

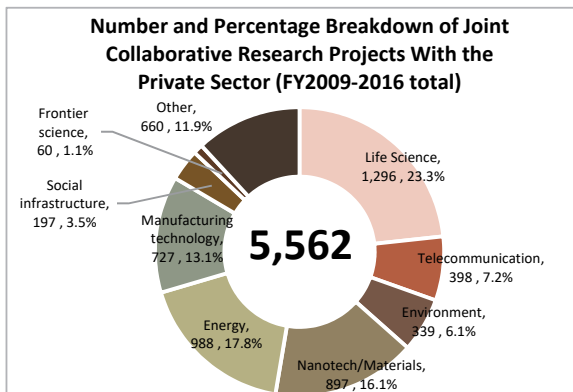
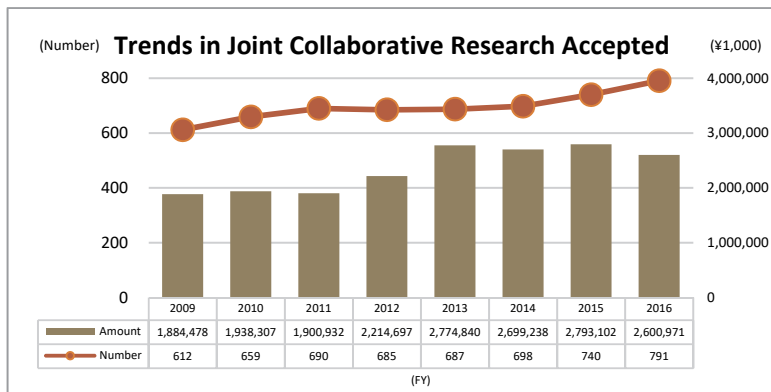
11. Industry-University-Government Collaboration

11-1. Joint Collaborative Research

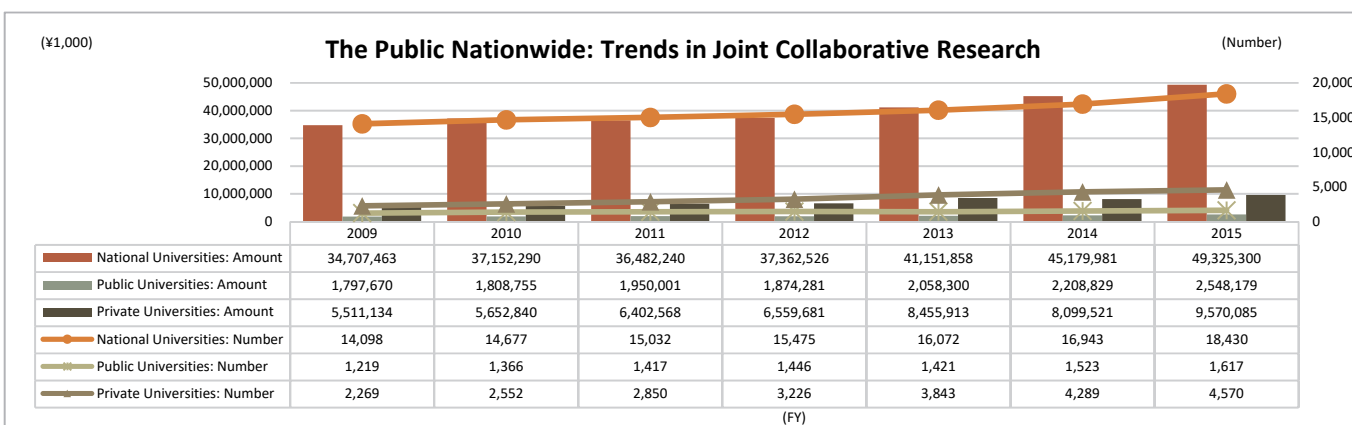
11-1-1. Trends in Joint Collaborative Research

Both the amount and number of joint collaborative research projects at Kyushu University are steadily rising. Between FY2009 and FY2015, the amount of joint collaborative research increased by 1.5 times, while the number of projects grew by 1.3 times.

◆ Kyushu University ◆



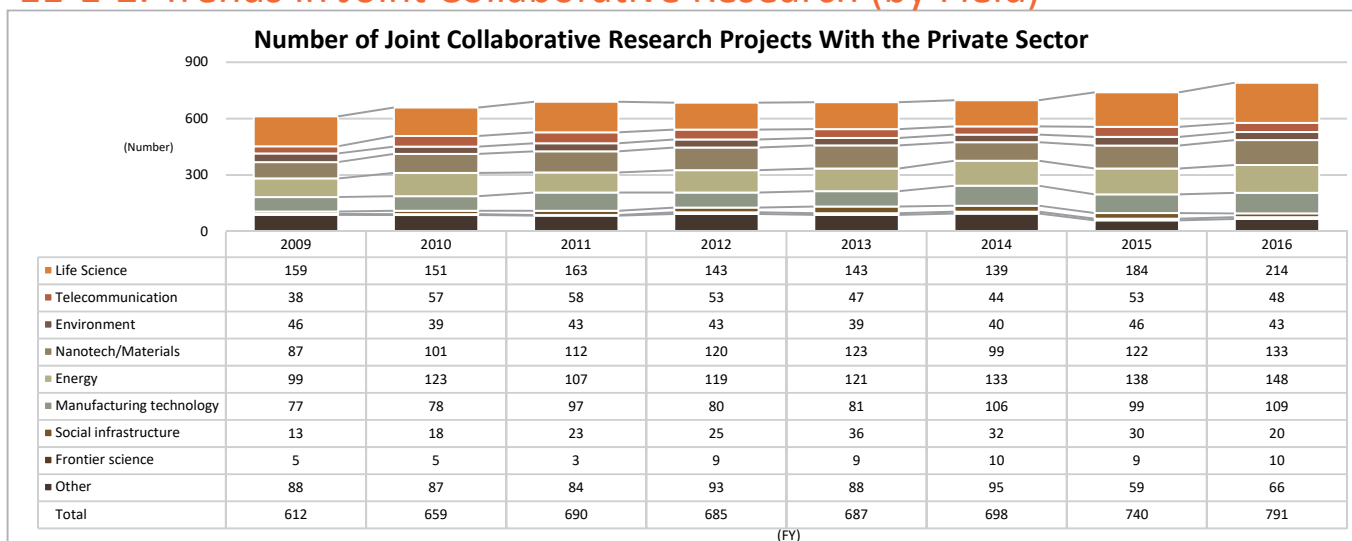
◆ The Public Nationwide ◆



***Sources**

- Kyushu University: Research Strategy Data Anthology (Academic Research and Industrial Collaboration Management Office Research Strategy Group, Scientific Research Promotion Group)
- The Public Nationwide: *Industry-Academia Collaboration in Higher Education Institutions* Joint Collaborative Research outputs (by Institution), figures for each fiscal year (MEXT)

11-1-2. Trends in Joint Collaborative Research (by Field)



• In this study, joint collaborative research refers to research jointly by a university or similar institution and industry and private organizations, etc., in which necessary project expenses incurred by the university, etc. are covered by the private organization, etc.

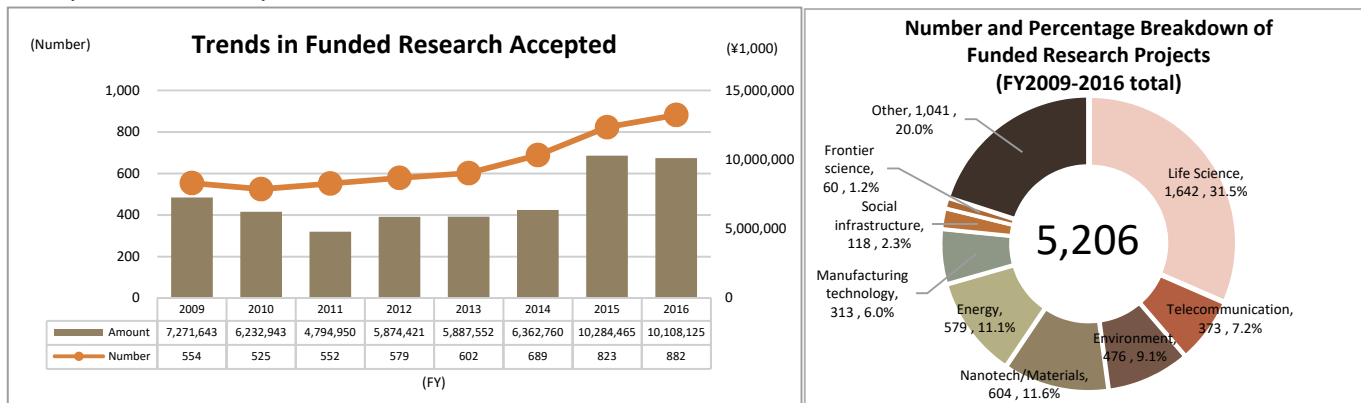
*Source: Kyushu University Information

11-2. Funded Research

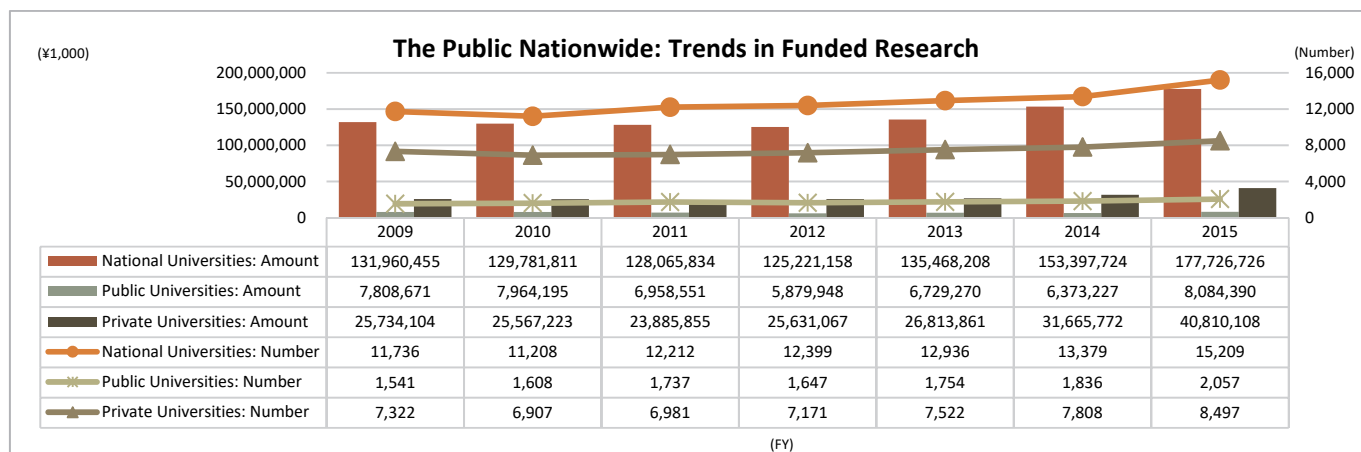
11-2-1. Trends in Funded Research

While the amount of Funded Research projects at Kyushu University fell in FY2011, both the amount and number of funded research projects has been steadily growing since then. The amount exceeded ¥10 billion in FY2015.

◆ Kyushu University ◆



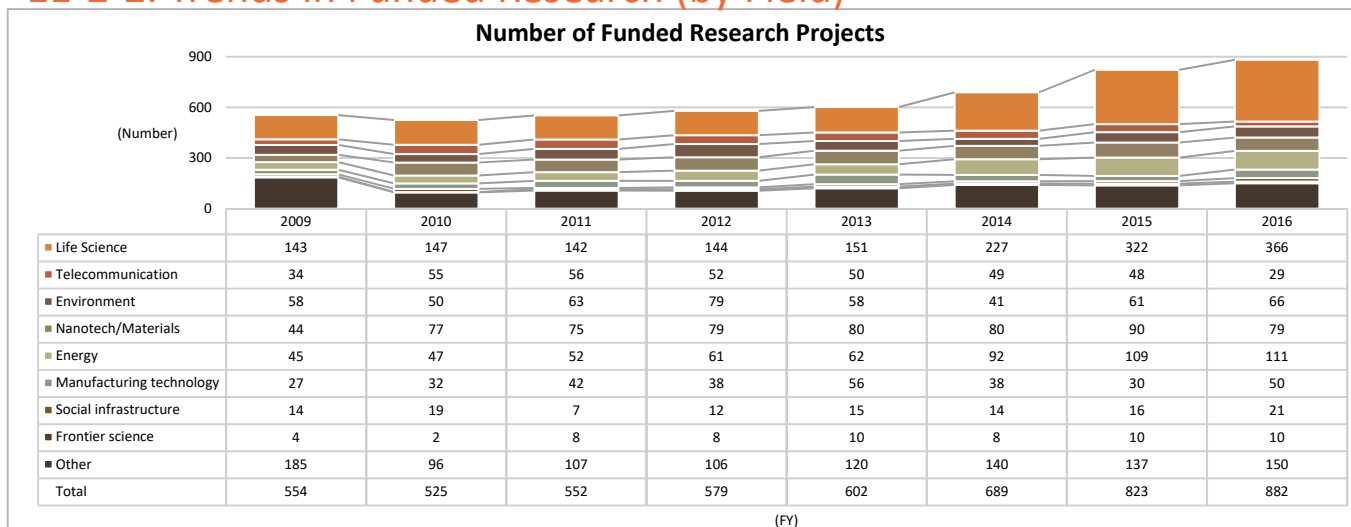
◆ The Public Nationwide ◆



***Sources**

- Kyushu University: Research Strategy Data Anthology (Academic Research and Industrial Collaboration Management Office Research Strategy Group, Scientific Research Promotion Group)
- The Public Nationwide: Industry and Public Organizations in Higher Education Institutions Joint Collaborative Research (by Institution), figures for each fiscal year (MEXT)

11-2-2. Trends in Funded Research (by Field)



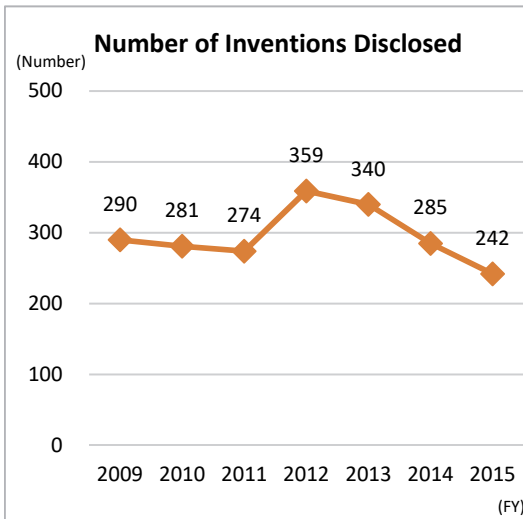
* In this study, Funded Research refers to research to a university by a private sector company, etc., in which, in most cases, the university, etc. alone conducts the research and development, with the expenses incurred being covered by the private organization, etc.

*Source: Kyushu University Information

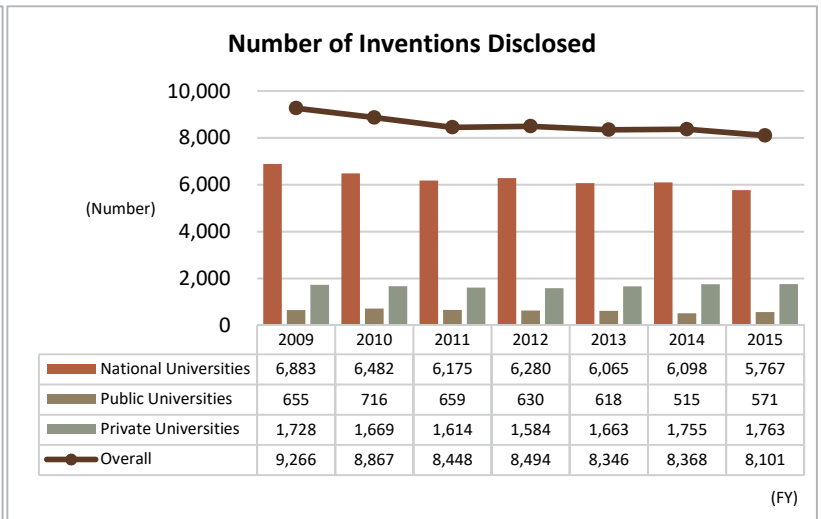
11-3. Intellectual Property

Both the number of inventions disclosed and the number of patent applications are in excess of 200 per year. The number of patents held is also growing steadily by 100-170 per year.

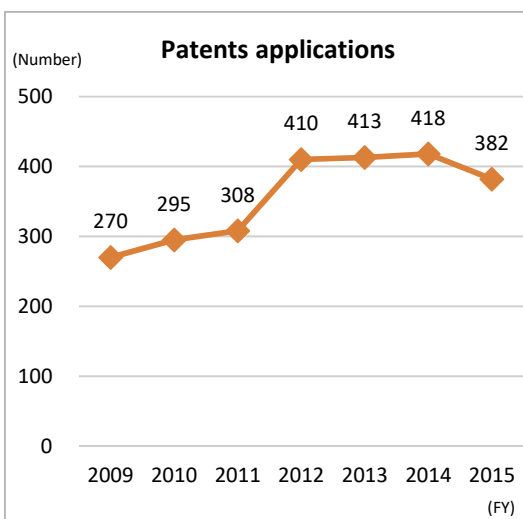
◆Kyushu University◆



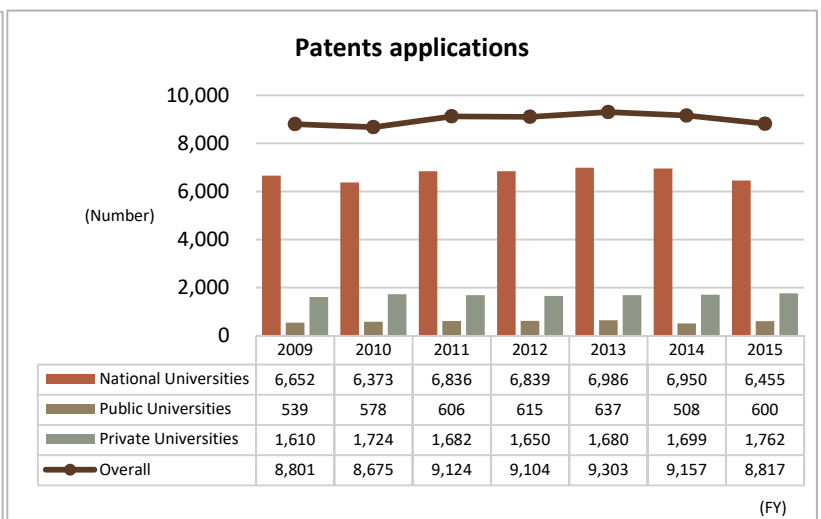
◆The Public Nationwide◆



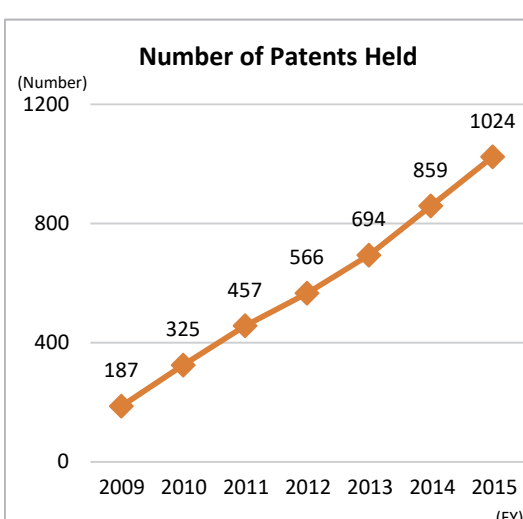
◆Kyushu University◆



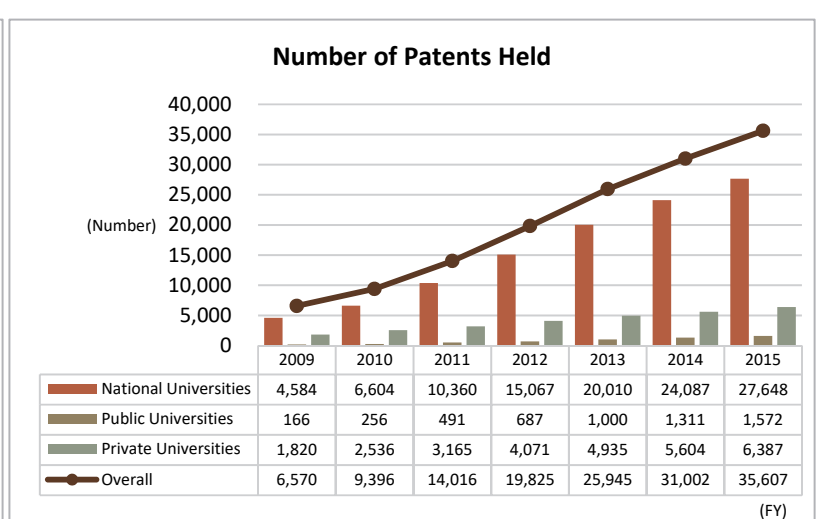
◆The Public Nationwide◆



◆Kyushu University◆



◆The Public Nationwide◆



*Source: MEXT, *Industry Collaboration in Higher Education Institutions*

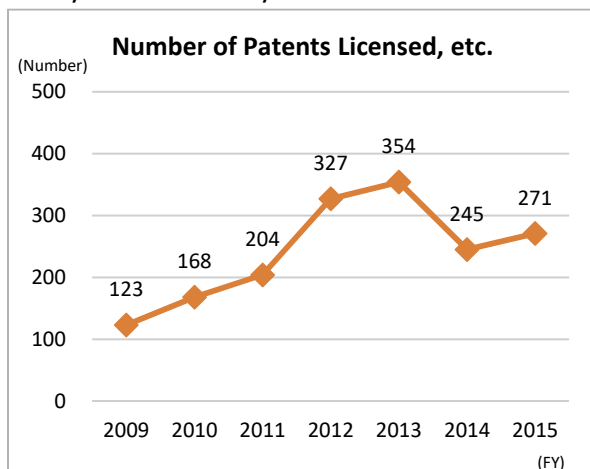
11-3. Intellectual Property (continued)

Income from licensing patent rights, etc. leaped in FY2015.

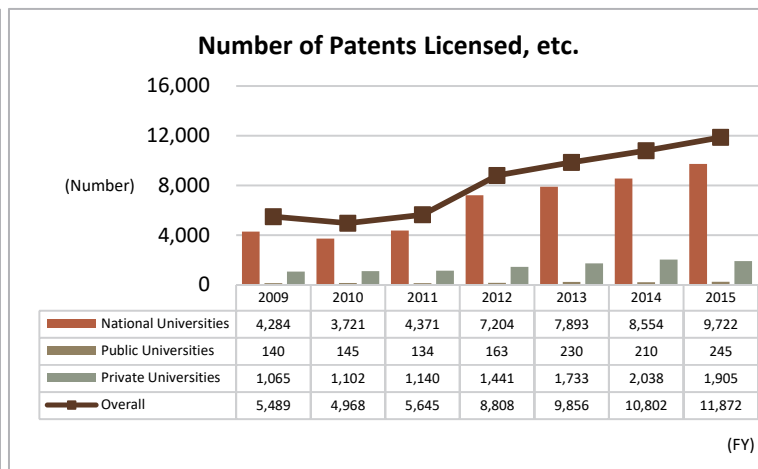
As a result, Kyushu University ranked **second** the public nationwide among institutions that saw a jump in license income from FY2014.

1. The University of Tokyo: up approx. ¥212 million
2. Kyushu University: up approx. ¥81 million
3. Nagoya University: up approx. ¥68 million

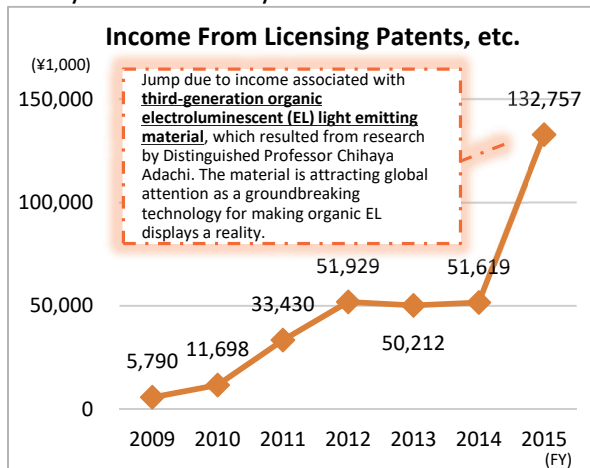
◆Kyushu University◆



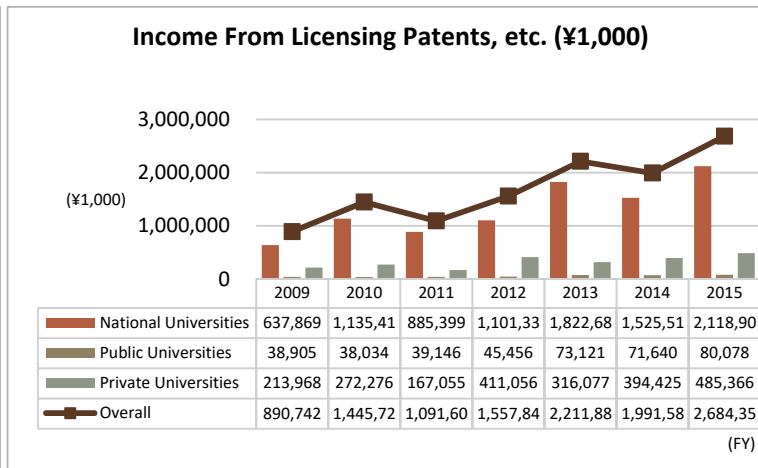
◆The Public Nationwide◆



◆Kyushu University◆



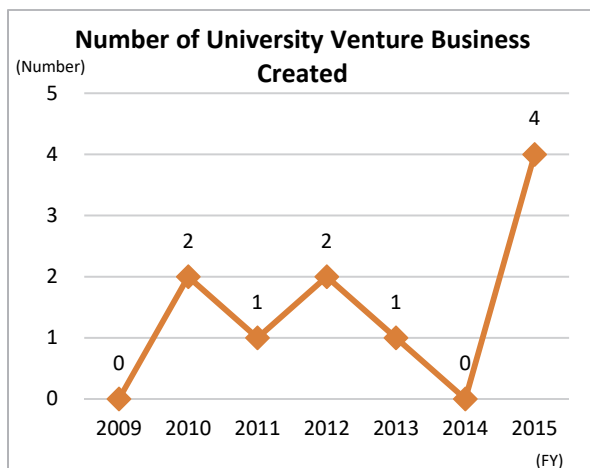
◆The Public Nationwide◆



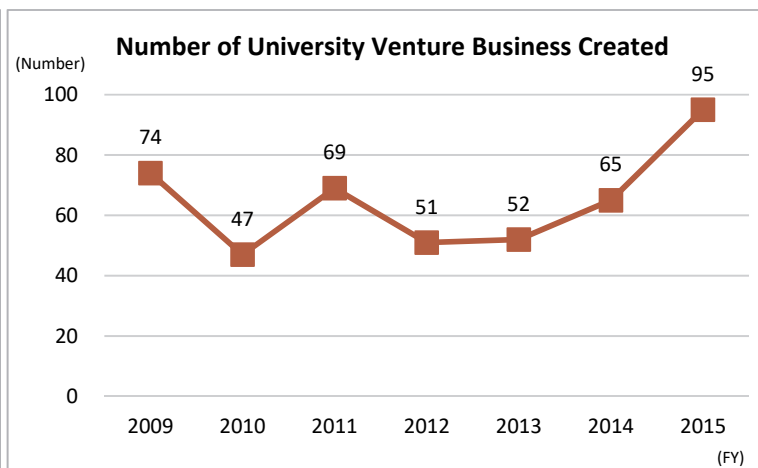
• In this survey, “number of patents licensed, etc.” and “amount of income from licensing patents, etc.” refers to the number of patent rights licensed or assigned (including at the “right to obtain a patent” stage) and the amount of income received as a result.

*Source: MEXT, *Industry and Public Organizations in Higher Education Institutions Joint Collaborative Research (by Institution)*, figures for each fiscal year (MEXT)

◆Kyushu University◆



◆The Public Nationwide◆



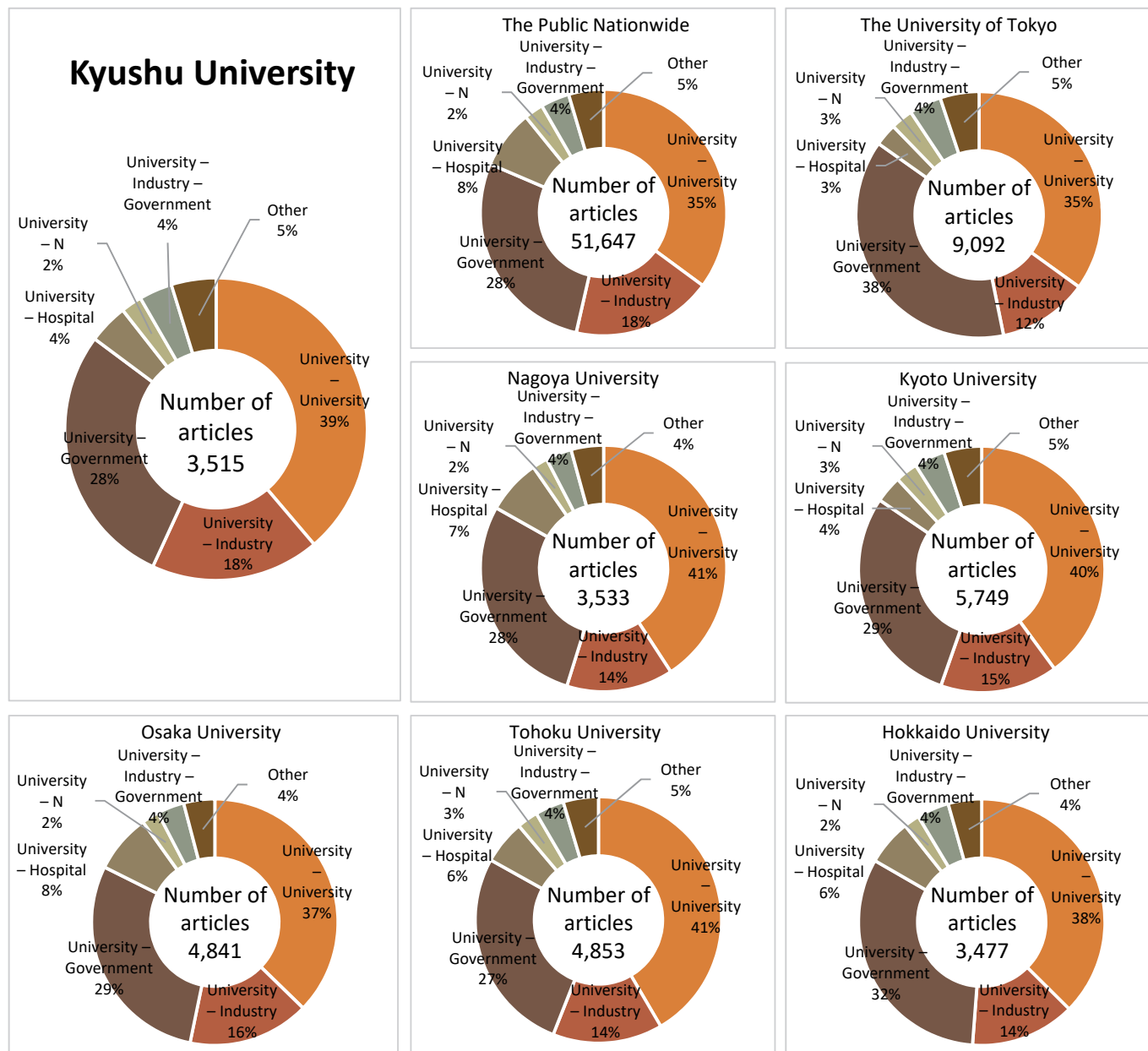
*Sources

• Kyushu University: Research Strategy Data Anthology (Academic Research and Industrial Collaboration Management Office Research Strategy Group, Scientific Research Promotion Group)

• The Public Nationwide: *Industry and Public Organizations in Higher Education Institutions Joint Collaborative Research (by Institution)*, figures for each fiscal year (MEXT)

11-4. Industry-University-Government Collaboration Through Co-authorship Relationships

Comparing co-authorship relationships between Kyushu University and other universities, while university-to-university collaboration is quite high, the share is about the same as the national average.



The six institution categories used in the graph are as follows.

Institution Category	Institutions Involved
University	Universities (including junior colleges) ^{Note 1)} , inter-university research institutes, and national colleges of technology Note 1) includes university hospitals
Industry	Private organizations
Government	National organizations, semi government corporations and independent administrative corporations, and local public entities
Hospital	Medical institutions
N	Nonprofit organizations
Other	Organizations other than those listed above

• Based on a database of conference records and proceedings compiled by JST

Source: Japan Science and Technology Agency (JST) Japan Information Platform for Science and Technology Innovation, *Patterns of Industry-University-Government Collaboration as Seen Through Co-authorship Relationships* (FY2011). Uses data extracted by setting the search parameters as follows:
 Year of article: 2011
 Fields: All fields
 Universities: Hokkaido University, Tohoku University, The University of Tokyo, Nagoya University, Kyoto University, Osaka University, and Kyushu University.
 Japan Science and Technology Agency (JST) website: <https://jipsti.jst.go.jp/foresight/dataranking/sangakukan/pattern/>

11-5. Number of Articles Co-authored With local public entities

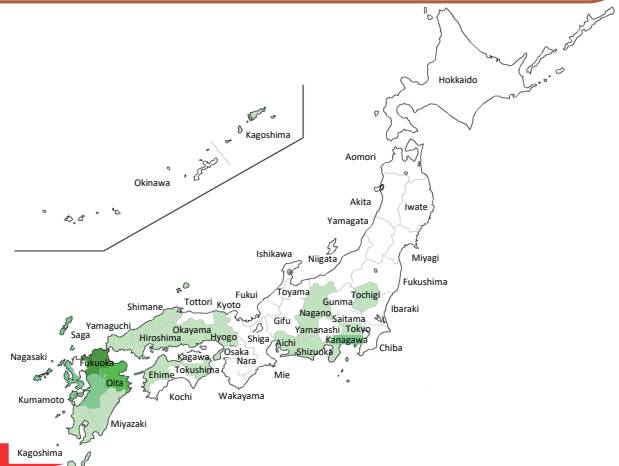
The maps of Japan below show the extent of collaboration between Kyushu University and local public entities such as public experimental research institutes, focusing on co-authorship relationships.

Tallying the number of articles co-authored with local government organizations by prefecture shows the extent to which the university is collaborating with “regional hubs.”

Over the ten-year period examined, the number of co-authored articles has almost doubled from 90 to 170, while the number of prefectures with which those articles were co-authored has grown from 19 to 31, demonstrating that collaboration with local governments is progressing smoothly.

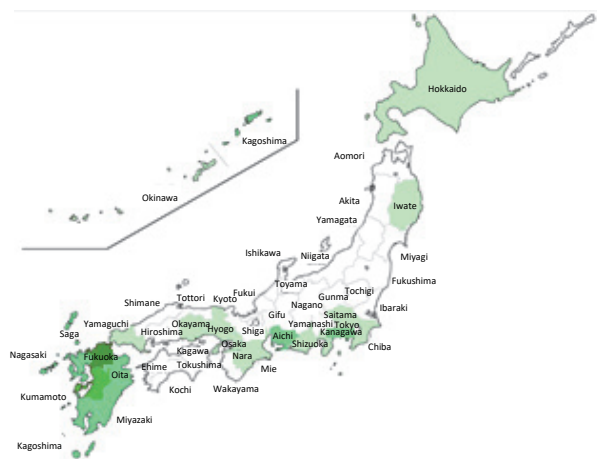
2001

Rank	Prefecture	Number of articles	Percentage
1	Fukuoka Prefecture	57	63.3%
2	Oita Prefecture	7	7.8%
3	Kanagawa Prefecture	4	4.4%
4	Nagasaki Prefecture	3	3.3%
4	Kumamoto Prefecture	3	3.3%
6	Shimane Prefecture	2	2.2%
6	Kagoshima Prefecture	2	2.2%
Other	12 Prefectures	12	13.4%
Kyushu University total		90	
(Total number of articles)		4,479	



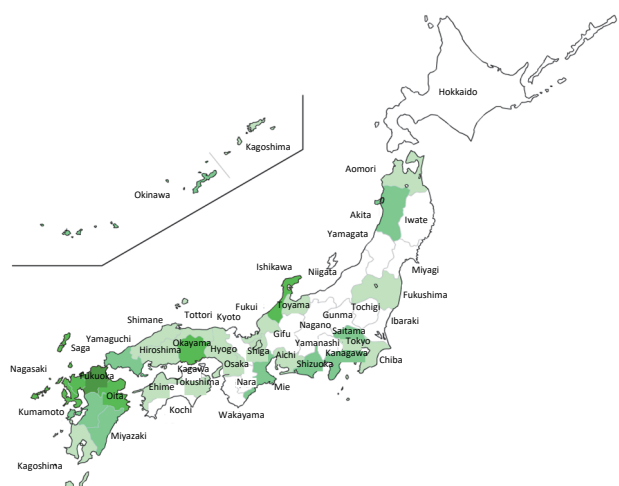
2006

Rank	Prefecture	Number of articles	Percentage
1	Fukuoka Prefecture	78	59.5%
2	Kumamoto Prefecture	7	5.3%
3	Aichi Prefecture	5	3.8%
3	Miyazaki Prefecture	5	3.8%
5	Nagasaki Prefecture	4	3.1%
6	Kanagawa Prefecture	3	2.3%
6	Saga Prefecture	3	2.3%
6	Oita Prefecture	3	2.3%
6	Kagoshima Prefecture	3	2.3%
Other	13 Prefectures	20	15.3%
Kyushu University total		131	
(Total number of articles)		8,133	



2011

Rank	Prefecture	Number of articles	Percentage
1	Fukuoka Prefecture	63	37.1%
2	Saga Prefecture	14	8.2%
3	Oita Prefecture	10	5.9%
4	Nagasaki Prefecture	9	5.3%
5	Ishikawa Prefecture	7	4.1%
5	Okayama Prefecture	7	4.1%
7	Miyazaki Prefecture	5	2.9%
8	Akita Prefecture	4	2.4%
8	Saitama Prefecture	4	2.4%
8	Shizuoka Prefecture	4	2.4%
8	Yamaguchi Prefecture	4	2.4%
8	Kumamoto Prefecture	4	2.4%
8	Okinawa Prefecture	4	2.4%
Other	18 Prefectures	31	18.3%
Kyushu University total		170	
(Total number of articles)		8,285	



Source: Japan Science and Technology Agency (IST), *Collaboration With Regions (Co-authorship Relationships With Each Prefecture) and Collaboration With Regions (Number of Articles)*