

Accountability in Japanese Research Grant System

16, June. 2009, Lisbon

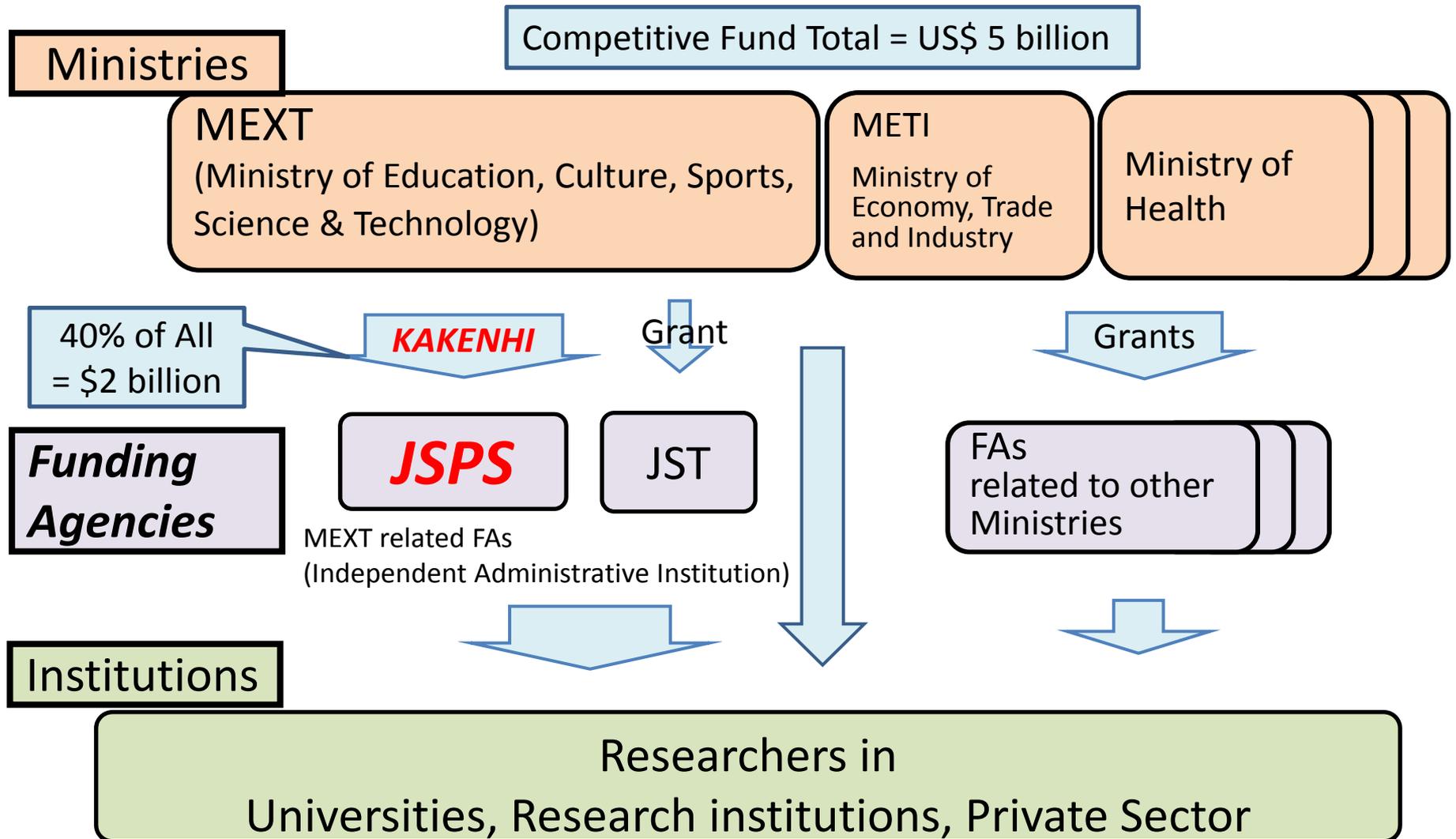
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Japan Society for the Promotion of Science**

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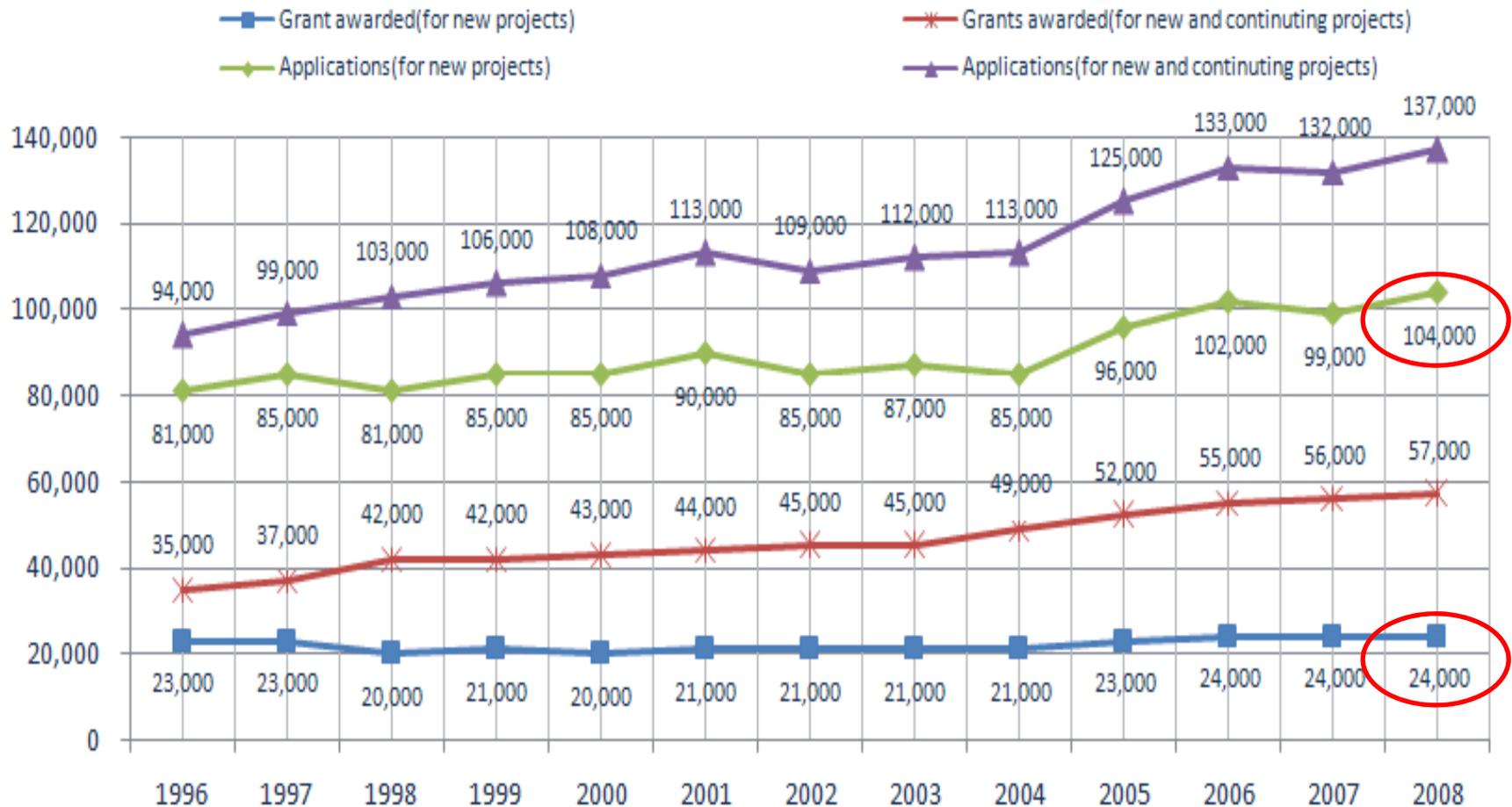
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“KAKENHI”
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Competitive Research Funding System in Japan



Application & Grants Awarded in KAKENHI

Over 100 thousands New Applications per year



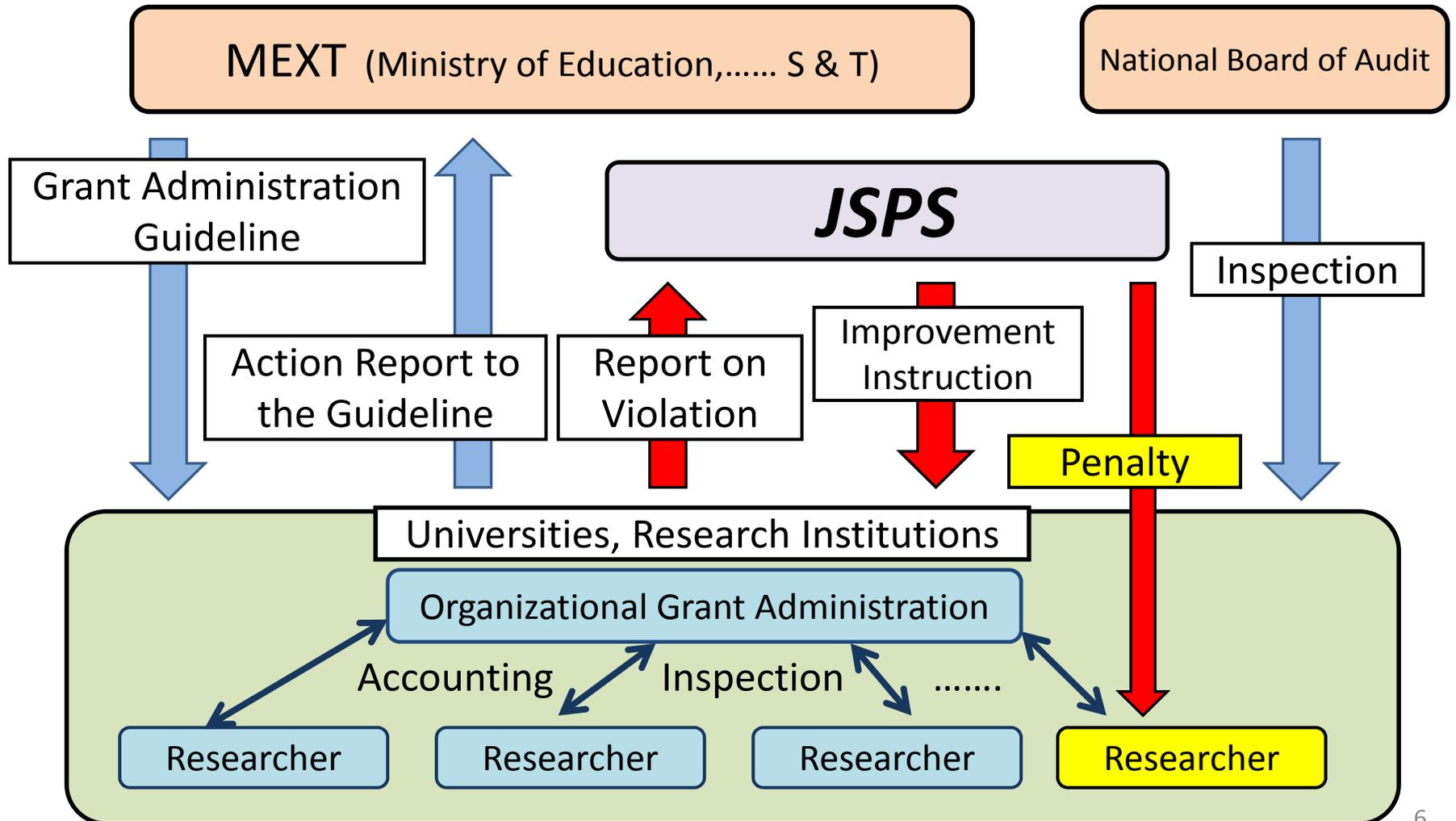
Major Grant Categories of KAKENHI

✓ Covers All Disciplines including Humanities, Social Sciences

Categories		Characteristics Duration Total Grant per Project (\$ 1 = JP¥ 100)	Newly Awarded Projects Success Rate (FY2009)
Specially Promoted Research		Internationally highly appraised research 3 - 5 years \$ 5,000,000	19 projects, 16.7 % (FY 2008)
Scientific Research	S	5 years / \$ 500,000 - 1,000,000	86 projects, 15.6% (FY2008)
	A	3 - 5 years A : \$ 200,000 - 500,000	A : 567 projects, 24.0%
	B C	B : \$ 50,000 - 200,000 C : Up to \$ 50,000	B : 2,749 projects, 24.9% C : 7,765 projects, 23.5%
Challenging Exploratory Research		Early-stage challenging research with very unique concept and very high goal 1-3 years Up to \$ 50,000	1,640 projects, 12.3%
Encouragement of Young Scientists	S A B	Research carried out by individual young researchers (S : up to age 42, A & B : up to age 39) 2 - 4 years S : \$ 200,000 - \$ 1,000,000 A : \$ 50,000 – 200,000 B : Up to \$ 50,000	S: 39 projects, 4.8% (FY2008) A: 350 projects, 18.7% B : 6,487 projects, 27.8%
Start Up		Start-up research conducted by a newly tenured researcher 2 years Up to \$ 30,000	934 projects, 24.9% (FY2008)

Accountability on Expenditure in KAKENHI

✓ Based on the Organizational Grant Administration in the Institutions



Typical Cases of Misuse

- ✓ About 10 cases are reported from institutions among 55,000 projects per year

Misuse Cases

- ✓ Holding money as a vender deposit through a fictitious transaction to avoid shortage of money during FY to next FY, time-consuming purchase procedure in the institutions
- ✓ Holding money through fictitious trip report and work report, to use it for travel expense of students in the lab.....
- ✓ Spending money for other research projects even though they covers related research themes of the awarded project

Careless Slips

- ✓ Careless Slips, such as mistake on accommodate days, class of trains are corrected in the institutions without penalty

Penalty to Violation

- ✓ Researcher's name is notified to all funding agencies
- ✓ Present projects are abolished including other governmental grants
- ✓ Restoration part of money for misuse
- ✓ Applications including other governmental grants are rejected for 2 to 5 years
 - 5 years Grant awarder based on false statement in application
Private use of grant
 - 4 years Misuse based on the fictitious transaction
Misuse for the purposes except for scientific research
 - 3 years Misuse for other research project
 - 2 years Misuse for the awarded research project

Is KAKENHI Flexible Grant for Researchers?

✓ Might not be flexible enough 5 years ago. Now most flexible Grant in Japan!

Flexibility

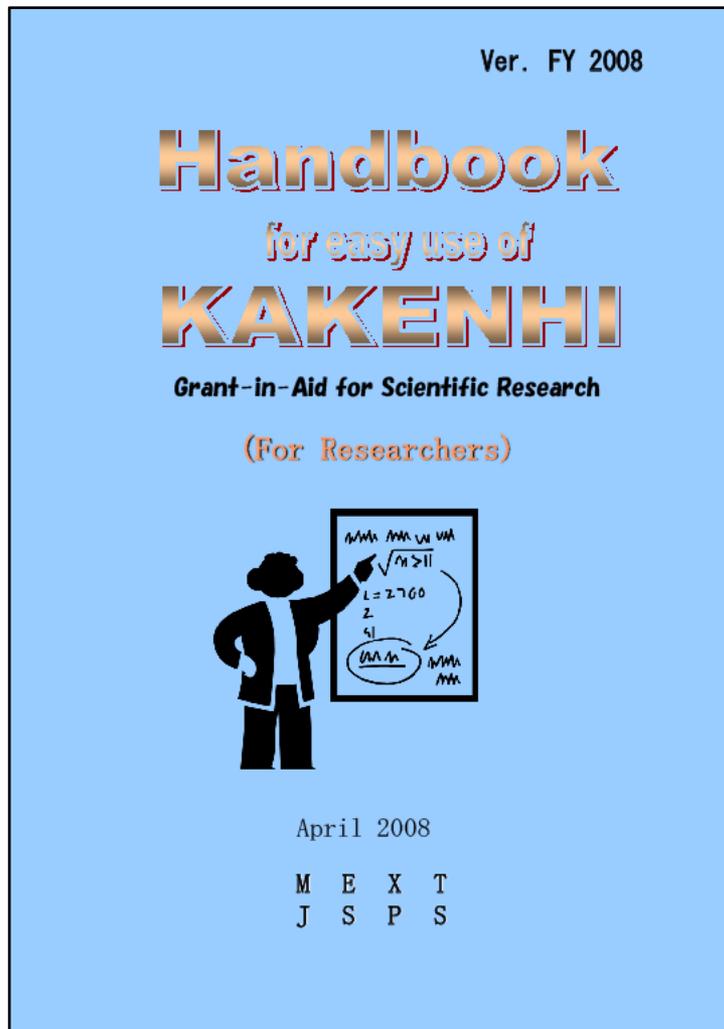
- + Minimum Restriction for Expenditure except for Facility, general furniture....
- + Only 4 Details of Cost Equipment & Consumables, Travel, Personnel, Others
- + Free Adjustment of Expense Plan up to 50% of total budget of the year

Difficulty

- Year by Year Expenditure Principle based on the National Account Regulation
 3 pages' procedure is needed to carry over the part of budget to next FY.
- 3 months time lag between Project adoption in April and Money remittance in July
 Shortage of money from the end of previous project in March to the start of new project in July.
- Different accounting when the researcher accepts several grants

Publicity for Researchers

- ✓ Handbooks are distributed to all grant awarded researchers



15. What happens if the rules are broken?

If the grant rules are not followed in using the funds, penalties may be levied including the stoppage or return of grant funds and the loss or restriction of grant application privileges.

Case of grant being awarded based on false or inaccurate statements

- Return the entire amount of grant disbursed
- 5-year loss of grant-application qualification for both grantee and accomplices

*Grant disbursement stopped on other ongoing projects. The Co-Investigator (*kenkyū-buntansha*) no longer receives a portion of the grant. Qualification to apply for other competitive funding also suspended. (These penalties apply in the following case as well.)

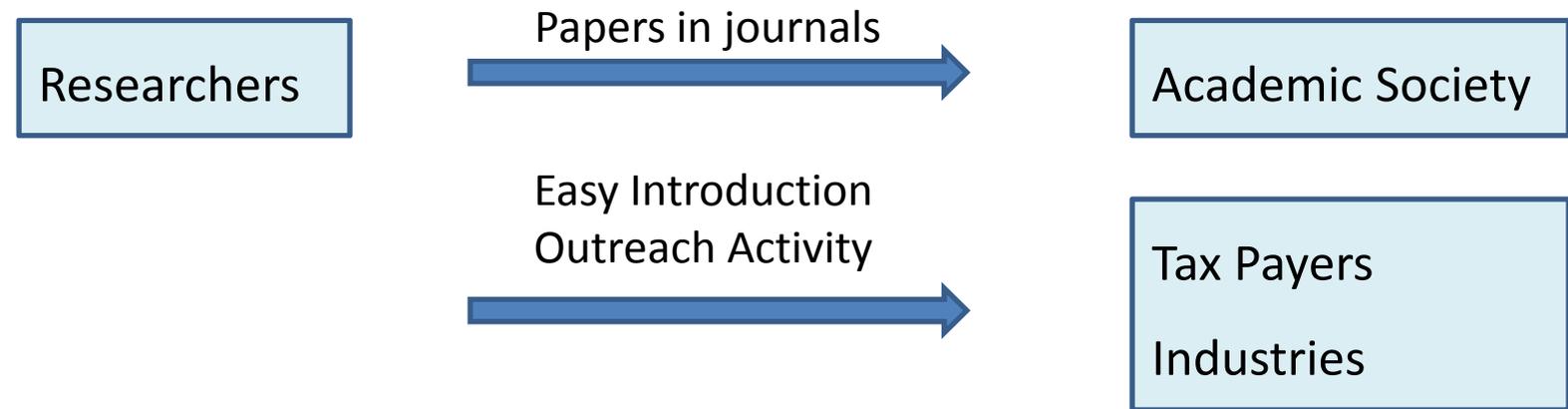
Case of misuse of the grant funds

- Return of subjected portion of grant funds
- For both the researcher who misused the funds and accomplices, 2-5 year loss of grant-application eligibility
- For other cooperating researchers, 1-year suspension of eligibility to apply for new grants

Subjects on Penalty to Violation

- ✓ Misuse Investigation is conducted by the institutions, there is not another retrial system if the researcher has objection to the judgment (although there is no objection so far)
- ✓ Simple adoption of penalty without consideration of the cases such as amount of misuse, researcher's record, past bad internal custom, circumstances
- ✓ No mitigating circumstances, no incentive for researchers to clear past custom
- ✓ Is it really good for science promotion?

Accountability for TAX payer



For Industries etc.

- ✓ Research Results Data Base “KAKEN” (<http://kaken.nii.ac.jp/>)
able to search but not enough to be useful
 - >> 2 page introduction from 2009
- ✓ Publication of newly awarded large-scale projects
introduce outline of the new large-scale research projects
(Frontline Scientific Research Projects in Japan
>> KAKENHI English Web Site)

Accountability for TAX payer

For Tax Payer

- ✓ KAKENHI News Letter (4 times per year)

introduce several research projects in easy word

>> English version from 2009 summer

- ✓ KAKENHI Essay Series (monthly)

eminent researchers' familiar essay on research and science

(KAKENHI English Web Site www.jsps.go.jp/english/e-grants/grants.html)

- ✓ Science Experience Program (200 programs in 2009)

PIs of KAKENHI organize the programs in their institutes for children aged 10 to 18

JSPS supports the cost up to \$ 6,000 per program

KAKENHI Essay Series No.1 Jan. 2009

The great honor of having received a Nobel Prize in Physics has suddenly changed my life in many ways. For one thing, I've been made to field many more questions via interviews, appearances, and other opportunities. In the process, I've found that conveying my thoughts so that they are accurately understood can be more challenging than doing research.

Research in my field of high-energy physics normally involves a division of labor between theorists and experimentalists. When I mention that I am a theorist, people often say, "Oh that's nice: so long as you have a pencil and paper, you don't need any funding, do you?" Well, for sure writing materials are needed and not that much research funding is required. Nevertheless, some funding is necessary. After receiving my doctorate in 1972, I was hired as a research associate in the Physics Department at Kyoto University. In those days, when one wrote a research paper, a preprint was published and mailed out to main research institutions in the subject field. This was the primary mode of disseminating research information. It was quite costly, even more so if one wrote a lot of papers. At the time, I was able to receive sufficient funding from the university to cover these costs. Therefore, the first time I availed myself of a Grant-in-Aid for Scientific Research was more than ten years after being employed at Kyoto University.

Now, the mode of information dissemination has changed to the Internet, making it no longer necessary to publish and mail out preprints. Still, maintaining an Internet environment is itself quite costly. On top of that is the need to travel to conferences both in and out of country. Concurrently, the price of journal subscriptions has gone up dramatically over recent years. These various costs impose a heavy burden on theoretical researchers. Needless to say, when such research is accompanied by experimentation, considerably larger research funding is needed to maintain the research environment.

It's been quite some time since I transferred my operational base from the university to a research institution, so my understanding of the current university situation may not be exactly accurate. To be sure, however, there has been a considerable decrease in the amount of research funding allocated to them. I've heard of cases where universities are providing their researchers with only ¥100,000 (about \$1,000), not per month, but per year. To make up this funding shortfall, researchers are forced to depend on a high ratio of Grant-in-Aid and other competitive funding. Though such funding has been increased by quite a bit; nevertheless, the selection rate for Grants-in-Aid for Scientific Research is only in the low 20 percentile. Under these conditions, even research that yields excellent results is not guaranteed another grant.

Prof. Makoto Kobayashi

Professor emeritus, High Energy Accelerator
Research Organization(KEK)

Executive Director, JSPS

2008 Nobel Laureate in Physics



Under the Grant-in-Aid system, funding is supplied for fixed-term projects with an established research plan. Speaking from my own personal position as a theorist, it is difficult to accommodate oneself to this system. In the realm of theory, there is a rapid transition in research phases: research cannot be pursued optimally by pre-formulating a detailed research plan. For people like me who do not have long interest spans, it's perplexing to be told, "Write a 2-3 year research plan." Well, given this perception and the fact that I have not received Grant-in-Aid funding that many times, I may not be the most appropriate person to author the first article of this series. Nevertheless, there are aspects of research funding, including Grants-in-Aid, about which I'd like to share some thought.

Competitive funding does provide an effective framework for selecting and advancing excellent research initiatives; the problem, however, arises with the system shift to competitive funding as the predominate source of research financing. There are many cases where a stable source of relatively small funding is desirable, including research to prepare for drafting a research plan, research to accumulate working data, and, as I have noted, theoretical research. This sort of basic research funding used to be provided to researchers by Japan's national universities in the form of chair research funds. Since, however, the incorporation of the national universities, their operating budgets have been cut by one percent a year. Accordingly, we can surmise that funding for basic research will continue to decline. One can't help but think that the current policy to compensating for this underfunding with competitive grants is misdirected.(continued)

<http://www.jsps.go.jp/english/e-grants/grants11.html>

Accountability on Selection

Disclosure of Screening Result

- ✓ Disclose reason to failure application to the largest-scale grant only about 100 failure applications
- ✓ Difficulty with the other smaller grant (over 70,000 failures)



- ✓ Disclose the weak points by fixed form >> from 2010

Assessment Standards on Document Review Process

Assess grade 4 (excellent) to grade 1 (bad) by 5 assessment factors

Each factor includes several points of view (about 15 points in total)



Reviewers choose the weak points when they assess grade 1 or 2

Accountability on Selection

Factors

Assessment Standards in Document Review Process (example)

(1) Academic Importance and Validity of the Research Project

- a) Is the research project academically important and should be implemented ?
- b) Are the framework of the research and the research objectives specified and clarified ?
- c) Is the scientific importance of the research project worth the scale of the costs for which the application is made ?

Points of View

Grades Assessment Standards

- 4 Excellent
- 3 Good
- 2 Poor
- 1 Bad

Reviewers choose the weak points “a) or b) or c)” when they assess grade 1 –Bad or 2 –Poor

Accountability on Selection

Verification of Reviewers' Assessment Result

- ✓ 5,000 reviewers assess 100,000 proposals in document review process
- ✓ KAKENHI program officers verify all assessment results
about 100 POs from university professors in JSPS as part-time position

Problems in Assessment

- ✓ Removal of reviewers for several years about 30 cases per year

Problems in Assessment

- ✓ Conflict of Interest ex. preference to stakeholders
- ✓ Biased Assessment ex. Very strange assessment compared with
the other reviewers assessments
- ✓ Lukewarm Assessment ex. No comments, most are grade "Good"

Thank You !

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