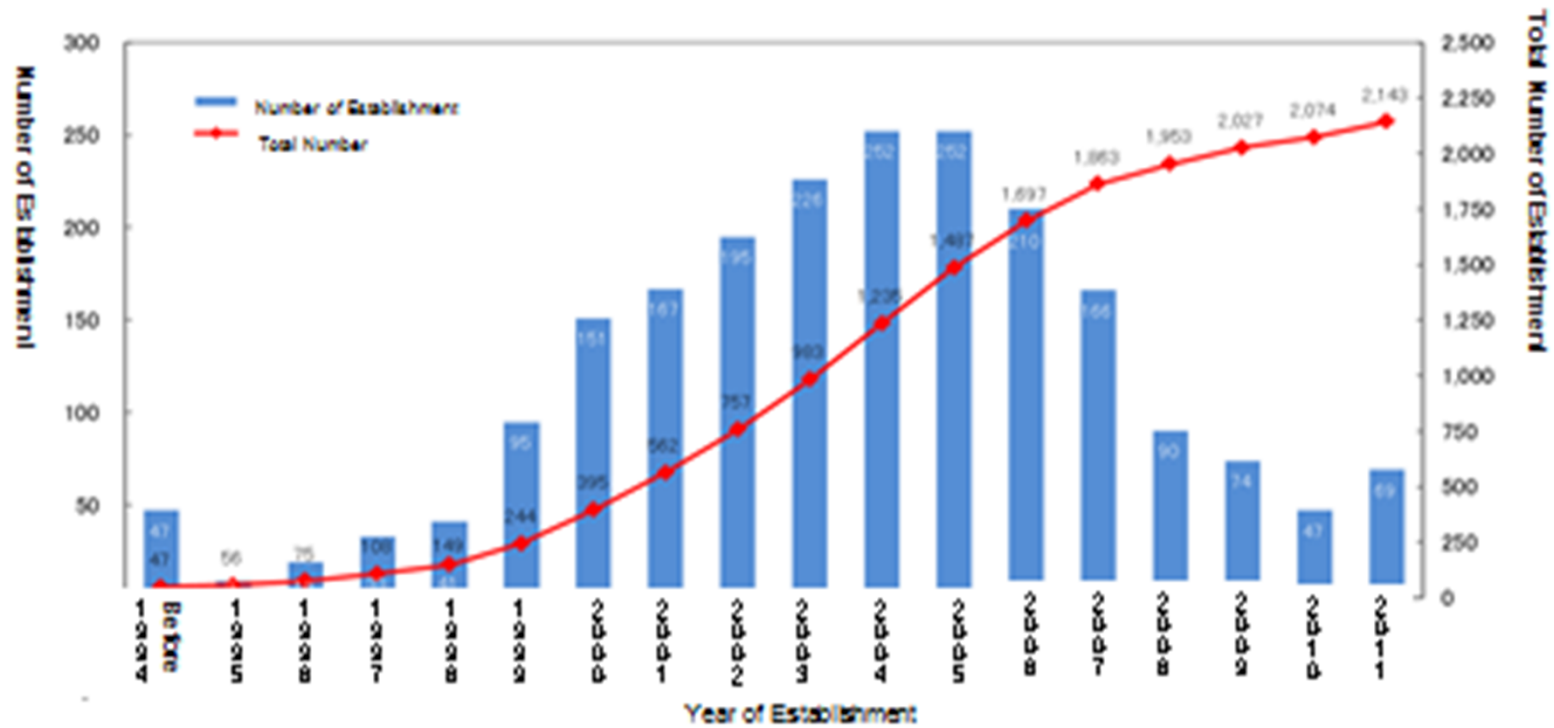
[Survey by MEXT]

Trends in University-Industry Collaboration (Cont'd)

The number of start-ups from universities became over two thousands in 2009
However, the number of the establishment is gradually decreasing after 2004

Cases

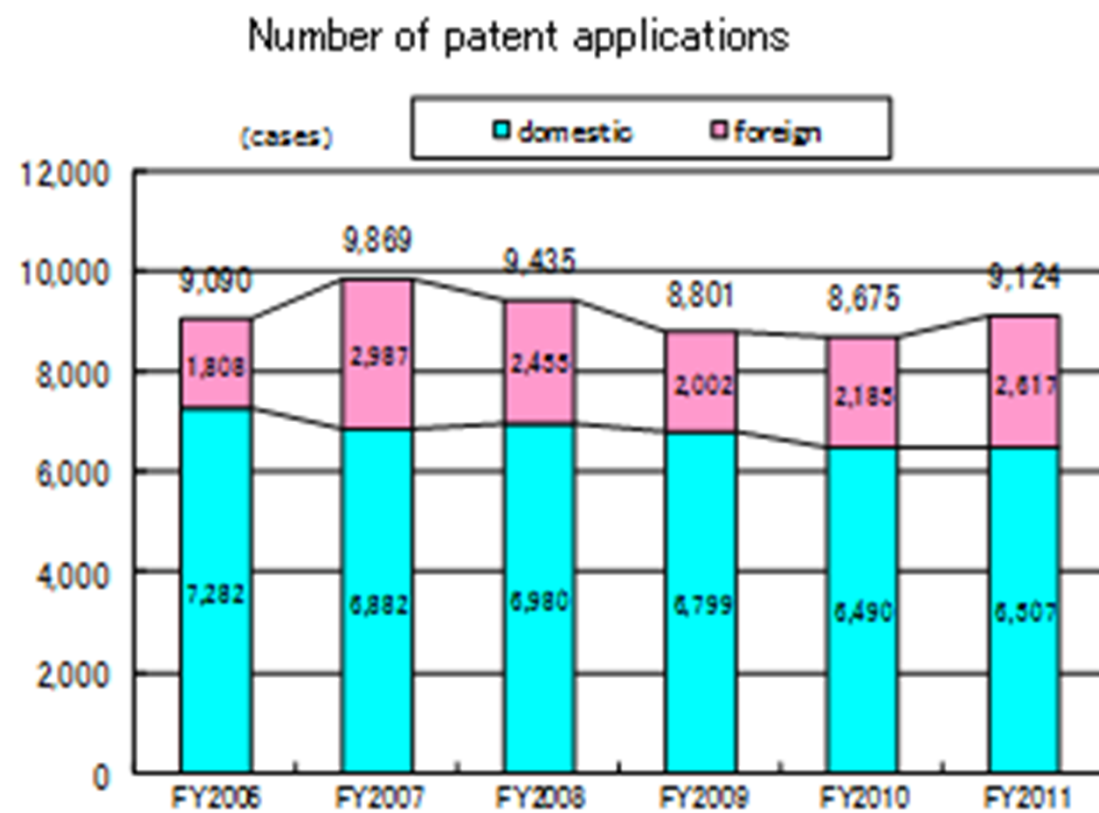
Japanese Start-Ups from Universities



[Survey by MEXT]

Trends in University-Industry Collaboration (Cont'd)

- The number of patents applications is 9,124 in FY2011.



[Survey by MEXT]

Number of TLOs (Cumulative Total)

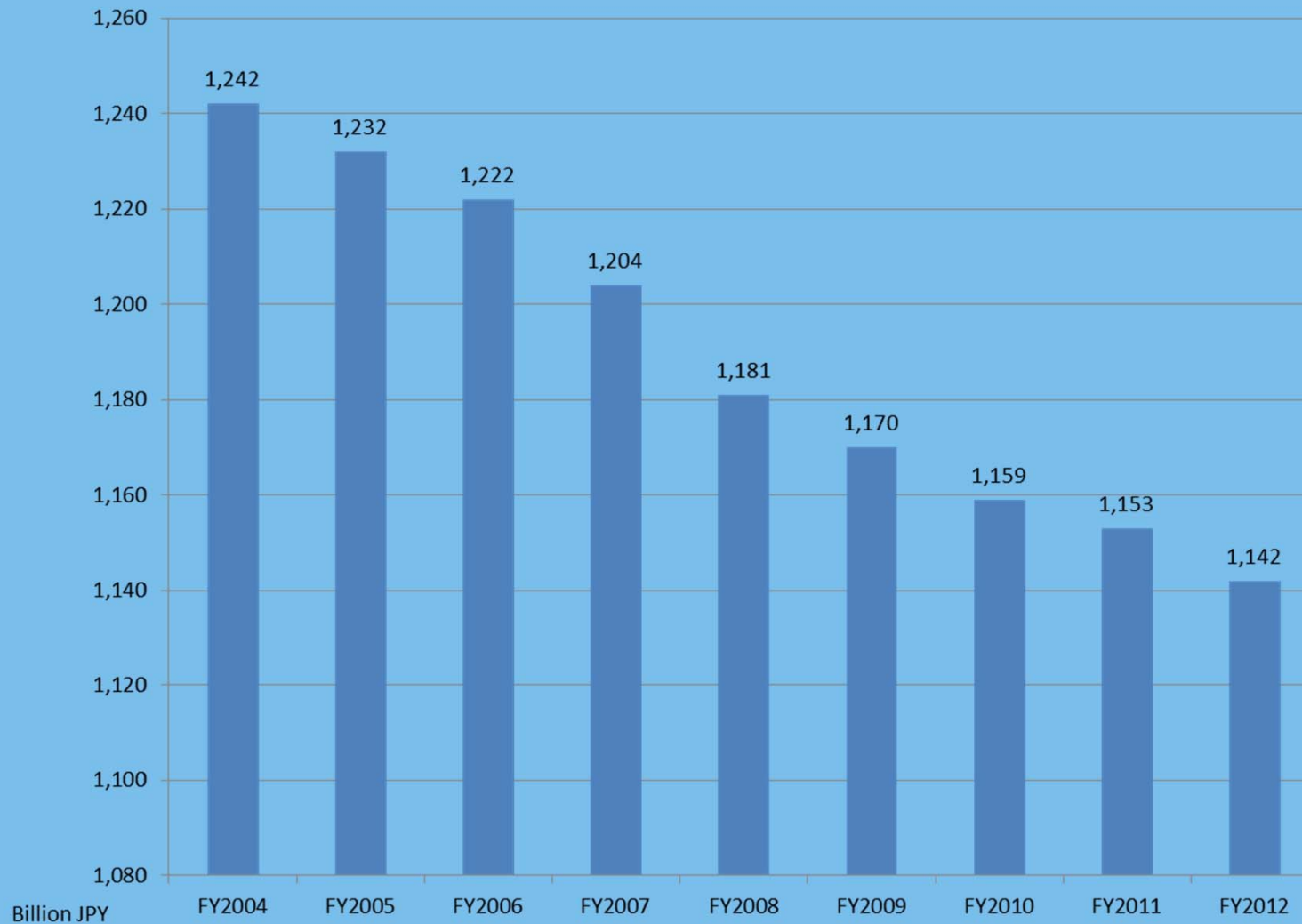


- ❖ U-I relationship has been close before these new policy initiatives, mostly through informal channels
- ❖ These new policies tried to introduce new formal mechanisms
- ❖ Despite increased upward trends in some indicators, results have been modest with some disappointments so far

- ❖ Despite emphasis on the role of universities in Japan's innovation system, and increasing U-I activities by universities, government cut back funding to universities from the already low level, while revenue from these new activities is very small

Management Expenses Grants※

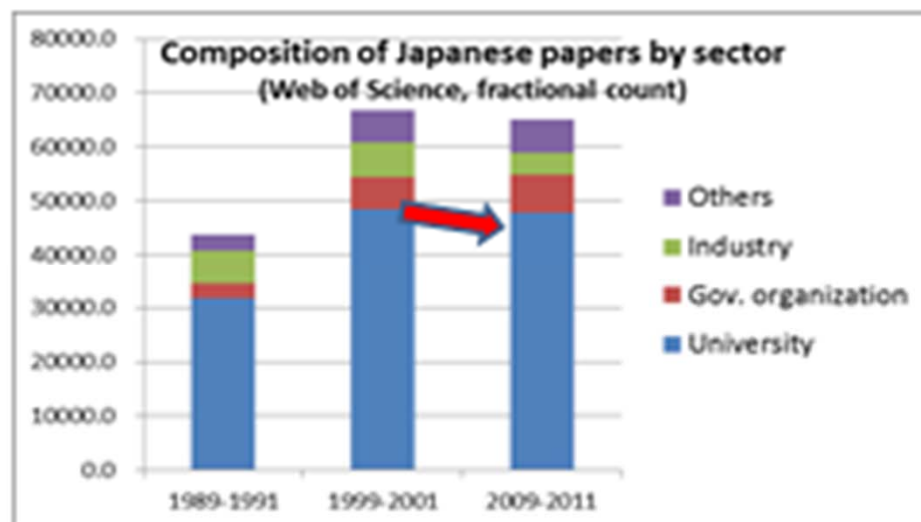
※Grants from the government to national university corporations, supplied as a block funding every fiscal year.



- ❖ This may have serious implications for Japanese universities and Japan's NIS

Publication of Japanese universities is decreasing

The number of papers of Japan is decreasing.



The number of papers of Japanese universities is decreasing.

4. Conclusion

- ❖ Various policies started in the Late 1990s to early 2000s
- ❖ Increasingly active U-I collaboration in many respects, with mixed results
- ❖ However, government funding to universities has been cut back
- ❖ With increasing roles and decreasing funding, university is facing a major challenge