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Questionnaires (translated)

Confidential

Fundamental Statistics

2020 Survey of Research and Development

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

As of March 31st, 2020

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, 2020 about employees, and for the year ending on the latest settling day prior to March 31st, 2020 about financial status.
- Please return this questionnaire to the Statistics Bureau no later than July 15th.

[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								Health sciences				
	1 Literature	2 Law	3 Economics	4 Other social sciences and humanities	5 Physical sciences	6 Engineering	7 Agricultural sciences	8 Medicine, dentistry and pharmacy	9 Others	10 Home economics	11 Education	12 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)		
			Female	
Total number of persons employed in R&D (505, 510~513) (515,520~523)		504	514	
Researchers*1	Regulars	505	515	
		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	
Technicians*3		512	522	
Clerical and other supporting personnel*4		513	523	
Regular researchers who hold a Ph.D.*5		524	525	
Permanent researchers *6		526	528	
	Under forty years old	527	529	
Number of employees engaged in work other than R&D*7		530		



- [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	531	547			
Natural sciences and engineering	532	548			
Physical science	533	549	Joined from	540	556
Engineering and technology	534	550	Companies	541	—
Agricultural science	535	551	Non-profit institutions	542	—
Medical sciences	536	552	Public organizations	543	—
Medical science	537	553	Other universities and colleges	544	—
Dentistry	538	554	Others	545	—
Pharmacy	539	555	Number of researchers who left the institution	546	557

- *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. **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 (559~602) (604~647)	Total (persons) 558	Female (persons) 603						
Social sciences and humanities	Humanities	Literature	559	604	Natural sciences and engineering (continued)	Engineering and technology (continued)	Material	580	625	
		History	560	605			Textile engineering	581	626	
		Philosophy	561	606			Aeronautics	582	627	
		Others	562	607			Polytechnics	583	628	
	Law and political science	563	608	Others			584	629		
	Social sciences	Commerce and economics	564	609		Agricultural sciences	Agricultural science	585	630	
		Sociology	565	610			Agricultural chemistry	586	631	
		Others	566	611			Agricultural engineering	587	632	
	Natural sciences and engineering	Physical sciences	Mathematics	567			612	Agricultural economics	588	633
			Information science	568			613	Dendrology	589	634
Physics			569	614	Forestry		590	635		
Chemistry			570	615	Veterinary science, animal husbandry		591	636		
Biology			571	616	Fishery	592	637			
Geology			572	617	Others	593	638			
Others			573	618	Medical sciences	Medical science	594	639		
Engineering and technology		Machinery and ship engineering	574	619		Dentistry	595	640		
		Electricity and communications	575	620		Pharmacy	596	641		
		Civil engineering and architecture	576	621		Nursing	597	642		
	Applied chemistry	577	622	Others		598	643			
	Applied physical science	578	623							
	Nuclear engineering	579	624							

As for the breakdown by field of specialty, write the number of "Regular researchers" (505 and 515) in question [4] (number of employees) by field of specialty.

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Continued from the previous page

Other sciences	Psychology	599	644
	Home economics	600	645

Other sciences (continued)	Education	601	646
	Arts and others	602	647

[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.

648
(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.

Total (650~652, 656, 658,659)	(10 thousand yen)
Labour costs*1	650
Materials*2	651
Expenditure on tangible fixed assets*3	652
Land, buildings, etc.	653
Machinery, utensils, equipment, etc.	654
Other tangible fixed assets	655
Expenditure on intangible fixed assets*4	656
Software	657
Lease fees*5	658
Other expenses*6	659

*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.

• **Land, building, etc.:** Land, 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.

[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)
	660
Basic research*1	661
Applied research*2	662
Development*3	663

*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).

In case the contents of research overlap with more than one field, enter the amount of R&D expenditure into each related field.

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

(10 thousand yen)

Field of life Sciences	664	Field of nanotechnology	668
Field of information technology	665	Field of energy	669
Field of environmental science and technology	666	Field of space exploration	670
Field of Materials	667	Field of oceanology	671

[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.

[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 (673~684) (686~697)		R&D funds received (Total) (10 thousand yen)	
			Intramural expenditure of R&D funds received
		672	685
Public organizations	From government	673	686
	From local government	674	687
	From other national and public universities and colleges	675	688
	From national and public research institutions and independent administrative institutions	676	689
	From public corporations and enterprises, which are based on self-supporting accounting systems	677	690
	From others	678	691
From companies		679	692
From other private universities and colleges		680	693
From non-profit institutions		681	694
The rest of the world	From companies	682	695
	From other universities and colleges	683	696
	From others	684	697

[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 (699~708) (710~719)		R&D funds received (Total) (10 thousand yen)	
			Extramural expenditure of R&D funds (self-financed)
		698	709
Public organizations	To other national and public universities and colleges	699	710
	To national and public research institutions and independent administrative institutions	700	711
	To public corporations and enterprises, which are based on self-supporting accounting systems	701	712
	To others	702	713
To companies		703	714
To other private universities and colleges		704	715
To non-profit institutions		705	716
The rest of the world	To companies	706	717
	To other universities and colleges	707	718
	To others	708	719

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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