

SCIENCE, INNOVATIONS AND TECHNOLOGIES IN THE REPUBLIC OF BELARUS

State Committee on Science and Technologies
of the Republic of Belarus

Short
Statistical
Book

2010

УДК 001 (476)

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The Short Statistical Book has been prepared at the request of the State Committee on Science and Technologies of the Republic of Belarus and contains statistical data on the condition and development of scientific capacity and innovation activity in the country, which are based on the up-to-date methods used in the production of science and innovation statistics and comply with international statistical standards.

The book is intended for scientists, teaching staff in higher education institutions, engineers, statisticians, businessmen, and diplomatic personnel.

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NOTATION CONVENTIONS:

— — Phenomenon is absent.

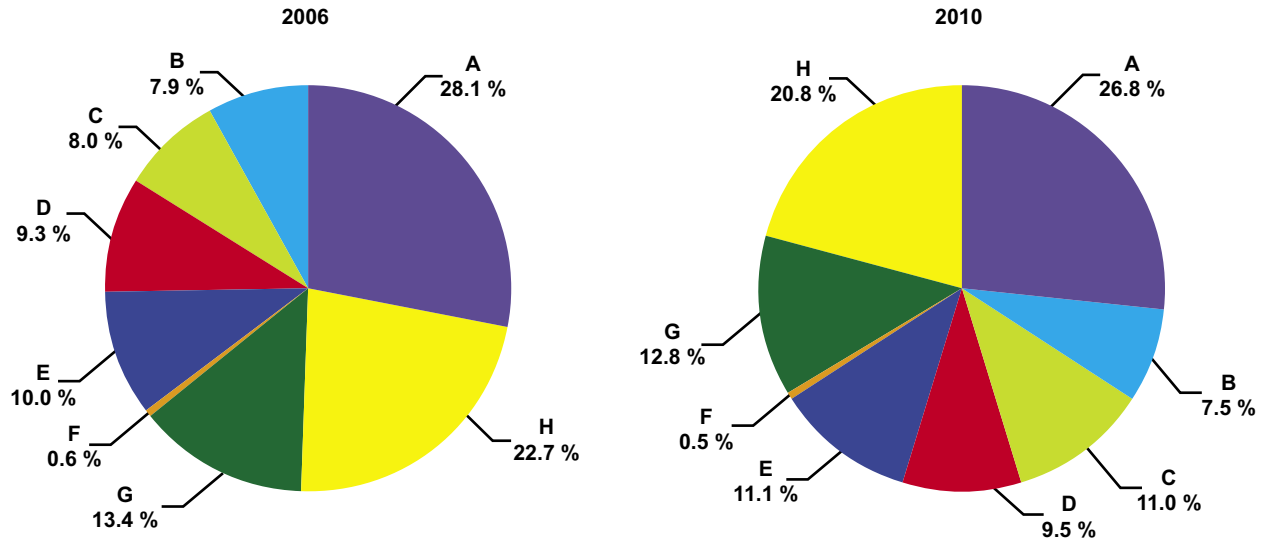
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GROSS DOMESTIC PRODUCT

	2005	2006	2007	2008	2009	2010
Gross domestic product (at current prices), billion rubles	65,067.1	79,267	97,165	129,791	137,442	162,964
Percent of the previous year	109.4	110.0	108.6	110.2	100.2	107.6
Gross domestic product per capita, ths rubles	6,656	8,145	10,015	13,407	14,157	17,171

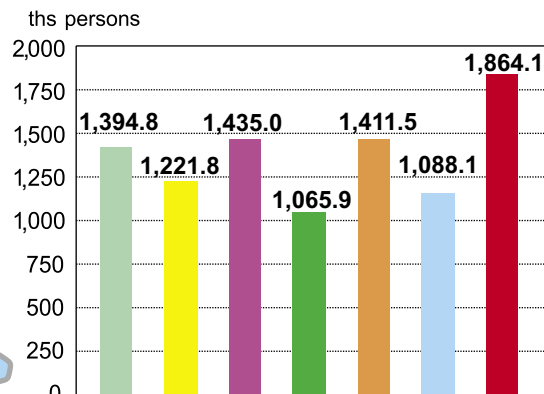
SECTOR-FOCUSED STRUCTURE OF GROSS DOMESTIC PRODUCT

(percent of total)



- A Industry
- B Agriculture
- C Construction
- D Transport and communications
- E Trade and catering
- F Science and science services
- G Net taxes on products
- H Other branches

POPULATION SIZE OF THE REPUBLIC OF BELARUS: 2011



- Brest region
- Vitebsk region
- Gomel region
- Grodno region
- Minsk region
- Mogilev region
- Minsk City

1

**RESEARCH AND DEVELOPMENT
ORGANIZATIONS**

1.1. ORGANIZATIONS ENGAGED IN RESEARCH AND DEVELOPMENT, BY SECTOR OF PERFORMANCE

	Number of organizations					
	2005	2006	2007	2008	2009*	2010**
Total	322	338	340	329	466**	468
<i>of which</i>						
government sector	122	139	131	127	80	101**
business enterprise sector	144	142	146	140	255	304
higher education sector	56	57	63	62	43	63

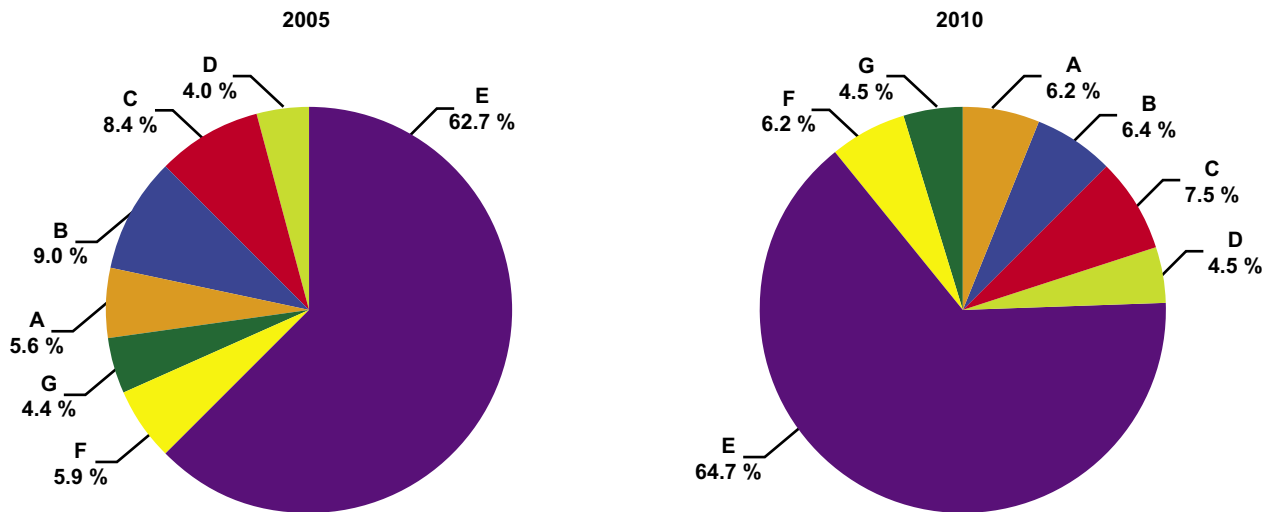
* Including small business entities.

** Including non-profit institution sector.

1.2. ORGANIZATIONS ENGAGED IN RESEARCH AND DEVELOPMENT, BY OWNERSHIP TYPE



1.3. DISTRIBUTION OF ORGANIZATIONS ENGAGED IN RESEARCH AND DEVELOPMENT, BY REGIONS AND MINSK CITY



- A Brest region
- B Vitebsk region
- C Gomel region
- D Grodno region
- E Minsk City
- F Minsk region
- G Mogilev region

2

PERSONNEL TRAINING

2.1. STATE INSTITUTIONS PROVIDING HIGHER EDUCATION, BY TYPES OWNERSHIP

(beginning of academic year)

	Number of institutions	Number of students therein, ths	Of which at departments		
			day-time	evening	correspondence
2003/2004	43	279.2	164.7	1.8	112.7
2004/2005	43	304.1	171.8	2.1	130.2
2005/2006	43	324.8	177.7	1.8	145.3
2006/2007	43	338.9	182.5	1.1	155.3
2007/2008	43	355.0	190.4	0.9	163.7
2008/2009	43	362.9	195.1	0.7	167.1
2009/2010	43	372.7	201.3	0.7	170.7
2010/2011	45	382.8	206.3	0.6	175.9

2.2. PRIVATE INSTITUTIONS PROVIDING HIGHER EDUCATION, BY TYPES OWNERSHIP

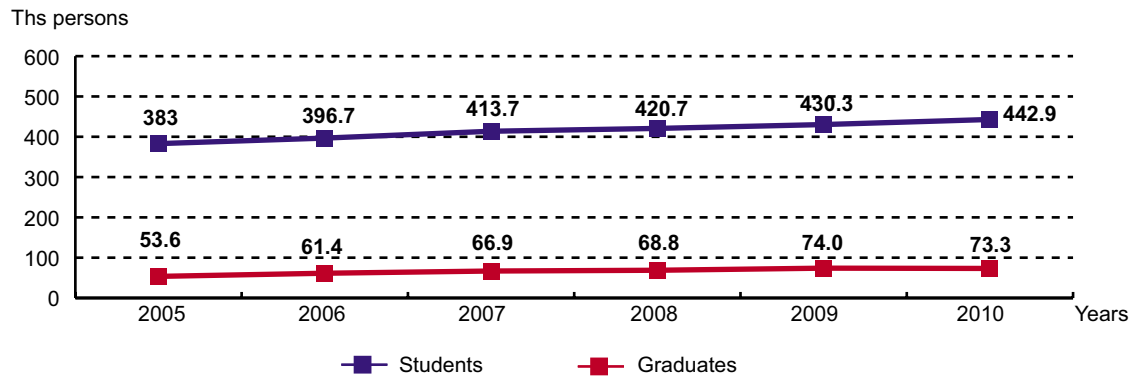
(beginning of academic year)

	Number of institutions	Number of students there in, ths	Of which at departments		
			day-time	evening	correspondence
2003/2004	16	58.6	18.8	–	39.8
2004/2005	12	58.8	16.5	0.1	42.2
2005/2006	12	58.2	14.8	0.2	43.2
2006/2007	12	58.0	14.5	0.1	43.4
2007/2008	10	58.7	14.9	0.1	43.7
2008/2009	10	57.8	14.8	–	43.0
2009/2010	10	57.6	15.1	–	42.5
2010/2011	10	60.1	15.4	–	44.7

2.3. INSTITUTIONS PROVIDING HIGHER EDUCATION, BY TYPES OWNERSHIP, BY REGIONS AND MINSK CITY

	Number of institutions	Total number of students therein, ths persons				
	2010/11	2006/07	2007/08	2008/09	2009/10	2010/11
Republic of Belarus	55	396.9	413.7	420.7	430.3	442.9
<i>regions</i>						
Brest	4	30.6	32.3	33.5	34.5	35.8
Vitebsk	5	34.8	36.5	37.1	38.9	41.8
Gomel	7	52.2	53.7	54.0	55.4	56.5
Grodno	3	25.4	27.5	28.6	30.0	31.5
Minsk City	31	212.5	222.1	226.4	230.7	235.9
Minsk	–	–	–	–	–	0.3
Mogilev	5	41.4	41.6	41.1	40.8	41.1

2.4. NUMBER OF STUDENTS AND GRADUATES FROM HIGHER EDUCATION INSTITUTIONS



2.5. NUMBER OF TEACHING STAFF IN HIGHER EDUCATION INSTITUTIONS

(persons)

	2005	2006	2007	2008	2009	2010
Number of teaching staff in higher education institutions (excluding multiple jobholders)	23,320	23,203	23,595	23,955	24,508	24,814
out of teaching and research staff — women	12,421	12,419	12,838	13,143	13,525	13,693
<i>of which</i>						
<i>those with academic status of</i>						
academician, corresponding member	45	41	44	41	44	41
professor	1,245	1,263	1,270	1,278	1,255	1,265
assistant professor	6,270	6,367	6,583	6,913	7,202	7,462
senior research officer	247	235	219	154	128	56
<i>those with academic degree of</i>						
doctor of science	1,344	1,352	1,358	1,366	1,353	1,357
candidate of science	8,519	8,503	8,604	8,710	8,880	9,077

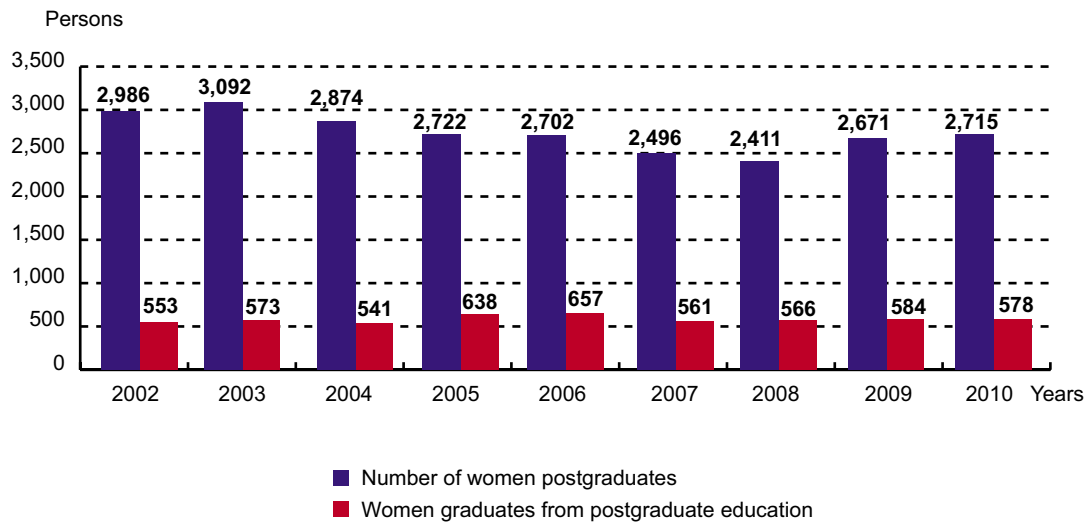
2.6. MAIN INDICATORS OF POSTGRADUATE EDUCATION

	Number of institutions engaged in postgraduate education	Number of postgraduates, persons	Postgraduate entrants, persons	Postgraduate graduates, persons
2003	121	5,964	1,796	1,232
2004	119	5,419	1,511	1,333
2005	119	5,042	1,508	1,296
2006	118	4,857	1,552	1,242
2007	118	4,498	1,428	1,093
2008	116	4,281	1,317	1,083
2009	117	4,571	1,516	1,094
2010	119	4,725*	1,469	1,015**

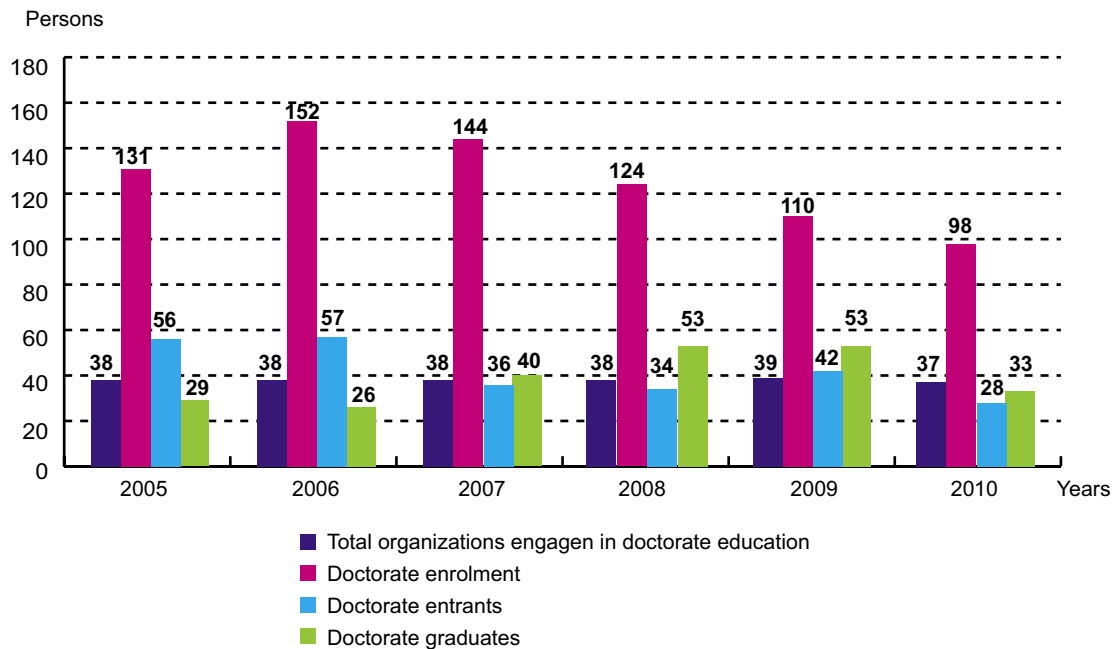
* Of which women — 2,715.

** Of which women — 578.

2.7. POSTGRADUATE EDUCATION ADMITTANCE AND GRADUATES FOR WOMEN



2.8. INDICATORS OF DOCTORATE EDUCATION



**2.9. CANDIDATE'S AND DOCTOR'S DEGREES CONFERRED BY THE SUPREME CERTIFYING COMMISSION (SCC)
OF THE REPUBLIC OF BELARUS, BY YEAR AND FIELD OF SCIENCE**

	Candidate's degrees						Doctor's degrees					
	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010
Total	661	578	531	568	573	586	116	44	53	53	51	45
<i>of which</i>												
physics and mathematics	62	58	50	54	49	54	15	8	12	5	11	2
chemistry	27	16	24	27	19	25	3	1	1	–	2	1
biology	54	38	50	33	40	44	7	2	1	–	4	–
geology and mineralogy	1	1	3	2	1	–	–	–	2	–	1	–
engineering	96	124	81	108	102	110	36	13	12	13	8	7
agriculture	32	43	32	32	47	31	5	4	3	7	2	3
history	37	27	23	25	38	20	4	2	2	3	3	3
economics	56	39	32	45	36	42	8	2	3	1	2	4
philosophy	9	6	6	3	10	5	1	–	–	1	–	–
philology	43	33	46	40	33	38	4	1	–	1	1	–
geography	4	3	2	1	8	8	–	1	1	2	1	1
law	39	23	36	30	22	32	1	–	2	–	2	2
teacher training	29	16	15	15	20	22	1	1	–	1	1	2
medicine	110	100	85	110	95	101	25	6	9	14	8	17
pharmacology	2	1	1	2	1	2	–	–	1	–	–	–
veterinary	19	14	11	8	10	16	1	1	1	1	2	1
art-criticism	11	17	11	11	12	10	4	–	–	1	2	–
architecture	4	2	1	–	4	1	–	–	–	2	–	–
psychology	7	8	5	7	7	6	–	–	1	–	–	–
sociology	13	4	6	6	10	6	–	1	2	–	1	1
politics	2	–	4	6	3	4	1	1	–	1	–	1
culturology	2	2	–	2	2	6	–	–	–	–	–	–
other	2	3	7	1	2	3	–	–	–	–	–	–

3

**RESEARCH AND DEVELOPMENT
PERSONNEL**

3.1. RESEARCH AND DEVELOPMENT PERSONNEL, BY CATEGORY
(persons)

	Total	Of which		
		researchers	technicians	supporting staff
2003	29,981	17,702	2,337	5,999
2004	28,750	17,034	2,068	5,844
2005	30,222	18,267	2,112	5,763
2006	30,544	18,494	2,263	5,715
2007	31,294	18,995	2,312	5,880
2008	31,473	18,455	2,278	6,466
2009	32,441	20,543	2,312	9,586
2010	31,712	19,879	2,248	9,585

3.2. RESEARCH AND DEVELOPMENT PERSONNEL, BY SECTOR OF PERFORMANCE
(persons)

	Total			Of which with educational attainment								
				higher			of which with academic degree				secondary specialized	
	doctor of science		candidate of science									
	2008	2009	2010	2008	2009	2010	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010
Total	31,473	35,516*	31,712	22,878	24,727	24,119	726 / 739	748	3,143 / 3,231	3,193	3,587 / 3,525	3,476
<i>of them</i>												
government sector	13,875	9,236	8,294	10,193	6,945	7,103	582 / 475	501	2,274 / 1,726	1,775	1,562 / 938	591
business enterprise sector	14,311	18,229	20,510	10,088	12,825	14,503	52 / 55	132	367 / 487	898	1,812 / 2,177	2,735
higher education sector	3,287	1,608	2,902	2,597	1,272	2,508	92 / 45	115	502 / 249	520	213 / 87	150
non-profit institutions sector	–	4,443	6	–	3,685	5	– / 164	...	– / 769	...	– / 323	...

* For 2009 including non-profit institution sector.

3.3. RESEARCH AND DEVELOPMENT PERSONNEL, BY CATEGORY AND EDUCATIONAL ATTAINMENT
(persons)

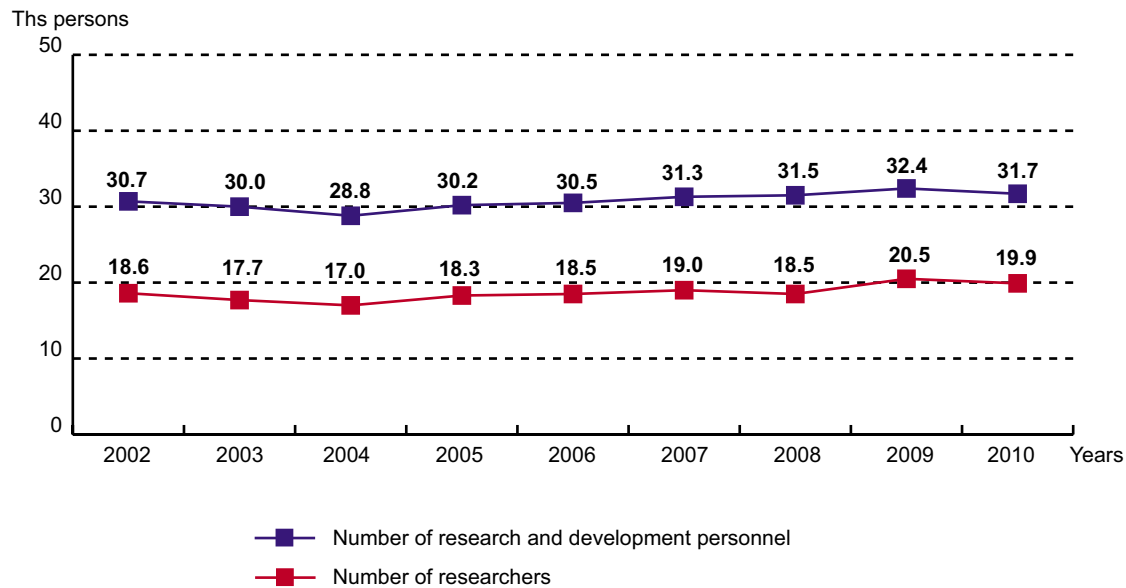
	Total		Of which with educational attainment							
			higher		of which with academic degree				secondary specialized	
	doctor of science				candidate of science					
	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010
Number of research and development personnel	31,473 / 35,516	31,712	22,878 / 24,727	24,119	726 / 739	748	3,143 / 3,231	3,193	3,587 / 3,525	3,476
<i>of which</i>										
researchers	18,455 / 20,571	19,879	17,980 / 20,014	19,349	725 / 737	746	3,112 / 3,184	3,143	410 / 471	435
technicians	2,278 / 2,322	2,248	568 / 596	620	- / -	-	- / 1	-	1,087 / 1,114	1,153
supporting staff	10,740 / 10,623	9,585	4,330 / 4,117	4,150	1 / 2	2	31 / 46	50	2,090 / 1,940	1,888

3.4. NUMBER OF RESEARCH AND DEVELOPMENT PERSONNEL, BY REGIONS AND MINSK CITY

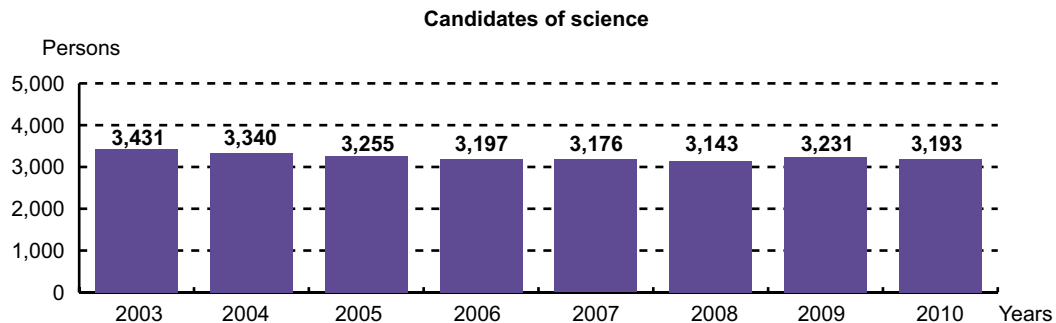
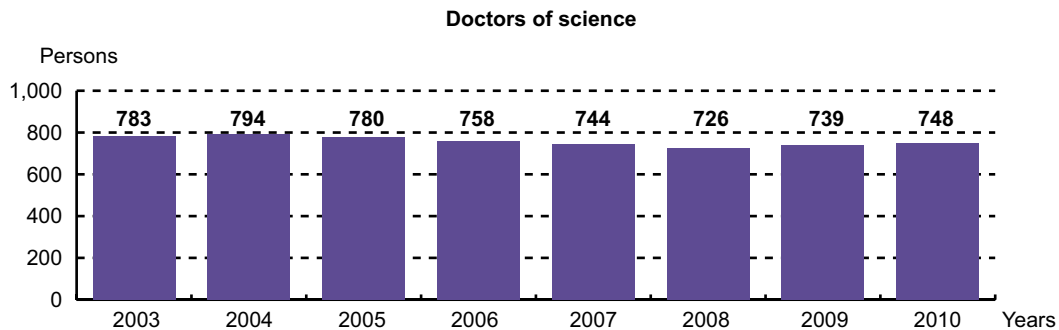
(persons)

	2000	2005	2006	2007	2008	2009	2010
Republic of Belarus	32,926	30,222	30,544	31,294	31,473	32,441	31,712
<i>regions</i>							
Brest	501	477	547	527	558	581	621
Vitebsk	1,293	1,246	1,180	1,243	1,210	1,061	1,094
Gomel	3,117	2,913	2,701	2,980	3,014	2,905	2,866
Grodno	524	409	488	470	432	575	557
Minsk City	24,556	22,822	23,209	23,545	23,719	24,012	22,863
Minsk	2,254	1,827	1,892	1,903	1,910	2,745	2,978
Mogilev	681	528	527	626	630	562	733

3.5. CHANGES IN THE NUMBER OF RESEARCH AND DEVELOPMENT PERSONNEL



3.6. DOCTORS AND CANDIDATES OF SCIENCE ENGAGED IN RESEARCH AND DEVELOPMENT



3.7. RESEARCHERS, BY SEX AND FIELD OF SCIENCE

(persons)

	Number of researchers				Of which							
	total		of which women		doctors of science				candidates of science			
					total		of which women		total		of which women	
	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010
Total	18,455 / 20,571	19,879	8,106 / 8,800	8,392	725 / 734	746	121 / 124	127	3,112 / 3,184	3,143	1,147 / 1,175	1,156
<i>of which</i>												
natural sciences	3,640 / 3,794	3,702	1,774 / 1,899	1,868	277 / 282	275	46 / 52	48	1,092 / 1,100	1,052	466 / 477	450
engineering and technology	10,977 / 12,648	12,257	3,929 / 4,355	4,170	191 / 192	205	11 / 8	15	921 / 926	945	146 / 137	171
medical sciences	954 / 962	924	637 / 624	567	90 / 89	79	24 / 25	22	312 / 317	304	194 / 203	175
agricultural sciences	1,183 / 1,208	1,206	710 / 698	678	72 / 70	74	16 / 15	16	374 / 392	399	157 / 159	168
social sciences	1,324 / 1,549	1,401	839 / 986	885	43 / 51	61	9 / 9	11	255 / 279	281	103 / 109	114
humanities	377 / 410	389	217 / 238	224	52 / 53	52	15 / 15	15	158 / 170	162	81 / 90	78

3.8. RESEARCHERS, BY SEX AND SECTOR OF PERFORMANCE

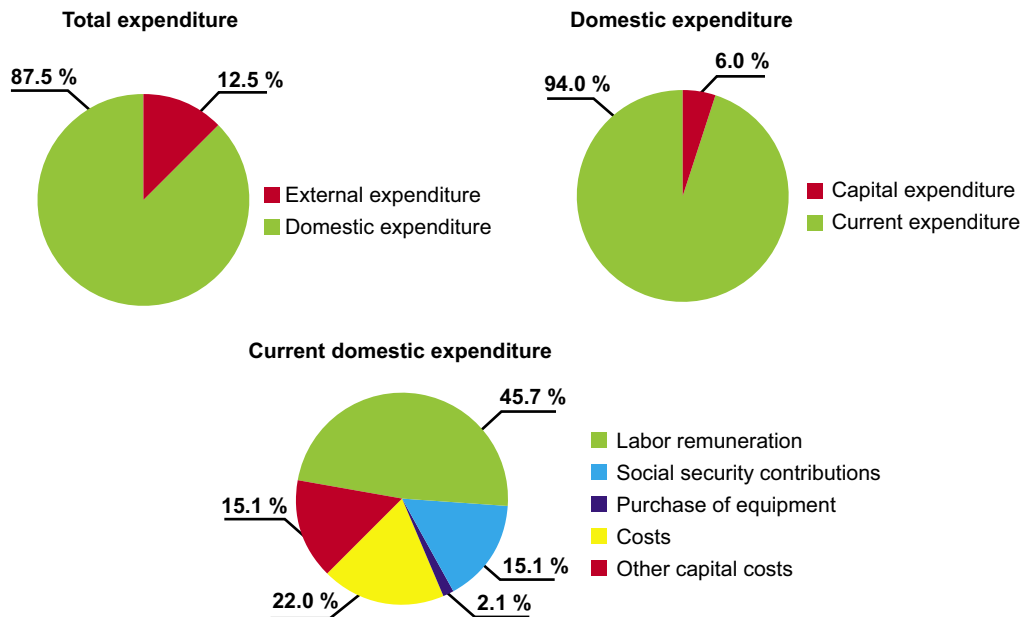
(persons)

	Number of researchers				Of them with educational attainment					
	total		of them women		higher		of which with academic degree			
							doctor of science		candidate of science	
	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010	2008 / 2009	2010
Total	18,455 / 20,571	19,879	8,106 / 8,800	8,392	17,980 / 20,014	19,349	725 / 737	746	3,112 / 3,184	3,143
<i>of which</i>										
government sector	8,217 / 5,652	6,118	4,125 / 2,707	2,989	8,086 / 5,584	6,051	582 / 475	501	2,256 / 1,712	1,761
business enterprise sector	8,258 / 10,851	11,779	3,191 / 4,022	4,641	7,926 / 10,402	11,331	52 / 55	132	362 / 472	882
higher education sector	1,980 / 973	1,980	790 / 434	761	1,968 / 971	1,965	91 / 43	113	494 / 232	500
non-profit institutions sector	... / 3,095	2	... / 1,637	1	... / 3,057	2	... / 164	-	... / 768	-

4

**RESEARCH AND DEVELOPMENT
EXPENDITURE**

4.1. EXPENDITURE ON RESEARCH AND DEVELOPMENT, BY TYPE OF EXPENDITURE: 2010



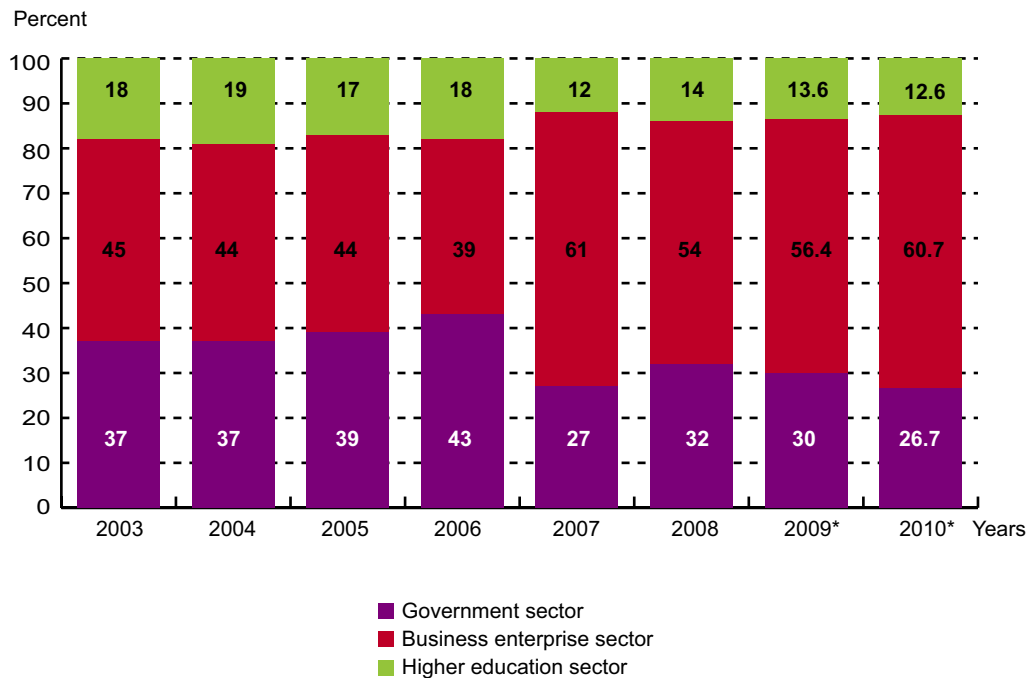
4.2. DOMESTIC EXPENDITURE ON RESEARCH AND DEVELOPMENT

(billion rubles)

	2000	2005	2006	2007	2008	2009	2010
at current prices	66.0	441.5	523.7	934.8*	962.4	883.3	1,140.6
at constant prices of 2000	66.0	89.0	95.3	150.6	127.9	111.1	130.2
percent of gross domestic product	0.72	0.68	0.66	0.96	0.74	0.64	0.7

* Growth of expenditure resulted from the capitalization of research and development results.

4.3. DOMESTIC EXPENDITURE ON RESEARCH AND DEVELOPMENT, BY SECTOR OF PERFORMANCE



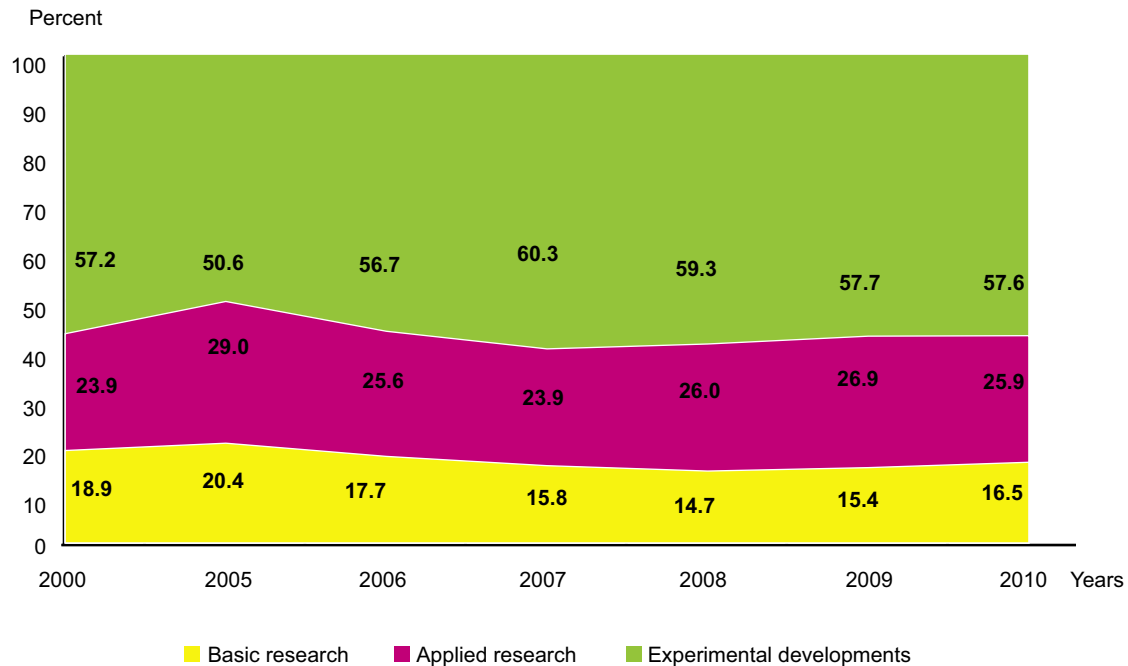
*Including non-profit institutions sector.

**4.4. CURRENT DOMESTIC EXPENDITURE ON RESEARCH AND DEVELOPMENT,
BY RESEARCH AND DEVELOPMENT ACTIVITY**

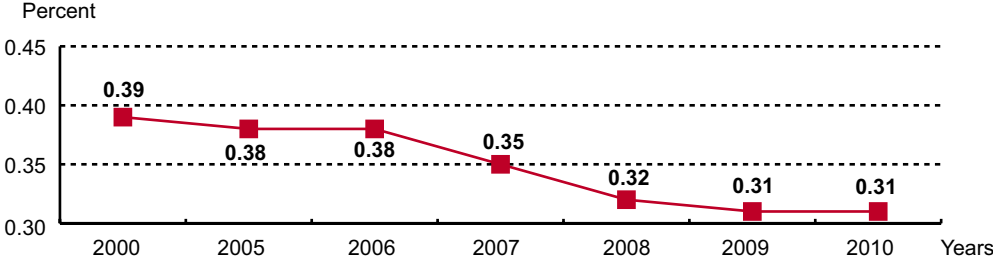
(current prices, billion rubles)

Years	Current domestic expenditure, total	Of which by type of research and development activity		
		basic research	applied research	experimental developments
2000	62.8	11.9	15.0	35.9
2005	402.1	82.2	116.5	203.4
2006	485.5	85.8	124.6	275.1
2007	606.8	95.9	144.8	366.1
2008	774.8	114.2	201.8	458.8
2009	839.5	129.5	225.6	484.4
2010	1,072.7	176.7	277.8	618.2

4.5. STRUCTURE OF CURRENT DOMESTIC EXPENDITURE ON RESEARCH AND DEVELOPMENT, BY TYPE OF ACTIVITY



4.6. SHARE OF REPUBLICAN BUDGET APPROPRIATIONS FOR SCIENCE IN GROSS DOMESTIC PRODUCT



5

**RESEARCH AND DEVELOPMENT
EFFECTIVENESS**

**5.1. INVENTIONS: FILING APPLICATIONS FOR GRANTING PATENTS OF THE REPUBLIC OF BELARUS
AND RESULTS OF EXAMINING ACTIVITIES**

Indices	2005	2006	2007	2008	2009	2010
Applications filed, total	1,340	1,377	1,662	1,730	1,926	1,933
<i>of which</i>						
by national applicants	1,166	1,188	1,405	1,510	1,753	1,759
by foreign applicants	174	189	257	220	173	174
<i>including</i>						
PCT applications entering the national phase	122	148	195	171	133	122
Preliminary examinations completed, total	1,356	1,357	1,466	1,878	1,909	1,952
Requests for substantive examination submitted	1,199	1,232	1,275	1,741	1,734	1,845
Substantive examinations completed	1,533	1,595	1,741	1,634	1,640	1,650
Decisions to grant patents, total	1,086	1,231	1,378	1,294	1,329	1,245
<i>including</i>						
to national applicants	906	1,106	1,245	1,165	1,222	1,131
to foreign applicants	180	125	133	129	107	114
Decisions to refuse patents, total	218	228	301	282	310	269
<i>including</i>						
to national applicants	182	189	270	220	249	212
to foreign applicants	36	39	31	62	61	57

5.2. INVENTIONS: REGISTERING PATENTS OF THE REPUBLIC OF BELARUS

Indices	2005	2006	2007	2008	2009	2010
Patents registered, total	955	1,130	1,379	1,252	1,297	1,222
<i>of which</i>						
to national applicants	811	1,015	1,238	1,139	1,188	1,126
to foreign applicants	144	115	141	113	109	96

5.3. UTILITY MODELS: FILING THE APPLICATIONS, BY YEARS

Indices	2005	2006	2007	2008	2009	2010
Applications filed, total	853	901	940	967	1,119	1,090
<i>of which</i>						
by national applicants	827	863	888	910	1,060	1,031
by foreign applicants	26	38	52	57	59	59

5.4. UTILITY MODELS: REGISTERED THE PATENTS, BY YEARS

Indices	2005	2006	2007	2008	2009	2010
Patents registered, total	731	830	859	860	965	1,012
<i>of which</i>						
to national applicants	708	799	815	812	927	966
to foreign applicants	23	31	44	48	38	46

5.5. INDUSTRIAL DESIGNS: FILING APPLICATIONS, BY YEARS

Indices	2005	2006	2007	2008	2009	2010
Applications filed, total	197	241	247	232	249	240
<i>of which</i>						
by national applicants	109	98	98	119	176	132
by foreign applicants	88	143	149	113	73	108

5.6. INDUSTRIAL DESIGNS: REGISTERED THE PATENTS, BY YEARS

Indices	2005	2006	2007	2008	2009	2010
Industrial designs registered, total	204	239	193	197	230	202
<i>of which</i>						
to national applicants	122	102	73	105	98	144
to foreign applicants	82	137	120	92	132	58

**5.7. TOPOGRAPHIES OF INTEGRATED CIRCUITS: FILING APPLICATIONS
AND REGISTRATIONS IN THE REPUBLIC OF BELARUS**

Indices	2005	2006	2007	2008	2009	2010
Applications for registration of the topography	2	2	6	2	8	20
Number of registered topographies of integrated circuits	1	3	5	1	8	16

**5.8. TRADEMARKS AND SERVICE MARKS: FILING APPLICATIONS FOR REGISTRATION
IN THE REPUBLIC OF BELARUS, BY YEARS**

Indices	2005	2006	2007	2008	2009	2010
Total number of applications for trademark registration filed	8,880	10,208	11,197	11,396	10,268	10,565
under the national procedure	3,556	4,396	5,075	4,721	4,773	5,346
<i>of which</i>						
by national applicants	2,510	2,797	3,666	3,487	3,703	3,921
by foreign applicants	1,046	1,599	1,409	1,234	1,070	1,425
under the Madrid Agreement	5,324	5,812	6,122	6,675	5,495	5,219
Total number of applications filed by national applicants under the Madrid Agreement	25	21	67	67	66	108

5.9. TRADEMARKS AND SERVICE MARKS: REGISTRATION OF MARKS, BY YEARS

Indices	2005	2006	2007	2008	2009	2010
Total number of trademarks registered	6,087	7,416	7,854	8,528	9,197	8,699
under the national procedure	1,800	2,130	2,110	2,460	2,550	3,300
<i>of which</i>						
to national applicants	1,101	1,348	1,404	1,551	1,520	2,192
to foreign applicants	699	782	706	909	1,030	1,108
under the Madrid Agreement	4,287	5,286	5,744	6,068	6,647	5,399
Total number of trademark registrations ceased to be valid	2,788	1,612	3,036	2,915	3,123	3,338
<i>of which</i>						
under the national procedure	2,197	749	879	760	756	749
under the Madrid Agreement	591	863	2,157	2,155	2,367	2,589
Total number of valid registrations by the end of the year	69,309	75,113	79,931	85,534	90,399	95,551
under the national procedure	19,125	20,506	21,737	23,427	25,192	27,810
under the Madrid Agreement	50,184	54,607	58,194	62,107	65,207	67,741

5.10. APPELLATIONS OF ORIGIN: FILING APPLICATIONS AND REGISTRATIONS IN THE REPUBLIC OF BELARUS

Indices	2005	2006	2007	2008	2009	2010
Applications for registration and granting of the right to use filed	1	1	–	–	–	–
Appellations of origin registered	–	1	–	–	–	–

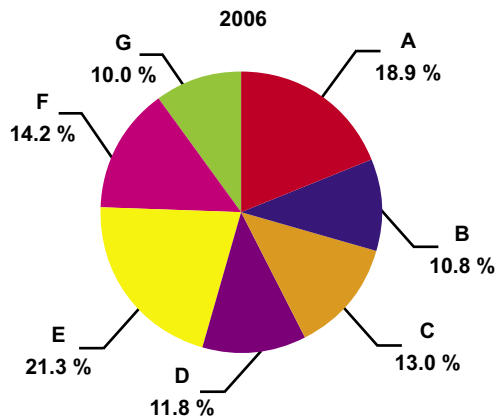
6

INNOVATIONS

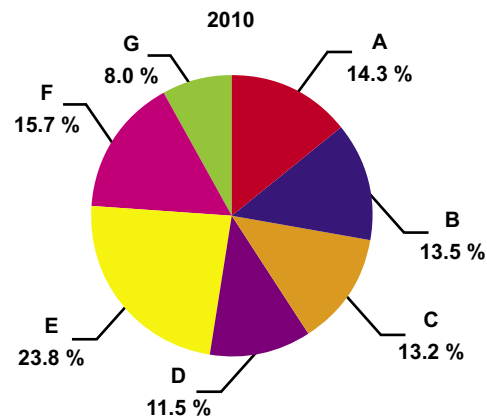
6.1. NUMBER OF INNOVATION ACTIVE ENTERPRIZES: 2010

	In total enterprises
Total	349
<i>of which</i>	
Number of innovation active enterprises, the main economic activity is the production of industrial products, units	324
Number of innovation active enterprises, the main economic activity is the communication and activities related to computer technology, units	25

6.2. DISTRIBUTION OF INNOVATION ACTIVE ENTERPRIZES, BY REGION AND MINSK CITY



- A Brest region
- B Vitebsk region
- C Gomel region
- D Grodno region
- E Minsk City
- F Minsk region
- G Mogilev region



6.3. STRUCTURE OF INNOVATION ACTIVITY OF INDUSTRIAL ORGANIZATIONS, BY TYPES OF TECHNOLOGICAL INNOVATIONS AND BY KINDS OF ECONOMIC ACTIVITY: 2010

	Innovation active organizations expending on technological innovations	Of which expending on		
		product innovations	process innovations	product and process innovations
Total	100	52.2	25.3	22.5
<i>of which</i>				
mining	100	40.0	20.0	40.0
mining and extraction of fuel and energy minerals	100	50.0	50.0	–
mining and extraction of minerals, other than fuel and energy minerals	100	33.3	–	66.7
manufacturing	100	53.3	24.0	22.7
manufacture of food, including beverages and tobacco	100	47.4	39.5	13.1
manufacture of textiles and apparel	100	33.4	37.0	29.6
manufacture of leather, articles of leather and footwear	100	66.6	16.7	16.7
manufacture of wood and products of wood	100	60.0	40.0	–
manufacture of pulp and paper; printing activities	100	50.0	50.0	–
manufacture of coke, petroleum products and nuclear materials	100	–	100	–
manufacture of chemicals and chemicals products	100	54.2	8.3	37.5
manufacture of rubber and plastic products	100	62.5	12.5	25.0
manufacture of other non-metallic mineral products	100	42.1	42.1	15.8
manufacture of basic metals and fabricated metal products	100	54.5	27.3	18.2

manufacture of machinery and equipment	100	68.0	15.3	16.7
manufacture of electrical, electronic and optical equipment	100	59.6	8.8	31.6
manufacture of transport vehicles and equipment	100	34.8	30.4	34.8
other manufacture	100	37.5	50.0	12.5
production and distribution of electricity, gas and water	100	–	100	–

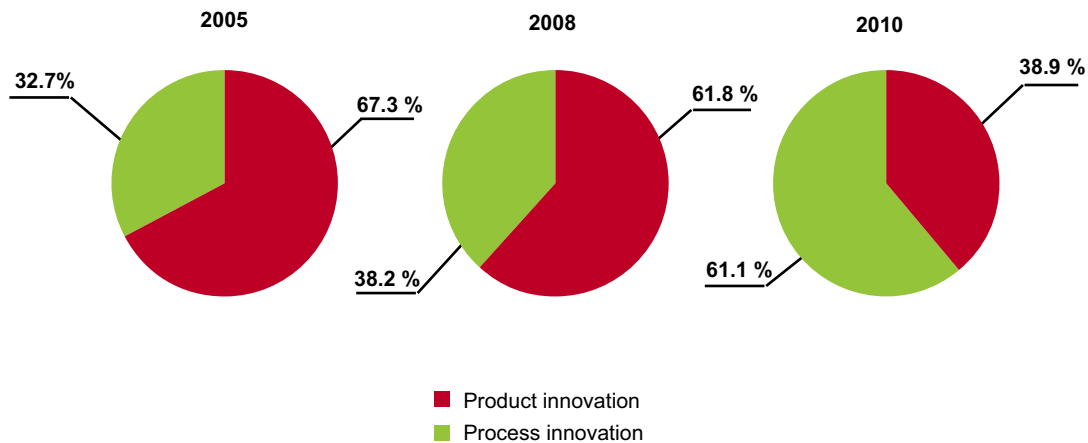
6.4. DISTRIBUTION OF INNOVATIVE ACTIVE INDUSTRIAL ORGANIZATIONS, BY TYPE OF INNOVATIVE ACTIVITY

	2005	2006	2007	2008	2009	2010
Total	318	378	380	371	234	324
<i>of which carrying out</i>						
research and development of new products, services and methods of their production/transfer, new production processes	153	164	168	157	149	191
purchase of machinery and equipment associated with technological innovation	227	275	278	266	145	203
acquisition of new technology, of which	35	30	23	17	14	20
rights to inventions, utility models and industrial designs, rights to utilization of inventions, utility models and industrial designs	12	9	8	5	4	4
purchase of computer software	53	52	51	52	23	38
industrial engineering; other preproduction activities to introduce new products, services or methods of their production/transfer	114	115	127	137	101	136
innovation-related education and training of personnel	50	56	51	48	39	47
marketing research	60	65	54	54	38	39
other expenditures on technological innovations	46	62	46	45	34	16

**6.5. DISTRIBUTION OF INNOVATIVE ACTIVE SERVICE SECTOR ORGANIZATIONS,
BY TYPE OF INNOVATIVE ACTIVITY**

	2005	2006	2007	2008	2009	2010
Total	...	0	29	25	16	25
<i>of which carrying out</i>						
research and development of new products, services and methods of their production/transfer, new production processes	...	4	6	4	4	14
purchase of machinery and equipment associated with technological innovation	...	23	20	18	13	14
acquisition of new technology, of which	...	2	2	3	1	3
rights to inventions, utility models and industrial designs, rights to utilization of inventions, utility models and industrial designs	...	2	1	3	1	1
purchase of computer software	...	9	9	5	3	3
industrial engineering; other preproduction activities to introduce new products, services or methods of their production/transfer	...	9	8	8	7	7
innovation-related education and training of personnel	...	5	2	5	2	6
marketing research	...	3	–	–	1	3
other expenditures on technological innovations	...	4	4	5	2	1

6.6. STRUCTURE OF EXPENDITURE ON TECHNOLOGICAL INNOVATIONS, BY TYPE OF INNOVATION



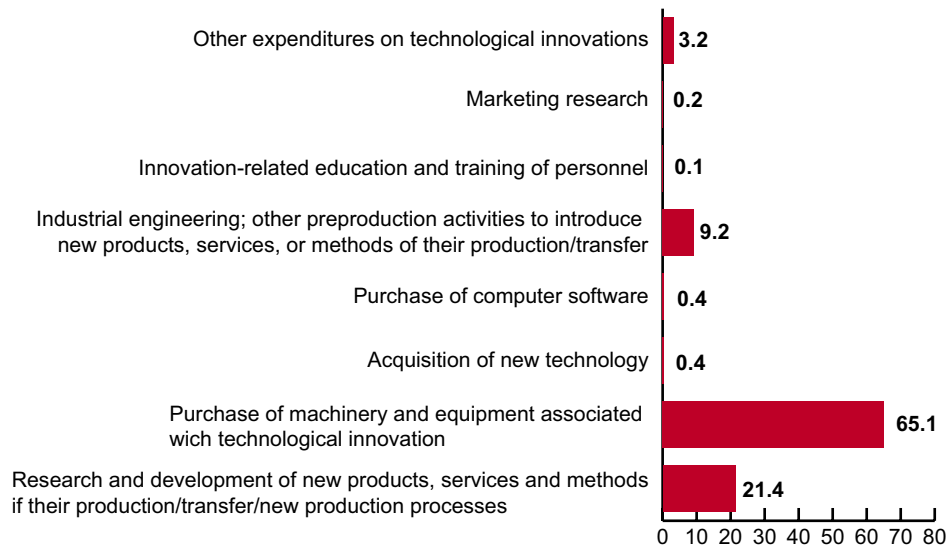
**6.7. SPENDING ON TECHNOLOGICAL INNOVATIONS OF ENTERPRIZES WHICH PRINCIPAL
VIEW OF ECONOMIC ACTIVITIES IS MANUFACTURE OF AN INDUSTRIAL OUTPUT: 2010**

(million rubles)

	Spending on technological innovations
Total	2,793,302
<i>including</i>	
research and development of new products, services and methods of their production/transfer, new production processes	597,531
purchase of machinery and equipment associated with technological innovation	1,818,069
acquisition of new technology, of which	11,992
rights to inventions, utility models and industrial designs, rights to utilization of inventions, utility models and industrial designs	2,217
purchase of computer software	11,136
industrial engineering; other preproduction activities to introduce new products, services or methods of their production/transfer	258,660
innovation-related education and training of personnel	2,344
marketing research	4,776
other expenditures on technological innovations	88,794

6.8. SPENDING ON TECHNOLOGICAL INNOVATION OF ENTERPRIZES WHICH PRINCIPAL VIEW OF ECONOMIC ACTIVITIES IS MANUFACTURE OF AN INDUSTRIAL OUTPUT: 2010

(percent of total)



6.9. VOLUME OF INNOVATIVE PRODUCT SHIPMENTS OF ORGANIZATIONS, BY KIND OF ECONOMIC ACTIVITY: 2010

	Innovative product shipments, million rubles	As percentage of total shipments
Total	18,609,492	14.5
<i>of which</i>		
mining	27,016	1.9
mining and extraction of fuel and energy minerals	7,046	0.9
mining and extraction of minerals, other than fuel and energy minerals	19,970	3.2
manufacturing	18,582,476	17.1
manufacture of food, including beverages and tobacco	123,631	0.5
manufacture of textiles and apparel	342,791	8.3
manufacture of leather, articles of leather and footwear	10,588	0.9
manufacture of pulp and paper; printing activities	59,635	4.3
manufacture of coke, petroleum products and nuclear materials	21,038	1.1
manufacture of chemicals and chemicals products	4,862,314	35.2
manufacture of rubber and plastic products	1,785,985	14.2
manufacture of other non-metallic mineral products	160,306	4.3
manufacture of basic metals and fabricated metal products	414,234	6.5

manufacture of machinery and equipment	5,217,012	38.0
manufacture of electrical, electronic and optical equipment	790,377	18.5
manufacture of transport vehicles and equipment	3,229,570	38.1
other industries	42,662	1.5
production and distribution of electricity, gas and water	–	–

7

INTERNATIONAL COMPARISONS

7.1. SCIENTIFIC STAFF AND VALUE OF RESEARCH AND DEVELOPMENT IN THE COMMONWEALTH OF INDEPENDENT STATES*

	Number of specialists engaged in R&D, as of the end of the year, ths persons	Of which have scientific degree, persons		Number of scientific-pedagogical workers engaged in R&D at the chairs of higher education establishments, ths persons	Value of carried out research and development, as percentage of gross domestic product
		doctor's degree	candidate's degree		
Azerbaijan					
2000	11.6	676	3,328	10.6	0.3
2010	12.8	838	3,533	10.4	0.2
Armenia					
2000	5.0	494	1,701	0.03	0.3
2010	5.5	479	1,700	1.0	0.2
Belarus					
2000	22.3	819	3,847	...	0.8
2010	22.1	748	3,193	...	0.7
Kazakhstan					
2000	10.2	948	2,797	4.8	0.2
2010	11.9	1,341	3,012	4.4	0.2
Kyrgyzstan					
2000	2.3	198	560	1.3	0.1
2010	2.2	280	670	2.8	0.2
Moldova					
2000	4.1	265	1,067	2.3	0.6
2010	3.6	378	1,288	...	0.4

Russia					
2000	501.1	21,949	83,962	...	1.2
2009	429	25,300	76,200	...	1.7
Tajikistan					
2000	2.5	190	926	2.2	0.1
2010	2.1	260	673	3.2	0.1
Turkmenistan					
1995	...	181	731	...	0.3
Uzbekistan					
1999	25.2	0.4
2004	33.6**	2,269	8,578
Ukraine					
2000	120.8	4,103	17,916	53.9	1.2
2010	89.6	4,478	16,944	69.4	0.9

* Source: Interstate Statistical Committee of the Commonwealth of independent states.

** Including scientific-pedagogical workers of higher education establishments.

7.2. TOTAL GBAORD AS A PERCENT OF TOTAL GENERAL GOVERNMENT EXPENDITURE

	2005	2006	2007	2008	2009
European Union (27)	1.51	1.47	1.49	1.47	1.48
Euro area	1.55	1.51	1.53	1.53	1.53
Belgium	1.13	1.26	1.25	1.35	1.25
Bulgaria	0.74	0.83	0.65	0.81	0.83
Czech Republic	1.22	1.3	1.36	1.29	1.38
Denmark	1.35	1.4	1.56	1.64	1.69
Germany	1.64	1.67	1.77	1.81	1.83
Estonia	1.2	1.5	1.42	1.62	1.54
Ireland	1.35	1.29	1.34	1.23	1.19
Greece	0.74	0.72	0.64
Spain	1.42	1.78	1.94	1.87	1.8
France	1.81	1.53	1.42	1.39	1.4
Italy	1.39	1.26	1.34	1.3	1.24
Cyprus	0.74	0.75	1	0.98	1.08
Latvia	0.55	0.7	0.83	0.75	0.47
Lithuania	1.06	0.97	0.96	0.7	0.6
Luxembourg	0.76	0.85	1.02	1.21	1.22
Hungary	0.83	0.7	0.78	0.87	0.91
Malta	0.43	0.37	0.35	0.35	0.39

Netherlands	1.54	1.56	1.52	1.51	1.73
Austria	1.33	1.34	1.34	1.44	1.5
Poland	0.68	0.72	0.75	0.7	0.76
Portugal	1.54	1.56	1.72	1.98	1.92
Romania	0.65	0.93	1.02	1.04	0.76
Slovenia	1.28	1.25	1.23	1.15	1.6
Slovakia	0.74	0.74	0.62	0.79	0.73
Finland	2.04	2.09	2.05	1.99	2.01
Sweden	1.59	1.6	1.55	1.55	1.66
United Kingdom	1.52	1.5	1.49	1.37	1.37
<i>Russia</i>	1.04	1.12	1.13	1.08	...
<i>United States</i>	2.88	2.84	2.76	2.59	2.79
<i>Japan</i>	1.85	1.95	1.88	1.9	...
Republic of Belarus	0.82	0.9	0.89	0.79	0.86

7.3 GROSS DOMESTIC EXPENDITURE ON RESEARCH AND DEVELOPMENT IN BELARUS AND OTHER COUNTRIES

(percent of gross domestic product)

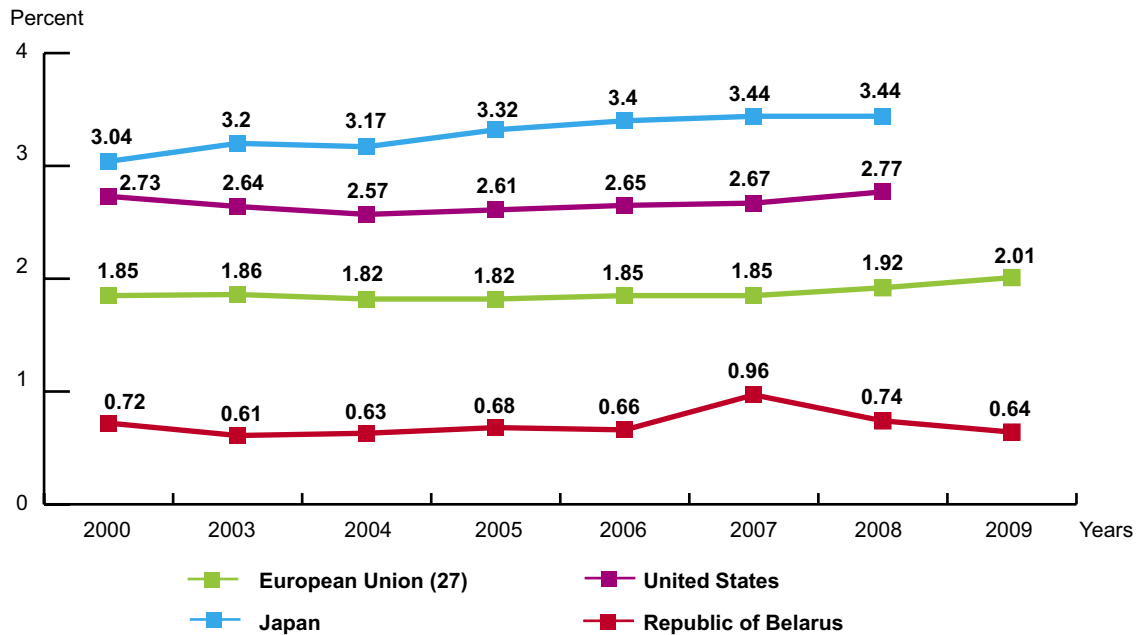
	2005	2006	2007	2008	2009
European Union (27)	1.82	1.85	1.85	1.92	2.01
Euro area	1.83	1.86	1.87	1.96	2.05
Belgium	1.84	1.88	1.87	1.96	1.96
Bulgaria	0.49	0.48	0.48	0.47	0.53
Czech Republic	1.41	1.55	1.54	1.47	1.53
Denmark	2.46	2.48	2.55	2.87	3.02
Germany	2.48	2.54	2.54	2.68	2.82
Estonia	0.94	1.15	1.14	1.29	1.42
Ireland	1.25	1.30	1.31	1.45	1.77
Greece	0.58	0.57	0.57	–	–
Spain	1.12	1.20	1.27	1.35	1.38
France	2.10	2.10	2.08	2.11	2.21
Italy	1.09	1.13	...	1.23	1.27
Cyprus	0.40	0.43	0.45	0.42	0.46
Latvia	0.56	0.70	0.59	0.61	0.46
Lithuania	0.75	0.79	0.82	0.8	0.84
Luxembourg	1.56	1.66	1.62	1.51	1.68
Hungary	0.94	1.00	0.97	1.0	1.15

Malta	0.57	0.61	0.59	0.57	0.54
Netherlands	1.72	1.71	1.70	1.76	1.84
Austria	2.44	2.46	2.56	2.67	2.75
Poland	0.57	0.56	0.57	0.6	0.68
Portugal	0.81	1.00	1.18	1.5	1.66
Romania	0.41	0.45	0.53	0.58	0.47
Slovenia	1.44	1.56	1.45	1.65	1.86
Slovakia	0.51	0.49	0.46	0.47	0.48
Finland	3.48	3.45	3.47	3.72	3.96
Sweden	3.60	3.74	3.60	3.7	3.62
United Kingdom	1.73	1.76	1.79	1.77	1.87
<i>Croatia</i>	<i>0.87</i>	<i>0.76</i>	<i>0.81</i>	<i>0.9</i>	<i>0.84</i>
<i>Turkey</i>	<i>0.59</i>	<i>0.58</i>	<i>0.72</i>	<i>0.72</i>	<i>0.85</i>
<i>Iceland</i>	<i>2.77</i>	<i>2.99</i>	<i>2.75</i>	<i>2.65</i>	<i>3.1</i>
<i>Norway</i>	<i>1.52</i>	<i>1.52</i>	<i>1.64</i>	<i>1.64</i>	<i>1.8</i>
<i>Switzerland</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>3.0</i>	<i>...</i>
<i>Japan</i>	<i>3.32</i>	<i>3.40</i>	<i>3.44</i>	<i>3.44</i>	<i>–</i>
<i>United States</i>	<i>2.61</i>	<i>2.65</i>	<i>2.67</i>	<i>2.77</i>	<i>–</i>
Republic of Belarus	0.68	0.66	0.96*	0.74	0.64

* Growth of expenditure resulted from the capitalization of research and development results.

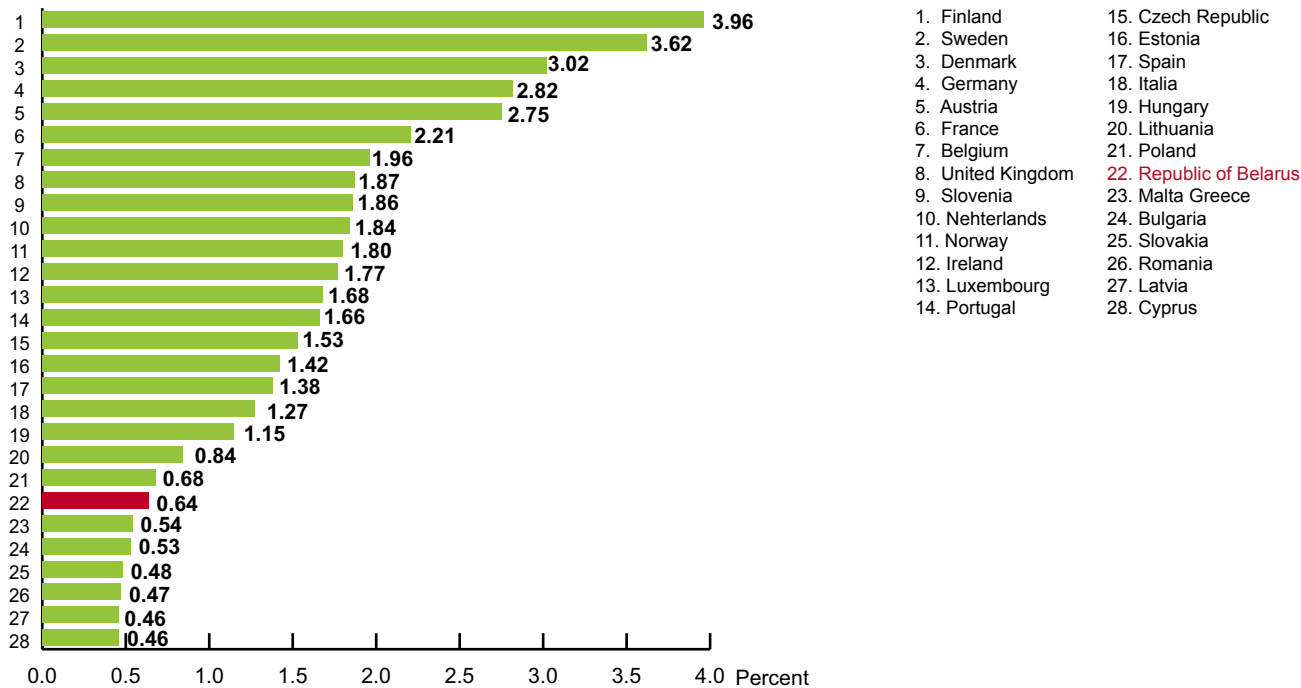
7.4. DYNAMICS GROSS DOMESTIC EXPENDITURE ON RESEARCH AND DEVELOPMENT IN BELARUS AND OTHER COUNTRIES

(percent of gross domestic product)



7.5. GROSS DOMESTIC EXPENDITURE ON RESEARCH AND DEVELOPMENT IN BELARUS AND EUROPEAN COUNTRIES: 2009

(percent of gross domestic product)



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