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Questionnaires (translated)

Confidential

Fundamental Statistics

2023 Survey of Research and Development

**Questionnaire C
(for universities and colleges)**

As of June 1st, 2023

Statistics Bureau
Ministry of Internal Affairs and Communications

Location and name of the institution		Person representing the institution	(Title) (Name)
		Person responding to the questionnaire	(Section name) (Name)
[*] Enter the Corporate Number (13 digits)		Telephone	
	Not specified <input type="radio"/>		

- Please refer to the instruction when you fill in the questionnaire.
- This Survey covers university and college faculties, junior colleges, technical colleges, and research institutes attached to universities, etc. Therefore, please answer the questions for each faculty in the case of universities and colleges, except where otherwise noted. In regard to graduate schools, the postgraduate courses should be included in the pertinent faculty. However, if your institution only offers postgraduate courses, answer the questions for each postgraduate course.
- If you have a medical department, answer the questions by also covering the attached hospitals.
- Give information as of March 31st, 2023 about employees, and for the year ending on the latest settling day prior to March 31st, 2023 about financial status.

[1] Select the type of institution. (Fill in the circle for the appropriate choice below.)

501 Type of university and college	1 Faculty of university <input type="radio"/> or college	3 Technical college <input type="radio"/>	5 Inter-university <input type="radio"/> research institute
	2 Junior college <input type="radio"/>	4 Research institute <input type="radio"/> attached to university	6 Others <input type="radio"/>

[2] Enter the name and location of the branches or attached research facilities.

502	Name	Location

[3] Mark all the fields of science that your institution is conducting R&D in. Among these, mark the main field (only one) that your institution is conducting R&D in. (Fill in the circle for the appropriate choice below.)

503												
Field of science	1 Literature	2 Law	3 Economics	4 Other social sciences and humanities	5 Physical sciences	6 Engineering	7 Agricultural sciences	Health sciences		10 Home economics	11 Education	12 Others
								8 Medicine, dentistry and pharmacy	9 Others			
Conducting R&D in:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Main field (check only one):	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[4] Fill in the number of persons employed (as of March 31st)

Include transferees, etc., from outside and who are engaged in R&D at the institution.

		Head-counts (persons)			
				Dispatched workers under the Worker Dispatching Act	
		Female		Female	
Total number of persons employed in R&D (505,510~513)(515,520~523) (525~527)(529~531)		504	514	524	528
Researchers*1	Regularity	505	515	Teachers and other researchers who are temporary workers should not be included in the researcher's regulars but should be included in the head counts of Non-regulars.	
	Teachers	506	516		
	Students for Ph.D. degree	507	517		
	Medical staff members	508	518		
	Others	509	519		
Non-regulars		510	520		
Assistant research workers*2		511	521	525	529
Technicians*3		512	522	526	530
Clerical and other supporting personnel*4		513	523	527	531

Regular researchers who hold a Ph.D.*5	532	533
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Permanent researchers *6	534	536
Under forty years old	535	537

Doctoral students who are employed by the university*7	538	539
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Others who are employed by the university *8	540	541
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Number of employees engaged in work other than R&D*9	542
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[5] Enter the number of researchers who joined or left the institution

- Cover the period from April 1 of last year to March 31 of this year.
- "The number of researchers who joined the institution" means "teachers", "medical staff members" and "others" as defined in question [4] (number of employees) who joined from outside the institution.
- Enter the number of newly hired researchers who were assigned to a department which conducts research on natural sciences and engineering according to the contents of their research.
- Enter the number of researchers who joined from outside your institution by their previous job according to the table of "classification of organizations" provided in the instruction
- "The number of researchers who left the institution" means "teachers", "medical staff members" and "others" as defined in question [4] (number of employees) who left the institution.
- Include transferees.

	Total (persons)	Female (persons)			
Newly hired	543	559			
Natural sciences and engineering	544	560			
Physical science	545	561	Joined from	552	568
Engineering and technology	546	562	Companies	553	—
Agricultural science	547	563	Non-profit institutions	554	—
Medical sciences	548	564	Public organizations	555	—
Medical science	549	565	Other universities and colleges	556	—
Dentistry	550	566	Others	557	—
Pharmacy	551	567	Number of researchers who left the institution	558	569

*1. **Researchers:** Persons who are "teachers", "medical staff and others" or "students for Ph.D. degree".

- "Teachers": Professors, associate professors, assistant professors and instructors.
- "Medical staff members": Persons other than "teachers" and "students for Ph.D. degree" and doctors who belong to the medical department and engaged in medical, research or educational activities in affiliated hospital or related institution.
- "Others" in the category of "others" in question [4]: Persons other than "teachers", "medical staff members" and "students for Ph.D. degree" who hold a university (excluding junior college) degree or its equivalent, and perform research activities in their own specific area of study.
- "Non-regulars": Researchers who have regular work outside the institution. However, part-time personnel who only give lectures are included in "Number of employees engaged in work other than R&D".

*2. **Assistant research workers:** Persons who assist researchers and who are engaged in research activities under their direction.

*3. **Technicians:** Persons, other than researchers and assistant research workers, who are engaged in technical services related to research activities under the guidance and supervision of researchers and assistant research workers.

*4. **Clerical and other supporting personnel:** Persons other than the above but who are engaged in clerical, accounting, etc., related to R&D. As for the persons engaged in the administration of such activities, those with research experiences are included in "researchers", while those without such experiences are included in "clerical and other supporting personnel" (i.e., this category).

*5. **Regular Researchers who hold a Ph.D:** Do not include "students for Ph.D. degree".

*6. **Permanent researchers:** Teachers and other regular researchers who are under an indefinite term of employment contract, including those who are allowed to work until the retirement age.

*7. **Doctoral students who are employed by the university.:** Those who have an employment relationship as a research assistant or other person performing research-related tasks.

*8. **Others who are employed by the university:** Persons who have an employment relationship as a person performing research-related tasks, irrespective of their term of office.

*9. **Employees engaged in work other than R&D:** These mainly mean technicians engaged in educational or medical activities, secretarial and accounting staff, and janitors. Managerial staff who are ex-researchers (careers as researchers) are included in "researchers".

[6] Fill in the number of researchers by specialty (as of March 31st)

		Total (571~614) (616~659)	Total (persons) 570	Female (persons) 615						
Social sciences and humanities	Humanities	Literature	571	616	Natural sciences and engineering (continued)	Engineering and technology (continued)	Material	592	637	
		History	572	617			Textile engineering	593	638	
		Philosophy	573	618			Aeronautics	594	639	
		Others	574	619			Polytechnics	595	640	
	Law and political science	575	620	Others			596	641		
	Social sciences	Commerce and economics	576	621		Agricultural sciences	Agricultural science	597	642	
		Sociology	577	622			Agricultural chemistry	598	643	
		Others	578	623			Agricultural engineering	599	644	
		Natural sciences and engineering	Physical sciences	Mathematics			579	624	Agricultural economics	600
	Information science			580			625	Dendrology	601	646
Physics	581			626	Forestry		602	647		
Chemistry	582			627	Veterinary science, animal husbandry		603	648		
Biology	583			628	Fishery	604	649			
Geology	584			629	Others	605	650			
Others	585			630	Medical sciences	Medical science	606	651		
Engineering and technology	Machinery and ship engineering		586	631		Dentistry	607	652		
	Electricity and communications	587	632	Pharmacy		608	653			
	Civil engineering and architecture	588	633	Nursing		609	654			
	Applied chemistry	589	634	Others		610	655			
	Applied physical science	590	635	Other sciences	Psychology	611	656			
	Nuclear engineering	591	636		Home economics	612	657			
			Education		613	658				
			Arts and others		614	659				

[7] Enter the total expenditure

- Enter the total expenditure at your institution (universities and colleges: for each faculty), regardless of the purpose be it for R&D, education, or others.

Universities and colleges: Expenditures related to the Headquarters and libraries not belonging to any of the faculties: Enter these by dividing them proportionately to the respective faculties.

660
(10 thousand yen)

As for research expenses, even if an expense is not booked as research expense, enter such expenses separately from the booked research expenses.
Incomes and expenditures in kind: include the relevant expenses as R&D expenses in market price.

[8] Enter the intramural expenditure on R&D.

- Enter the R&D expenditures by the institution during the one year period, including those financed by outside sources. If it is difficult to calculate the R&D expenses by dividing them into those spent by the R&D and other divisions, enter them separately.

	(10 thousand yen)
Total (662~664, 669, 671,672)	661
Labour costs*1	662
Materials*2	663
Expenditure on tangible fixed assets*3	664
Land	665
Buildings, etc.	666
Machinery, utensils, equipment, etc.	667
Other tangible fixed assets	668
Expenditure on intangible fixed assets*4	669
Software	670
Lease fees*5	671
Other expenses*6	672
Cost related to dispatched workers	673

***1.Labour costs:** The following expenses that became necessary for R&D purposes and paid to persons engaged in R&D during the one year period: the total amount of salaries, etc. (basic salaries, allowances, bonuses, etc., paid regularly or as extras), retirement allowances, social insurance premiums paid on behalf of the insured, and others. The "salaries, etc." are before subtracting the income tax, local taxes, insurance premiums, etc. That is, it is not "take-home pay".

If employees are working extramurally, also include their salaries, etc.

***2.Material:** Expenses on main raw materials, processed materials, auxiliary materials, parts and so on needed for R&D.

***3.Expenditure on tangible fixed assets:** "Tangible fixed assets" here mean all such assets required for R&D.

- **Building, etc.:** Buildings including ancillary structures, construction, ships, aircraft

- **Machinery, utensils, equipment, etc.:** Machinery, equipments and fixtures which are durable for one year or more and valued at 100,000 yen or more.

- **Other tangible fixed assets:** Suspense account of construction, animals and plants which are treated as fixed assets.

***4. Expenditure on intangible fixed assets:** "Intangible fixed assets" here mean all such assets required for R&D.

- **Software:** Within expenditure on intangible fixed assets, the amount paid for software which is used for one year or more and valued at 100,000 yen or more.

***5.Lease fees:** The amount paid based on lease contracts for R&D purposes, but excluding land and buildings rent, short-term leases, charters, etc.

***6.Other expenses:** Expenses for books and other publications, electricity, fuel and water, expendables and supplies, etc.

- **Cost related to dispatched workers :** Expenses related to persons engaged in research-related work who are dispatched by staffing agencies under the Worker Dispatching Act.

[9] Enter the total R&D expenditures by type of R&D in the fields of physical sciences, engineering and technology, agricultural sciences, and medical sciences.

- Of the "Total" in question [8] (intramural expenditure on R&D), categorize and enter the R&D expenditures related to the fields of natural sciences and engineering namely physical sciences, engineering and technology, agricultural sciences, and medical sciences. The expenditures should be categorized by research theme. If this is not possible, either use the categories provided in the table below, or categorize by researcher or research unit.

Total (661~663)	(10 thousand yen)
	674
Basic research*1	675
Applied research*2	676
Development*3	677

*1. **Basic research:** This refers to theoretical or experimental research undertaken for the formulation of hypothesis and theories, or for the acquisition of new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view.

*2. **Applied research:** This refers to research undertaken in order to determine possible uses with a specific, practical objective or to explore a new form of application different from the existing one.

*3. **Development:** This refers to research directed to producing new products, services, systems, equipment, materials and processes, etc. or to improving the existing ones, drawing on knowledge gained from basic and applied research and/or practical experience and producing additional knowledge.

[10] Enter the expenditure on R&D by selected objective.

- If your institution is conducting any R&D in the following fields, enter the respective disbursements among the "Total" in question [8] (intramural expenditure on R&D). If there is overlap among the eight fields listed below, please enter the research expenses in each field and fill in the "overlap with the other seven fields" column.

In the case previously stated, any overlap through these fields is acceptable.

(10 thousand yen)

Fields	Expenditures on R&D	Overlap	Fields	Expenditures on R&D	Overlap
Field of life sciences	678	686 ○	Field of nanotechnology	682	690 ○
Field of information technology	679	687 ○	Field of energy	683	691 ○
Field of environmental science and technology	680	688 ○	Field of space exploration	684	692 ○
Field of materials	681	689 ○	Field of oceanology	685	693 ○

- If your company is conducting any R&D in the following fields, enter the respective disbursements among the "Total" in question [8] (intramural expenditure on R&D). If there is overlap between the three fields listed below, please enter the research expenses in each field and fill in the "overlap with the other two fields" column.
※ These are positioned within the government as fundamental technologies that should be strategically addressed.

Overlapp	Expenditures on R&D	Overlap	Fields	Expenditures on R&D	Overlap
Field of artificial intelligence	694	697 ○	Field of quantum technology	696	699 ○
Field of biotechnology	695	698 ○			

[Expenditures on R&D by selected objective]

*1. **Field of life sciences:** This refers to research on improvement and development of living by clarifying life related phenomena and various functions of organisms, and by applying the results to a variety of disciplines including medical, agricultural, industrial, environmental protection, energy development and so on.

*2. **Field of information technology (IT):** In addition to R&D on hardware and software, that for the upgrading of networks and the development of high-speed computing technologies that enable high-speed processing, analysis and storage of massive quantities of information.

*3. **Field of environmental science and technology:** This refers to research concerning the infection of polluted natural environments, life cycle and property, protection of natural environments from pollution and destruction, achievement of non-polluted environments, etc.

*4. **Field of materials:** This means researches on 1) investigation and control of the structure, etc., of substances on the level of atoms and molecules which become the bases of IT, medical sciences, etc., and 2) development of the materials for the high value added energy and environment-related substances that can meet the needs to save energy and natural resources and recycle natural and other resources.

*5. **Field of nanotechnology:** R&D for the achievement of functions utilizing nanosize material/substance characteristics.

*6. **Field of energy:** This refers to research relating to exploration, production, conversion, transportation, consumption, safety etc., in relation to the development and reasonable use of energy resources.

*7. **Field of space exploration:** This includes research on rockets and artificial satellites and also research on tracing or communication stations.

*8. **Field of oceanology:** This means oceanic research and technical development relating to culture of bio-resources, development of mineral resources, research on ocean space, utilization of seawater, etc.

*9. **Field of artificial intelligence:** This refers to a wide range of research related to AI science and technology, including fundamental research necessary to construct artificial intelligence, research and development of AI systemization technology and related device technology necessary for social implementation, research and development of AI implementation technology in various industries and economic activity fields, and AI-related ethics and legal systems.

*10. **Field of biotechnology:** This refers to research on the application of science and technology to living organisms and parts, products and models thereof in order to modify biological or non-biological materials in order to produce knowledge, goods and services.

*11. **Field of quantum technology:** This refers to a wide range of research related to quantum technology, including fundamental research on quantum science and its applied technology, research and development for practical application and commercialization, and research and development of peripheral technologies to support this research.

[11] Enter the R&D funds received from outside.

- Enter the total of all funds on R&D received from others, whatever the type of finance such as trust money, subsidies, allocations, etc. Record intramural expenditures, that is, all funds used for the performance of R&D intramurally in the right columns.

Total (701~714) (716~729)		R&D funds received (Total) (10 thousand yen)	
			Intramural expenditure of R&D funds received
		700	715
Public organizations	From government	701	716
	From local government	702	717
	From other national and public universities and colleges	703	718
	From national and public research institutions and independent administrative institutions	704	719
	From public corporations and enterprises, which are based on self-supporting accounting systems	705	720
	From others	706	721
From companies		707	722
From other private universities and colleges		708	723
From non-profit institutions		709	724
The rest of the world	From companies	710	725
	From other universities and colleges	711	726
	From non-profit organization	712	727
	From universities and colleges	713	728
	From others	714	729

※ If the research funds received from domestic companies include the following nominal amounts, please enter the relevant amounts.

R&D funds received from companies	R&D funds received (Total) (10 thousand yen)	
		Intramural expenditure of R&D funds received
Collaborative research fund	730	733
Sponsored research fund	731	734
Donation	732	735

[12] Enter the R&D funds paid outside.

- Enter all funds on R&D paid outside for the performance of R&D, whatever the type of payment (trust, dues, etc.). Record those paid from own funds in the right columns.

Total (737~748) (750~761)		R&D funds received (Total) (10 thousand yen)	
			Extramural expenditure of R&D funds (self-financed)
		736	749
Public organizations	To other national and public universities and colleges	737	750
	To national and public research institutions and independent administrative institutions	738	751
	To public corporations and enterprises, which are based on self-supporting accounting systems	739	752
	To others	740	753
To companies		741	754
To other private universities and colleges		742	755
To non-profit institutions		743	756
The rest of the world	To companies	744	757
	To other universities and colleges	745	758
	To government agency	746	759
	To non-profit organization	747	760
	To others	748	761

Remarks column	(In addition to changing the location and name of the institution, description of business, etc., enter any special notes relevant to what you have filled in.)
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