National Council for Higher Education Funding	National University Research Council

Executive Agency for Higher Education and Research Funding

SECTOR AND PROJECT MONITORING INDICATORS

Preliminary Report 2

May 2002

The sector and project monitoring indicators analysis –
Present status

The main steps in obtaining the sector and project monitoring indicators were:

1. Identifying the most appropriate indicators for measuring the impact of the Reform Program for Higher Education RO-4096; the list of the indicators was finalized in June 2001
2. Identifying the necessary data for answering to the indicators - September 2001
3. Identifying the institutions that can deliver the necessary data - September 2001:
    - Universities
    - MER
    - CNEAA
    - HNEFC
    - NURC
4. Establishing the database structure and the application forms used in data collection -October 2001
5. Sending the application form to the universities (the major source of data):
    - directly to the universities – by fax and e-mail
    - at the National Rectors' Conference – print and CD-ROM accompanied by a letter from MER and the Councils underlining the necessity and importance of delivering the requested data on time;
    - at the workshop organized by NHEFC, NURC, EA with the representative of the universities – print and CD-ROM;

    end of October-beginning of November 2001

    Problems occurred at this stage: need of some more in detail specification in order to help universities to fill in the application form.
6. Receiving the data from the universities – printed and in electronic format;
    Problems occurred at this stage:
    - Delays in data collection: only 8 universities delivered the data on time; at the moment there are 2 universities that have not yet sent the requested data;
    - Changes in data format: some universities sent the data in a database that had a different structure than the requested one
7. Consolidating the databases and verifying the data consistency;
    Problems occurred at this stage:

- High error rate in filling the databases – 10-15%;
- The differences between the printed and electronic data for some universities;
- No consistency in some data (Ex. the total number of students listed by fields of study is different than the total number of students listed by form of study).

As a consequence, the entire database was in detail examined aiming to assure data consistency.

8. Analyzing the sector and project monitoring indicators.

The process is going on and the first results are presented in the following paragraph.

- Preliminary data analysis
- Establishing the working hypothesis
- Identifying the most appropriate criteria for classifying the universities
  - by major fields of study
  - by size
  - by geographical location
  - by tradition
- Identifying the most appropriate methods of analysis for each indicator:
  - Global analysis
  - Analysis by components
  - Comparative analysis
  - Analysis at the level of the university;
  - Correlation between the values of funding of the universities through RO-4096 and the evolution of the indicator;
- Establishing the most appropriate graphical methods for illustrate the analyze conclusions;

In the next pages is presented the list of the indicators. Indicators II.1, II.3 and IV.1 are presented in an extended graphical form. For other indicators is presented only the global conclusion.

I. **Macro** (*the data form universities are currently compared and consolidated with the data from other sources*)**:**
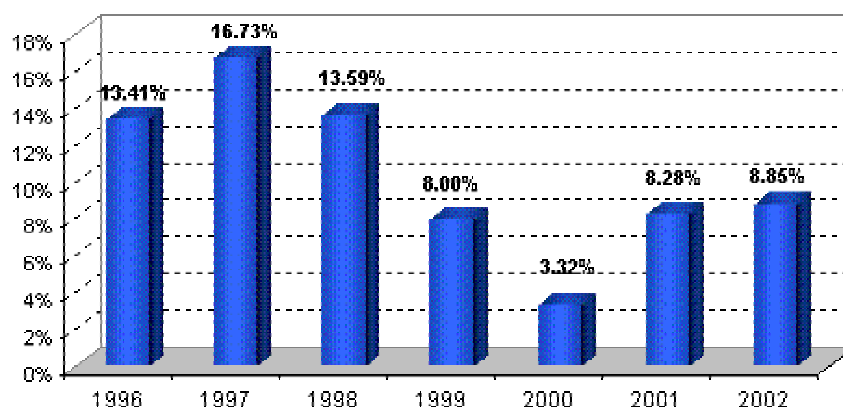
I.1. Increase in private share of total higher education expenditure
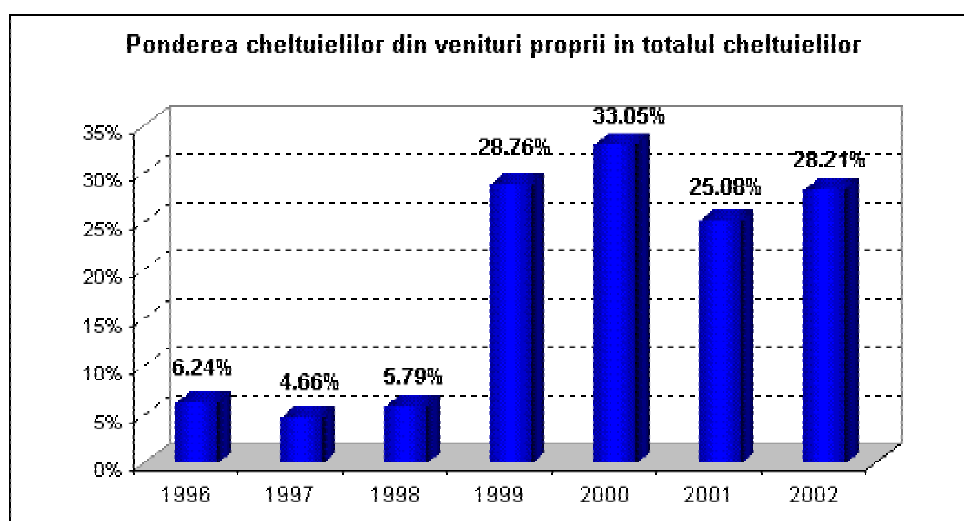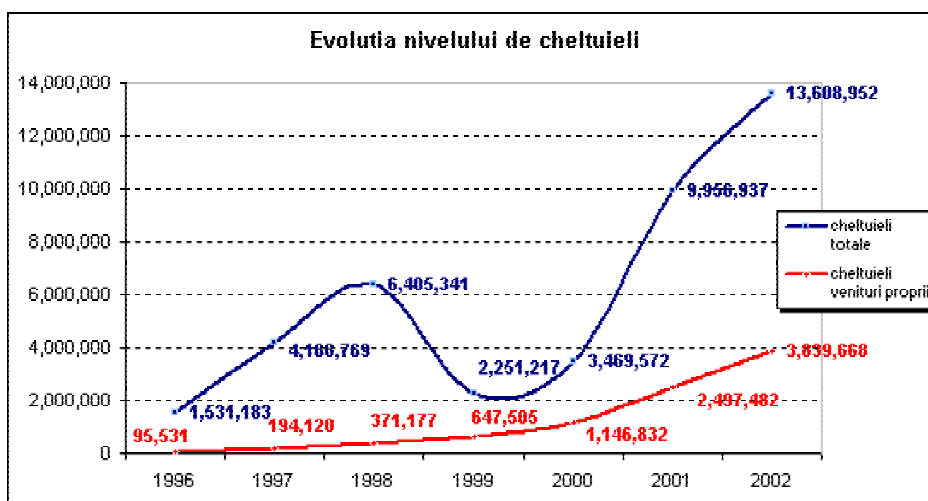
I.2. Increase in proportion of state budget allocation used for capital investments
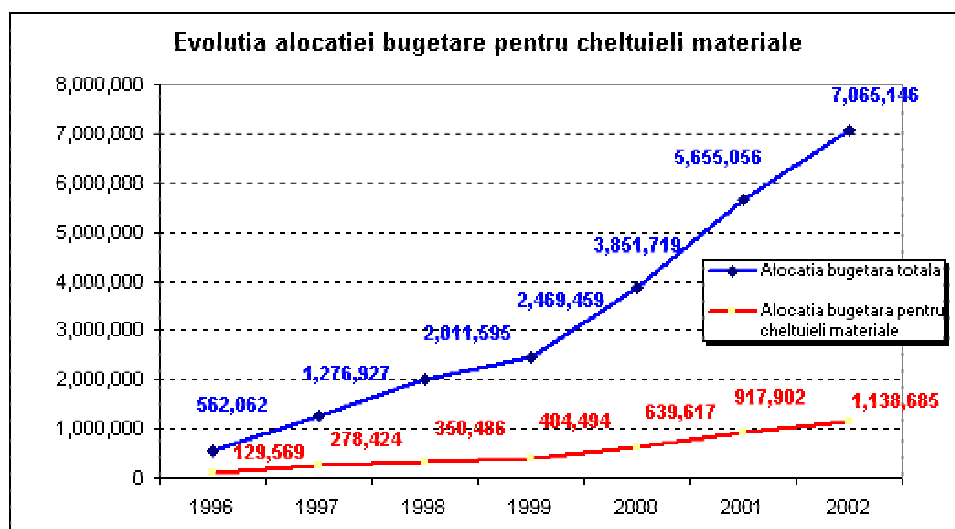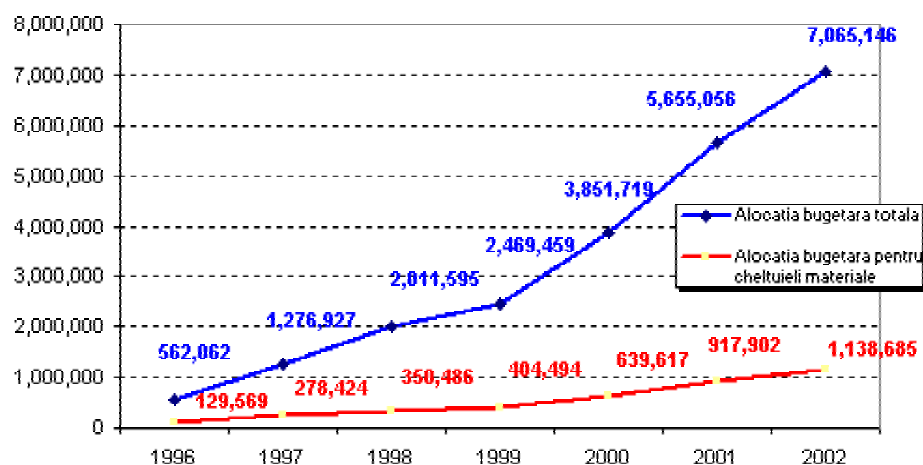
Ponderea alocatiilor pentru cheltuieli de capital din totalul alocatiei bugetare

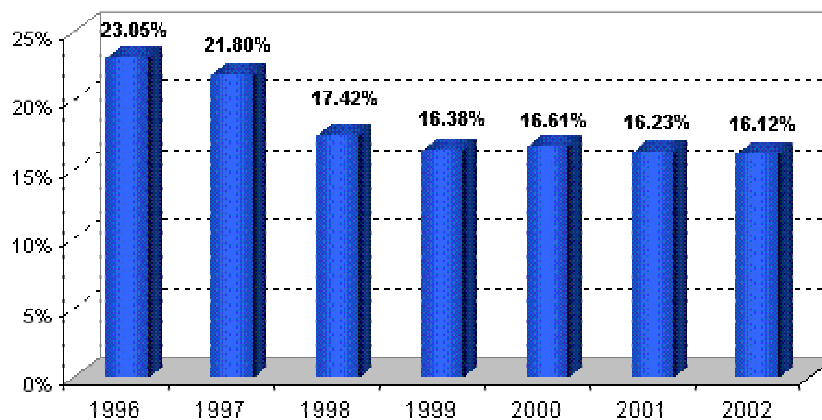**I.3.** **Increase in proportion of state budget allocation used for materials and supplies**
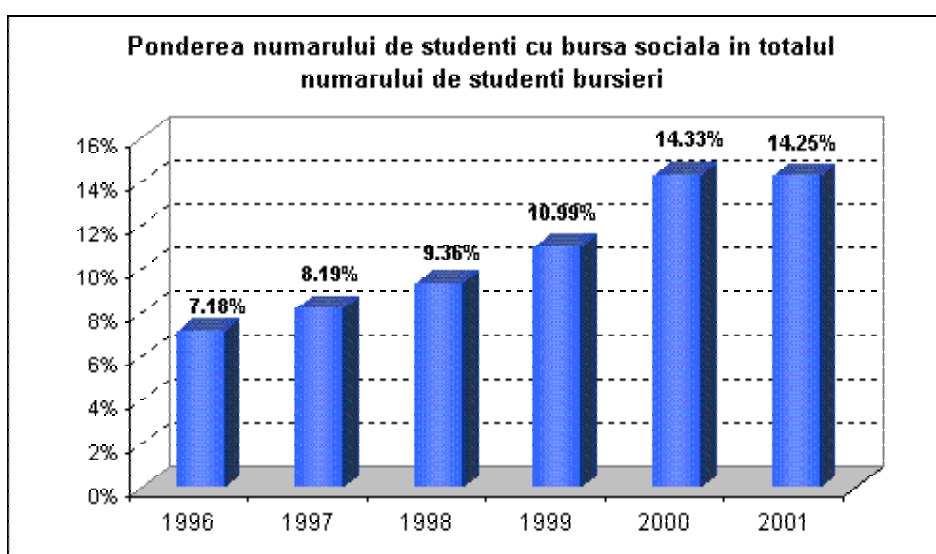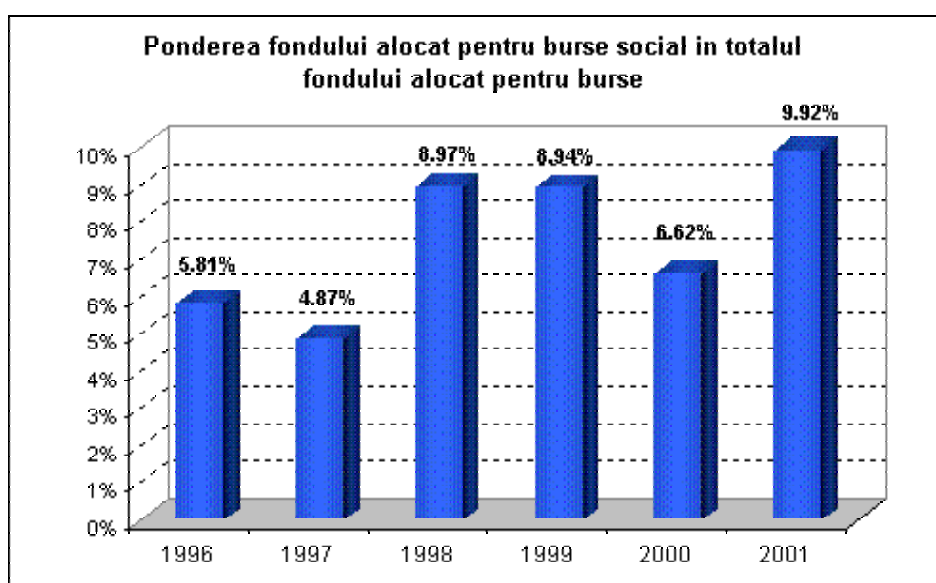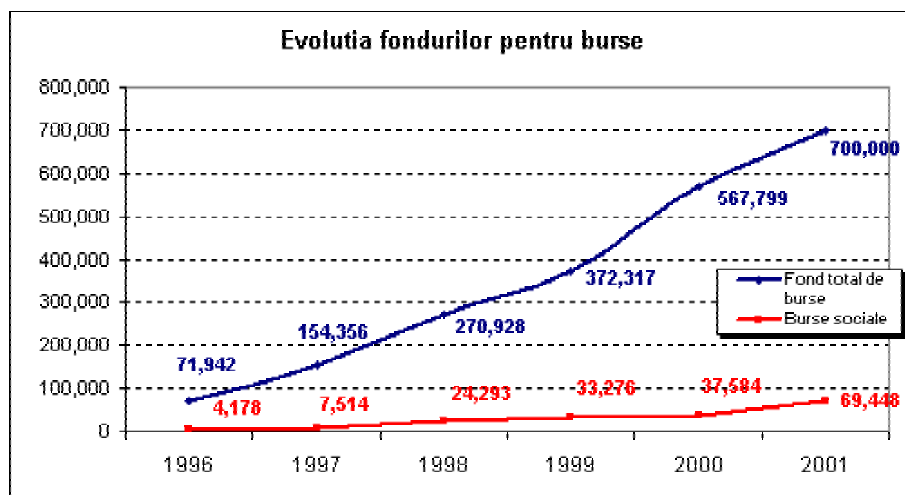

Evolutia alocatiei bugetare pentru cheltuieli materiale

Ponderea alocatiei bugetare pentru cheltuieli materiale din totalul alocatiei bugetare

I.4. Increase in proportion of student support directed to needy but talented students

Evolutia fondurilor pentru burse

800,000
700,000 700,000
600,000 ....
500,000 567,799
400,000 ....
300,000 372,317
200,000 270,928
100,000 154,356
71,942
4,178 7,514 24,293 33,276 37,584 69,448

1996 1997 1998 1999 2000 2001

— Fond total de burse
— Burse sociale

Ponderea fondului alocat pentru burse social in totalul fondului alocat pentru burse

9.92%
10% .... 8.97% 8.94% ....
9%
8%
7% 5.81%
6% 4.87% 6.62%
5%
4%
3%
2%
1%
0%
1996 1997 1998 1999 2000 2001

Ponderea numarului de studenti cu bursa sociala in totalul numarului de studenti bursieri

16%
14% 14.33% 14.25%
12% 10.99%
10% 9.36%
8% 8.19%
7.18%
6%
4%
2%
0%
1996 1997 1998 1999 2000 2001

II.   *Institution/ enrolment:*

II.1.   Increase in student to staff ratio in small HE institutions (with 5,000 or fewer students)

The analyze of the evolution of the student to staff ratio in small HE institutions point out the increase of this ratio (see G-II.1.a), especially for the last years.

In the graphic G-II.1.b) is observed that in the small universities (with less than 5000 students) the increase of this ratio has the same trend as the global ratio for the all universities. The rate of ratio increase for the small universities is higher than the increase for the global ratio. The graphic G-II.1.c) shows the difference between the evolution of the students to staff ratio for the small universities (less 5000 students) and the very small universities (less 1000 students) - it can be seen that the evolution of the ratio for the very small universities is almost constant (an increase of 1.06 in 2001 relative to 1996 for very small universities and 4.52 for all small universities). The same aspect is presented in the graphic G-II.1.g) where the comparison is between the small universities and vocational universities.

The increase of student to staff ratio can be explained through the comparative evolution of the students number and academic staff number. This comparative analyzes (related to 1996) for the evolution of the students number and academic staff number is show in G-II.1.d. It can be observed that the increase of students' number is bigger than the increase of the academic staff number (with 106% for the students number and 30% for the academic staff number, in 2001), especially for the last years. The small ratio fluctuation (increasing in 1997 and decreasing in 1998) that is observed in the graphic G-II.1.a) results from the similar evolution (small changes) of the students' number and academic staff number.

The graphics G-II.1.e), G-II.1.f) point out the structure of the students to staff ratio (the proportion between full-time and part-time students) and the structure of the academic staff per 100 students (the proportion between professors and assistants).

G-II.1.a Student number to staff ratio in small Higher Education institutions
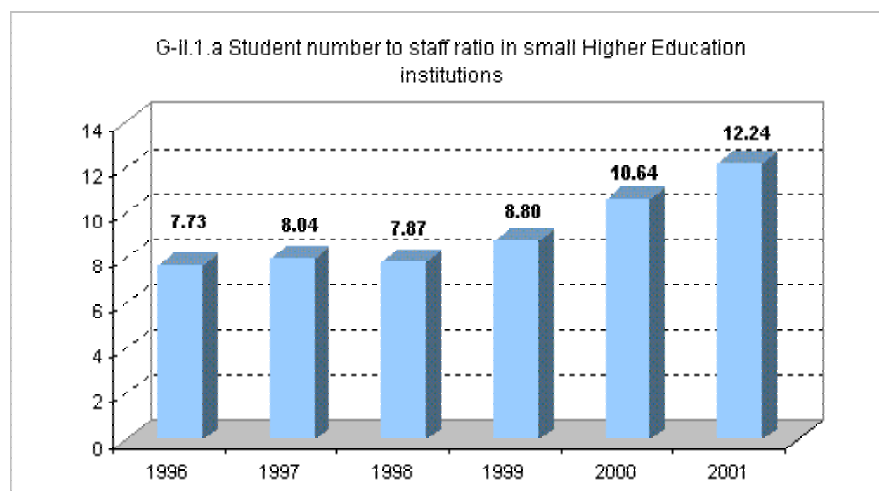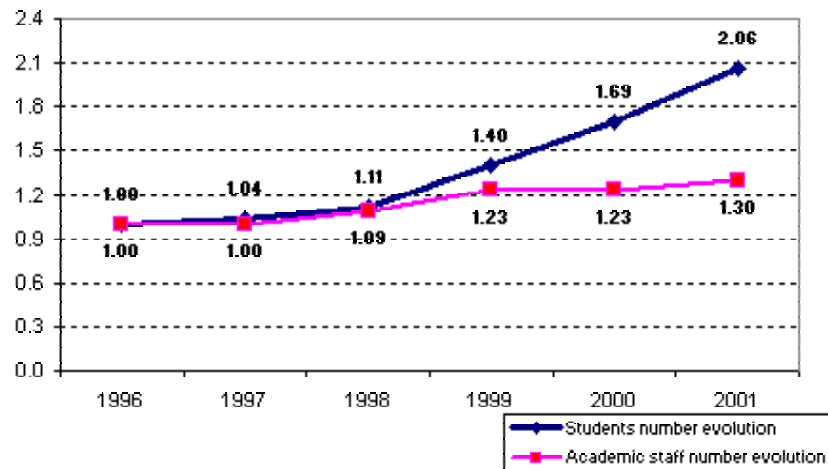
G-II.1.b Comparative evolution of the student number to staff ratio (global and small Higher Education institutions)
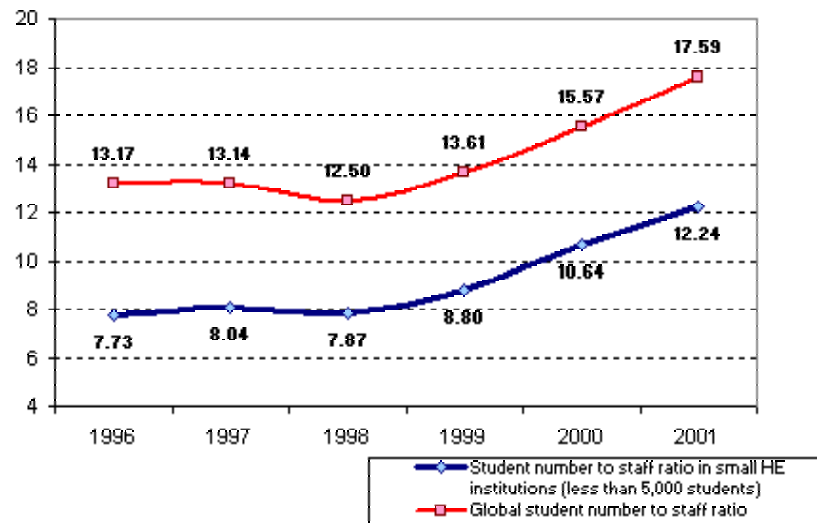
G-II.1.c Comparative evolution of the students number to staff ratio (very small HE institutions and the mean of the small HE institutions)
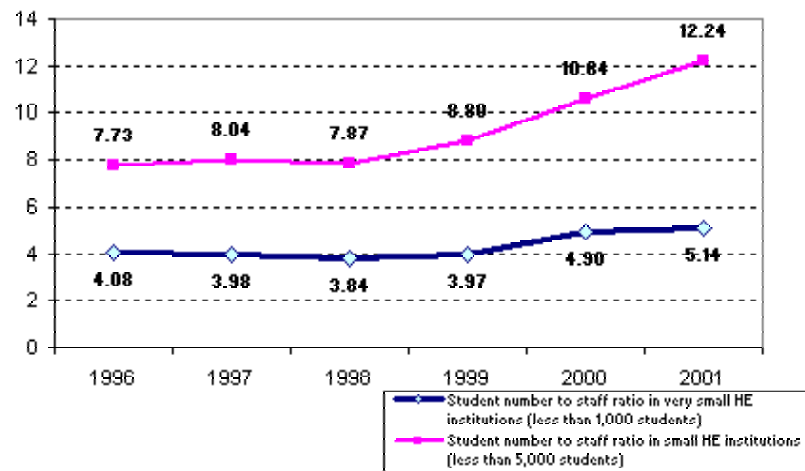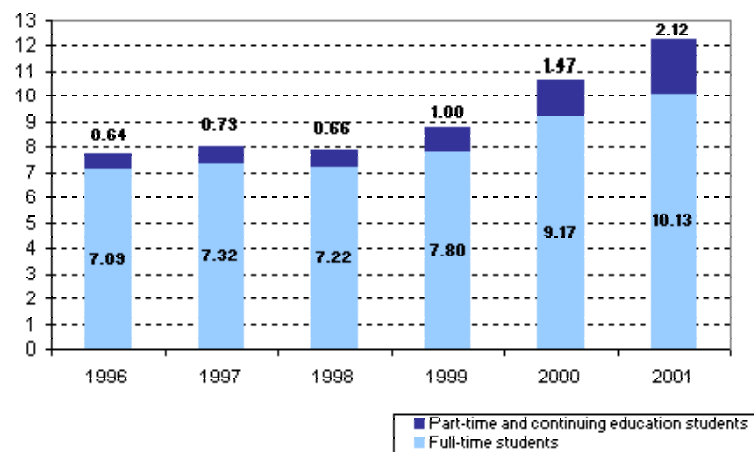

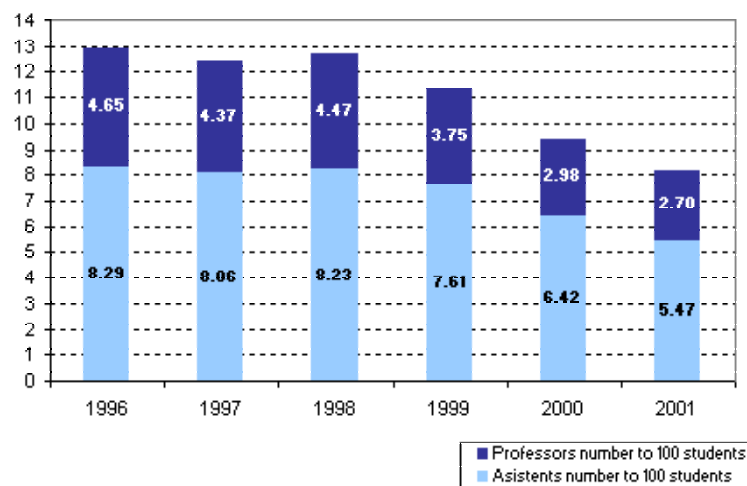G-II.1.d Comparative analysis for small Higher Education (less than 5,000 students)

G-II.1.e The structure of the students number to staff ratio Evolution for small HE institutions (less than 5,000 students)

G-II.1.f The structure of the academic staff to students ratio (per 100 students) Evolution for small HE institutions (less than 5,000 students)

G-II.1.g Comparative analysis of the students number to staff ratio evolution
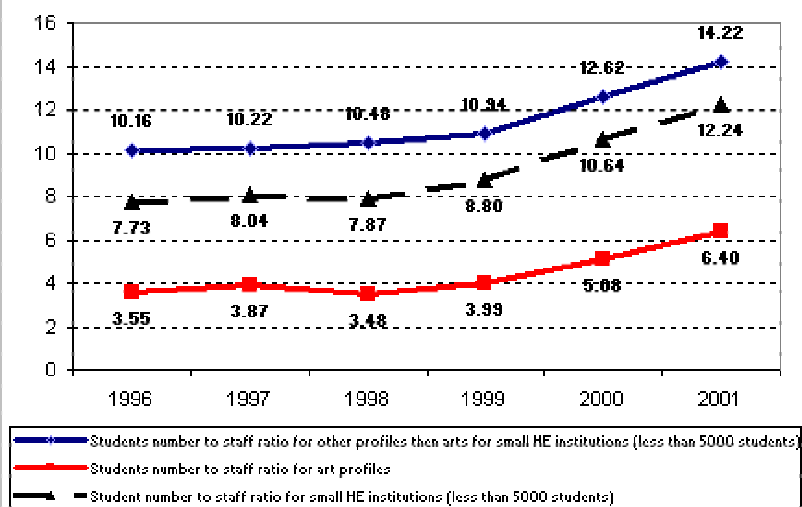
II.2. **Increase in private share of total higher education enrolment** (the data from the CNEEA are in processing).

II.3. **Increase in number of full time equivalent students in part-time and continuing education programs**

The evolution of part-time and continuing education students' number is showed in the graphic G-II.3.a). Is underlined the increase of this number, especially in the last tree years. This evolution is a consequence of the following facts: a significant increase of the IDD and continuing education in the last years (see graphic G-2.3.e) and an accentuated decrease of the evening courses.

In the graphics G-II.3.b, G-II.3.c and G-II.3.d is presented the structure of the part-time and continuing education students financed from the budget and with fees. In this way is underlined the increase of the part-time students and continuing education with fees, especially after 1999, when the continuing education was not financed from the Budget and the IDD teaching form was assumed by the universities.
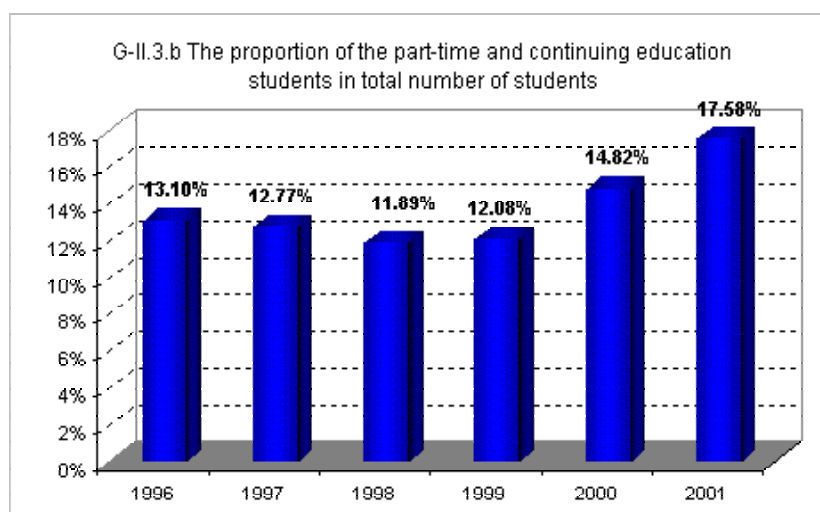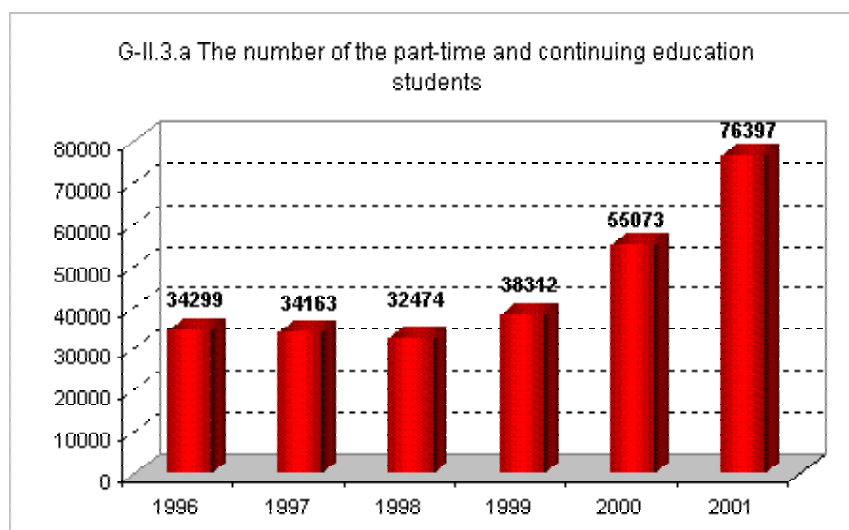
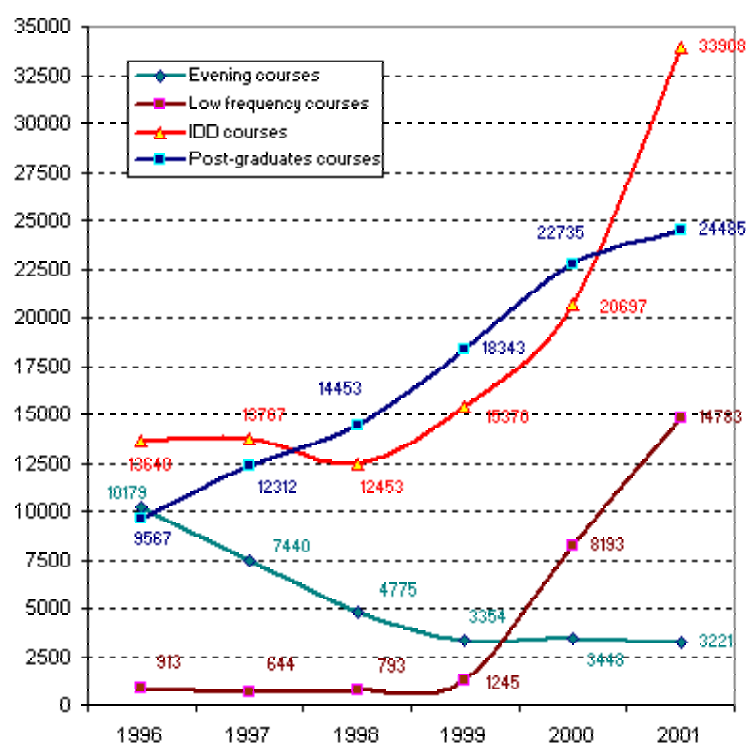G-II.3.c The proportion of the part-time and continuing education students with fees and budgetarians

- Students with fees
- Budgetarian students

Year	Students with fees	Budgetarian students
1996	1.68%	11.43%
1997	1.75%	11.03%
1998	2.82%	9.07%
1999	5.46%	6.62%
2000	9.88%	4.94%
2001	14.34%	3.23%
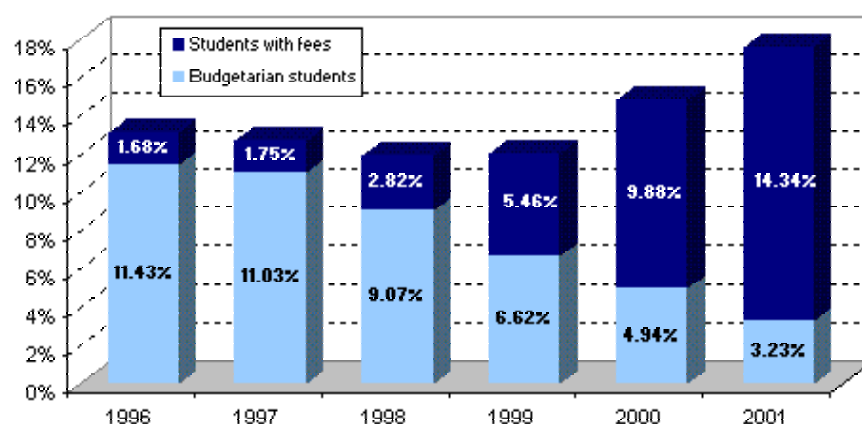
G-II.3.d The evolution of the number of part-time and continuing education students

- Evening courses
- Low frequency courses
- IDD courses
- Post-graduates courses

Evening courses: 10179, 7440, 4775, 3354, 3446, 3221
Low frequency courses: 913, 644, 793, 1245, 8193, 14783
IDD courses: 13640, 13767, 12453, 15376, 20697, 33908
Post-graduates courses: 9567, 12312, 14453, 18343, 22735, 24485

G-II.3.e The proportion of part-time and continuing education students by universities size

	Small universities	Medium universities	Large universities

(Chart values)
- Small universities: 7.22% (1996), 6.33% (1997), 4.87% (1998), 7.73% (1999), 15.66% (2000), 28.78% (2001)
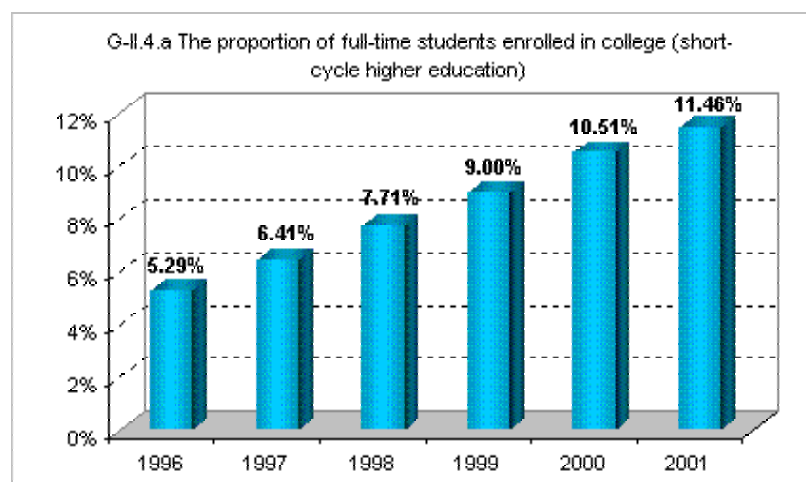- Medium universities: 11.00% (1996), 12.43% (1997), 13.93% (1998), 17.57% (1999), 21.54% (2000), 24.69% (2001)
- Large universities: 16.27% (1996), 15.61% (1997), 14.53% (1998), 14.62% (1999), 20.84% (2000), 26.72% (2001)

II.4.   Increase in the proportion of full time students enrolled in college (short-cycle higher education)
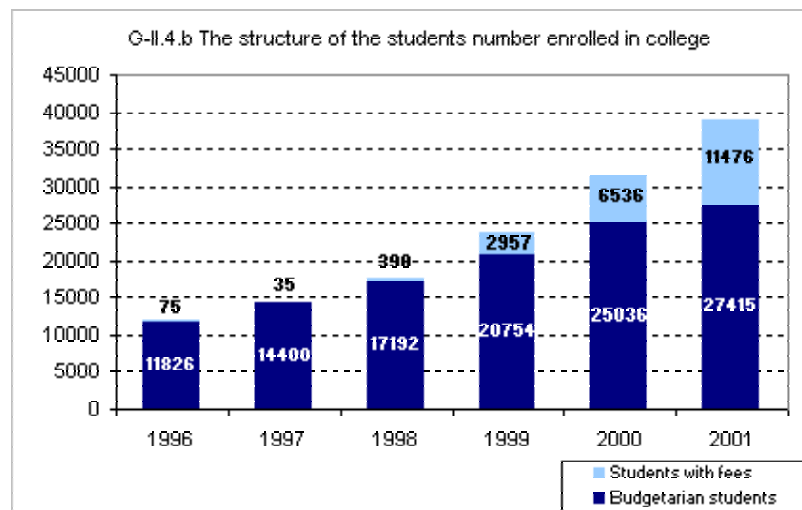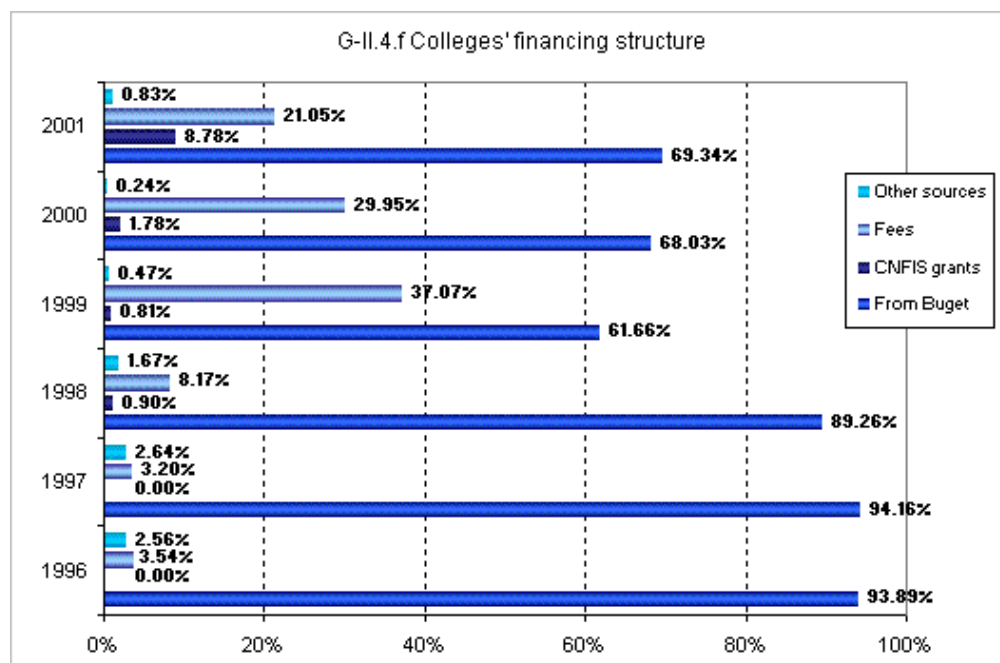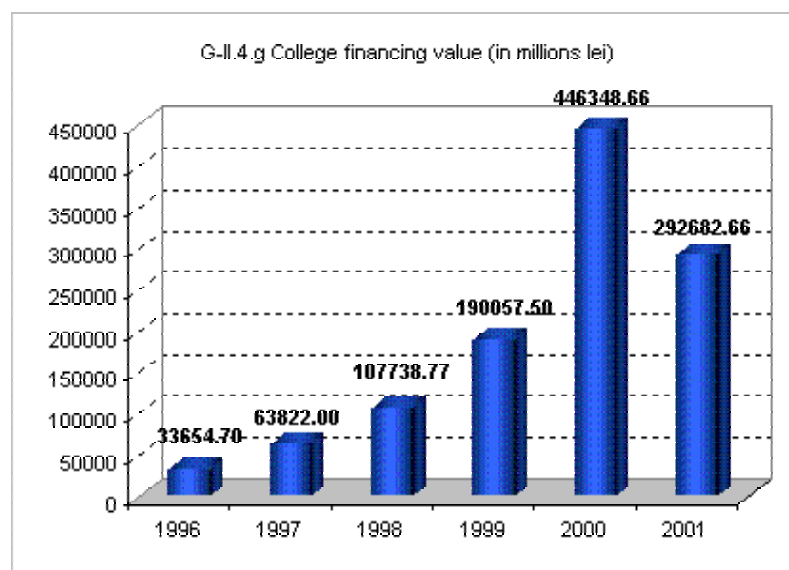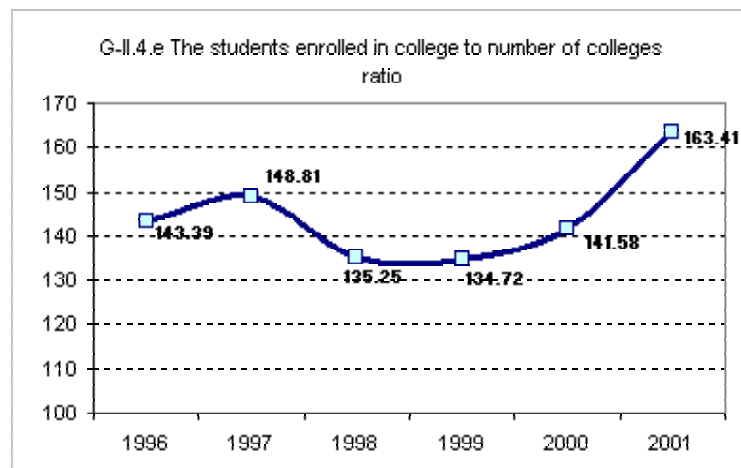
See the graphic G-II.4. The proportion of full time students enrolled in college (short-cycle higher education).

G-II.4.a The proportion of full-time students enrolled in college (short-cycle higher education)

(Chart values)
- 5.29% (1996), 6.41% (1997), 7.71% (1998), 9.00% (1999), 10.51% (2000), 11.46% (2001)

G-II.4.b The structure of the students number enrolled in college

	1996	1997	1998	1999	2000	2001
Students with fees	75	35	398	2957	6536	11476
Budgetarian students	11826	14400	17192	20754	25036	27415

G-II.4.c The proportion of the students enrolled in college in the total number of full-time students

	1996	1997	1998	1999	2000	2001
Students with fees	0.03%	0.02%	0.17%	1.12%	2.18%	3.38%
Budgetarian students	5.25%	6.39%	7.54%	7.87%	8.33%	8.08%

G-II.4.d Total number of collegies

	1996	1997	1998	1999	2000	2001
Other sources			10	12	20	21
Financed from the Budget	74.5	85.5	107.5	144.5	170.5	177.5
Co-financed by WB grants	8.5	11.5	12.5	19.5	32.5	39.5

G-II.4.e The students enrolled in college to number of colleges ratio

G-II.4.g College financing value (in millions lei)
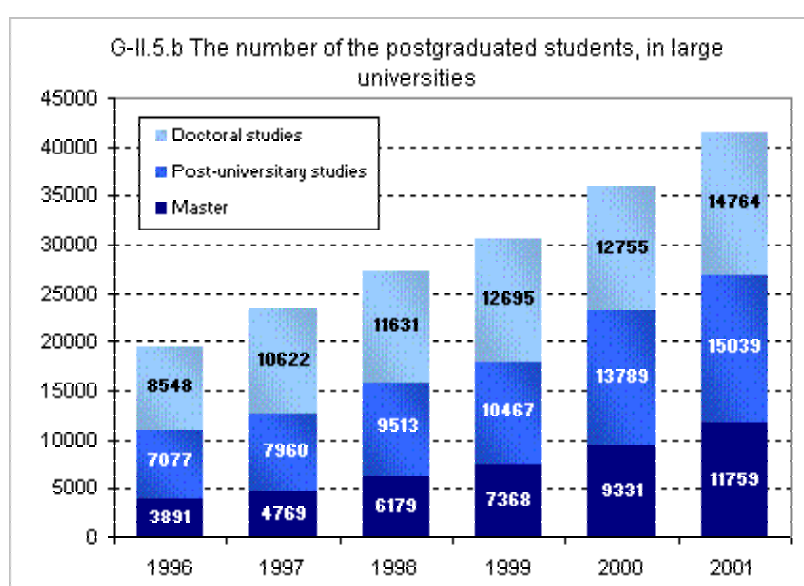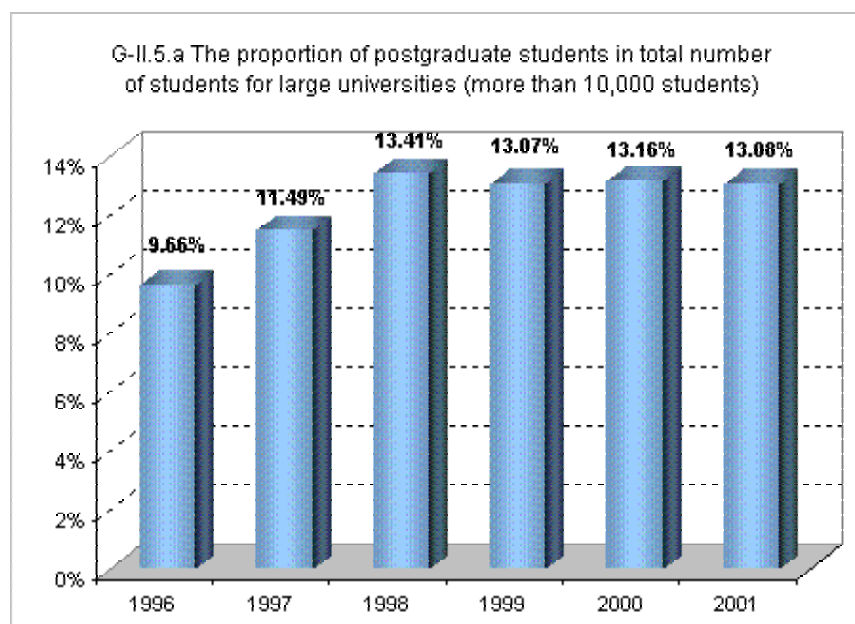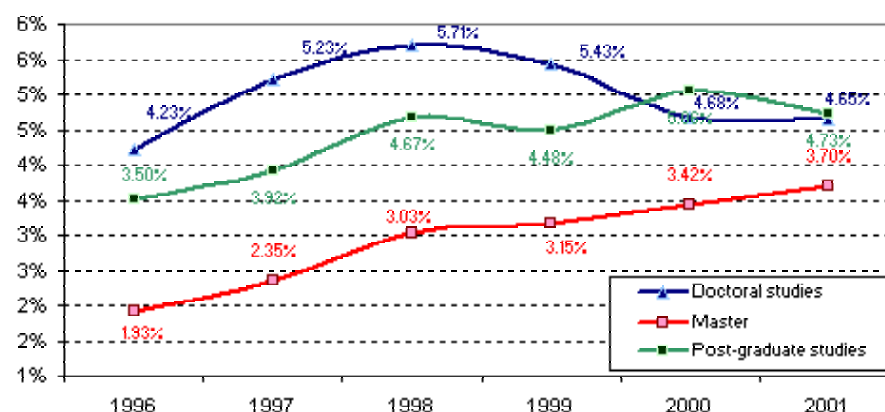

G-II.4.f Colleges' financing structure

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II.5.   Increase in postgraduate share of full time equivalent enrolment in large public higher education institutions (with 10,000 or more students)
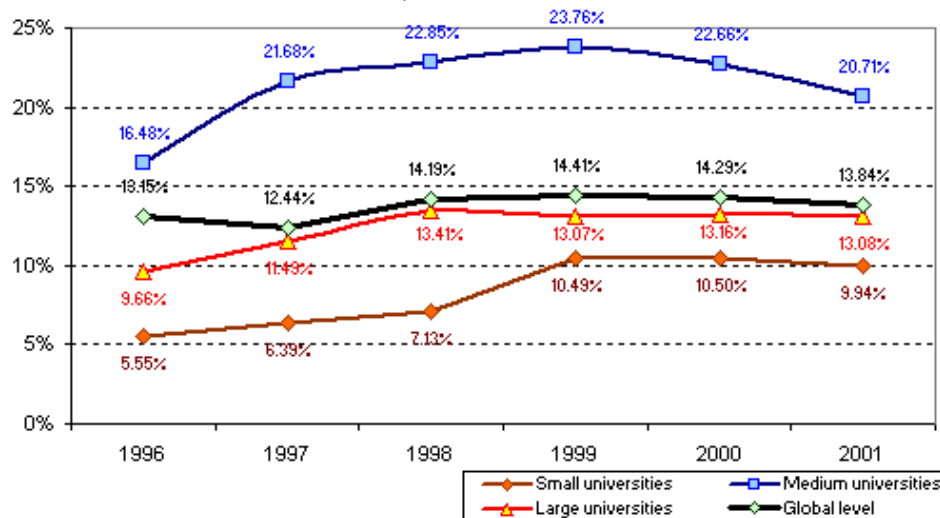
See the graphic G-II.5. Proportion of the postgraduate enrollment in large public higher education institutions.
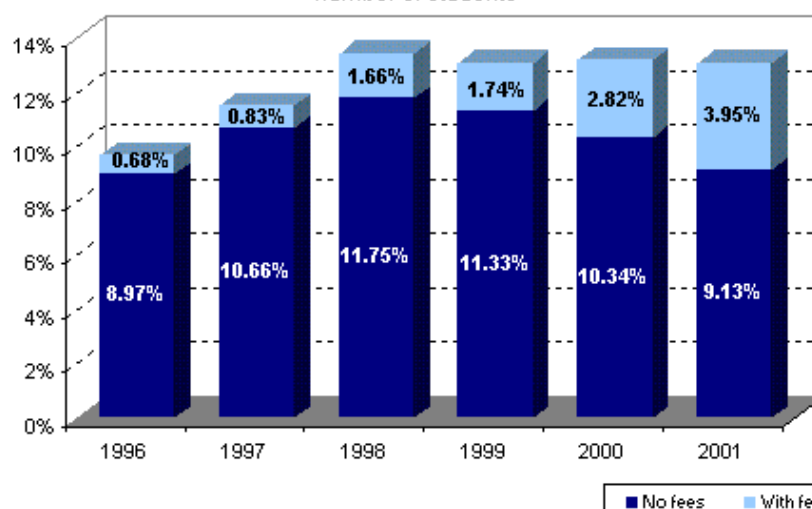

G-II.5.a The proportion of postgraduate students in total number of students for large universities (more than 10,000 students)

G-II.5.b The number of the postgraduated students, in large universities

G-II.5.c The evolution of postgraduate, doctoral and master students in total number of students

6%
6%
5%
5%
5%
5%
4%
4%
4%
3%
3%
3%
2%
2%
2%
1%

5.71%
5.23%
5.43%
4.68%
4.65%
4.23%
5.12%
4.73%
3.50%
3.92%
4.67%
4.48%
3.70%
3.03%
3.42%
2.35%
3.15%
1.93%

1996 1997 1998 1999 2000 2001

— Doctoral studies
— Master
— Post-graduate studies

G-II.5.d The proportion of postgraduate students in the total number of students - by universities size

25%
20%
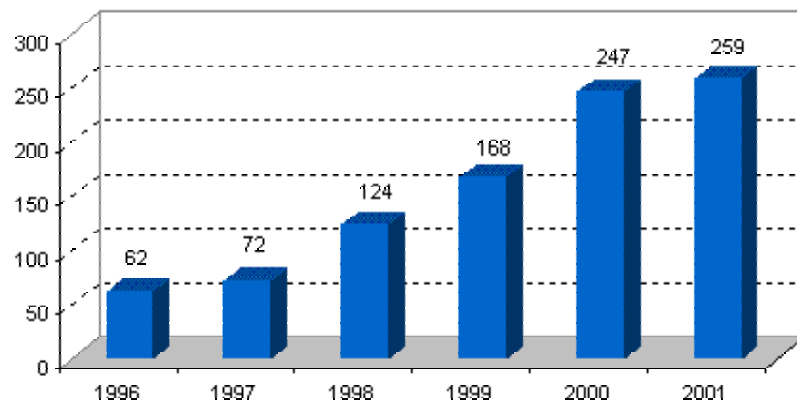15%
10%
5%
0%

23.76%
22.85%
22.66%
21.68%
20.71%
16.48%
13.15%
12.44%
14.19%
14.41%
14.29%
13.84%
9.66%
11.49%
13.41%
13.07%
13.16%
13.08%
5.55%
6.39%
7.13%
10.49%
10.50%
9.94%

1996 1997 1998 1999 2000 2001

— Small universities   — Medium universities
— Large universities   — Global level

G-II.5.e The structure of the postgraduated students in the total number of students

14%
12%
10%
8%
6%
4%
2%
0%

0.68% 0.83% 1.66% 1.74% 2.82% 3.95%
8.97% 10.66% 11.75% 11.33% 10.34% 9.13%

1996 1997 1998 1999 2000 2001

■ No fees   ■ With fees

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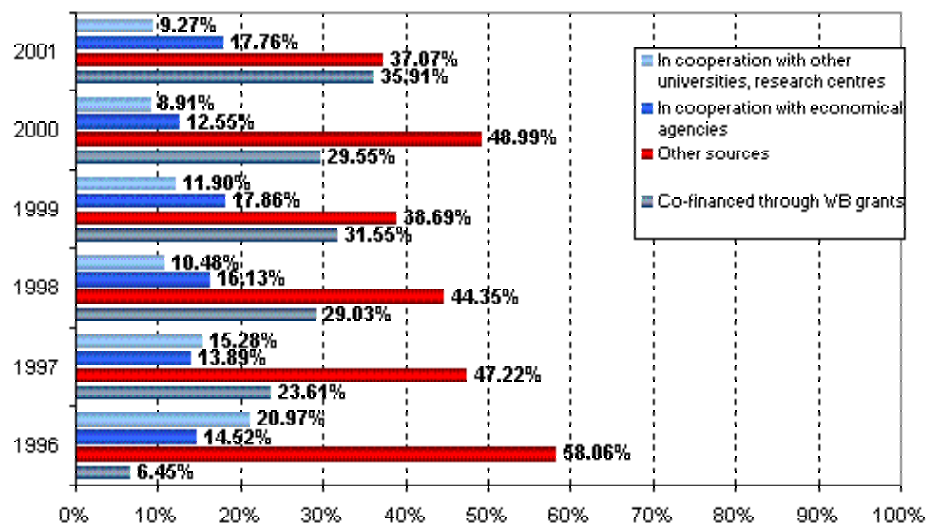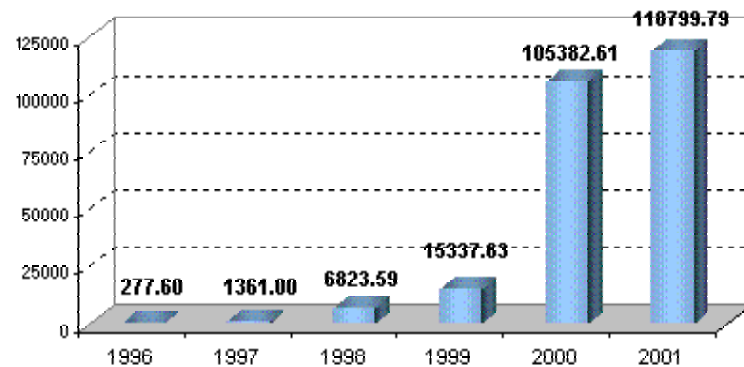## G-II.5.e Continuing education programs
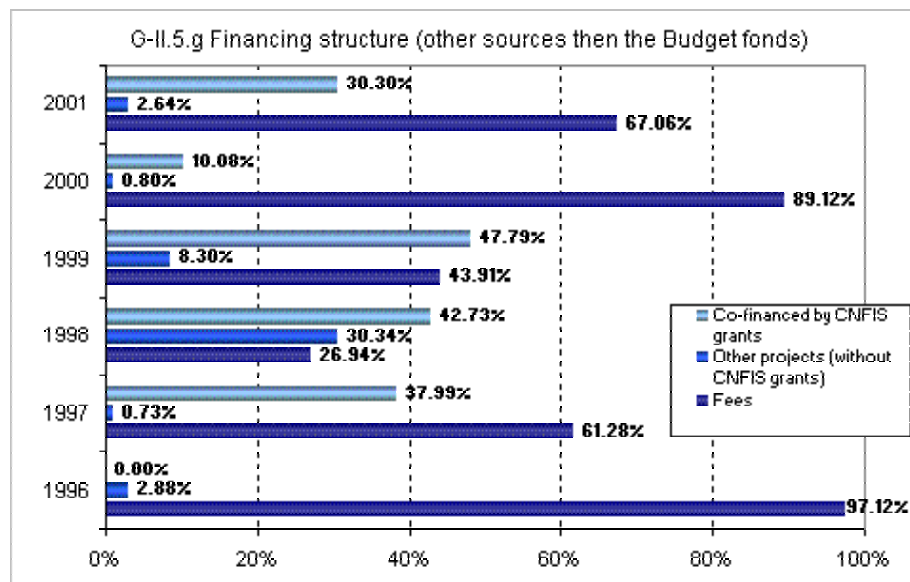

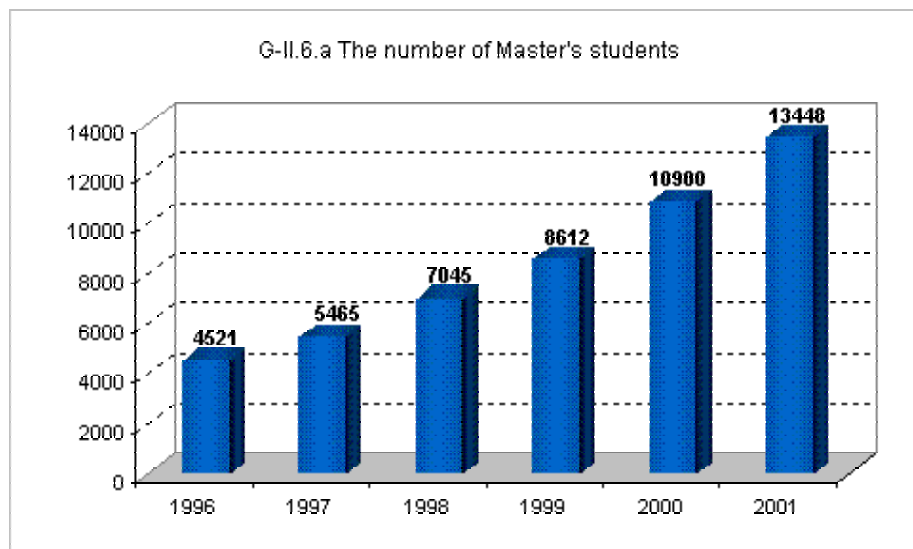## G-II.5.f Continuing education programs (funding structure)

G-II.5.f Financing total value for the continuing education (in thousend lei)

G-II.5.g Financing structure (other sources then the Budget fonds)
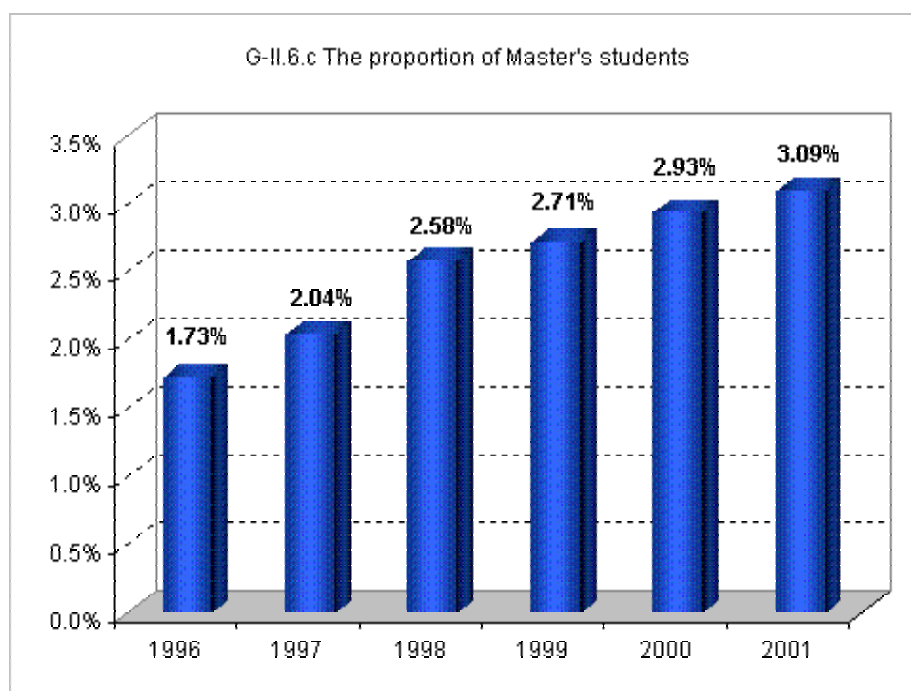
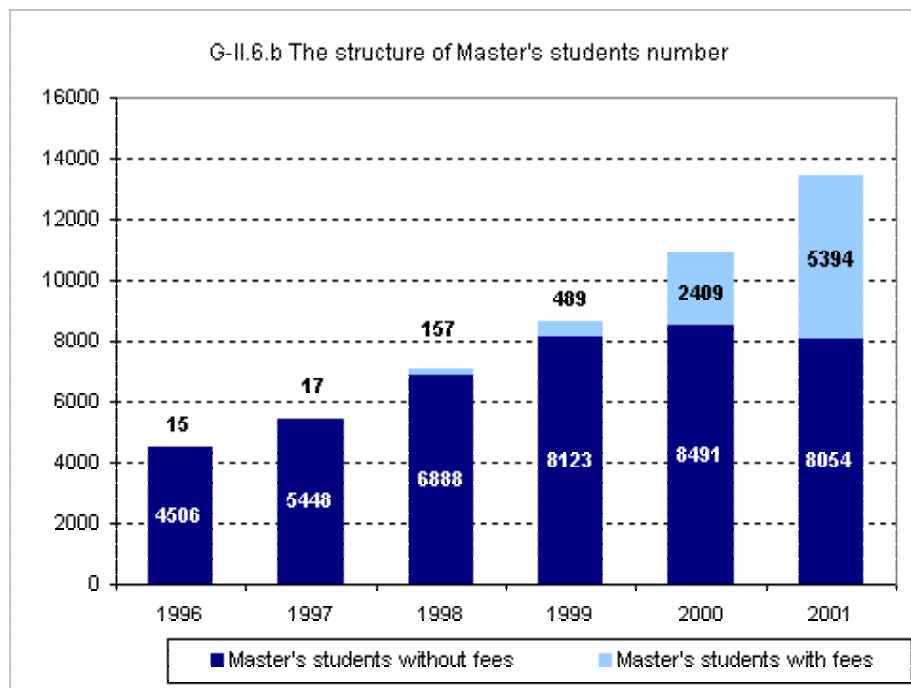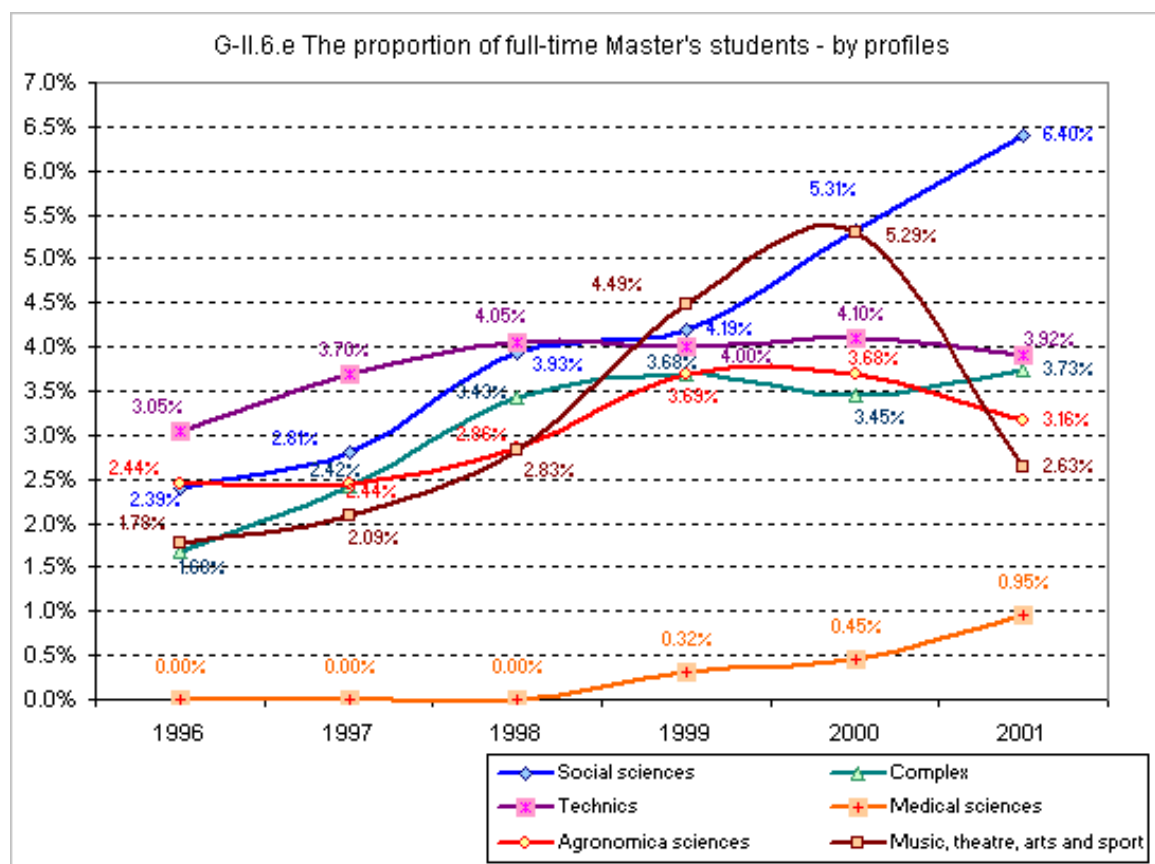## II.6.   Increase in number of Master's students

See the graphic G-II.6. The number of Master's students.

G-II.6.a The number of Master's students

G-II.6.b The structure of Master's students number

	1996	1997	1998	1999	2000	2001
Master's students with fees	15	17	157	489	2409	5394
Master's students without fees	4506	5448	6888	8123	8491	8054

G-II.6.c The proportion of Master's students

1996	1997	1998	1999	2000	2001
1.73%	2.04%	2.58%	2.71%	2.93%	3.09%

G-II.6.d The proportion of Master's students number by universities size

G-II.6.e The proportion of full-time Master's students - by profiles
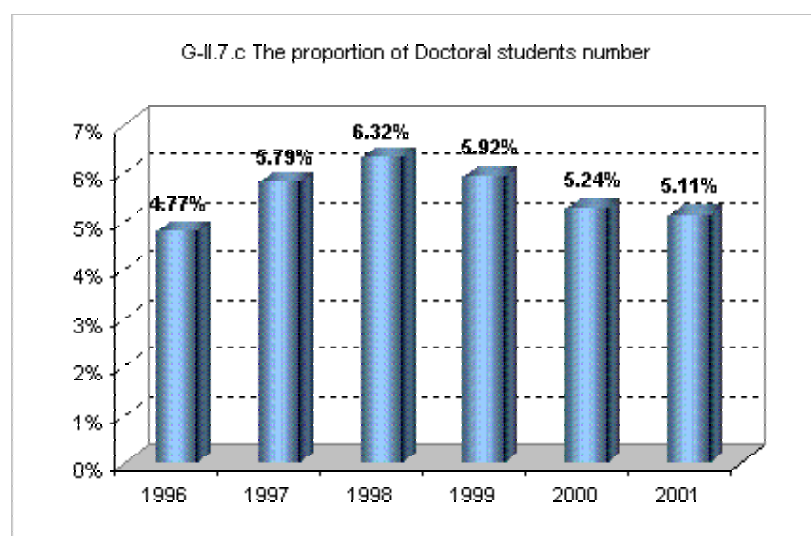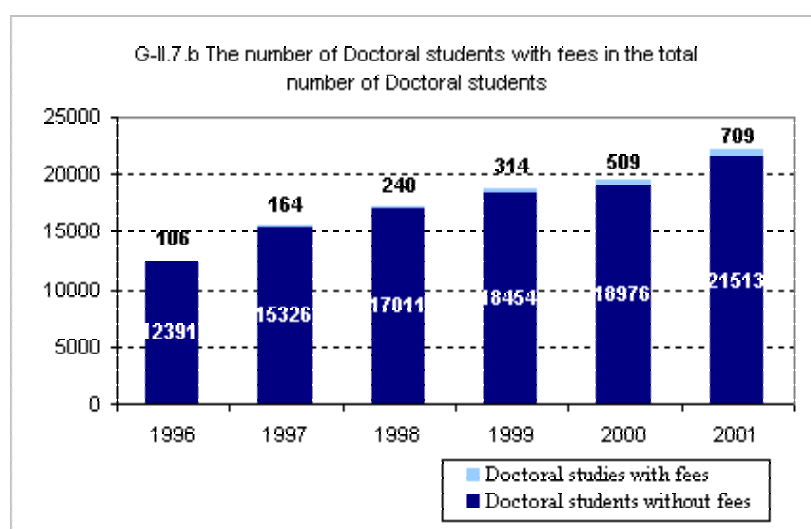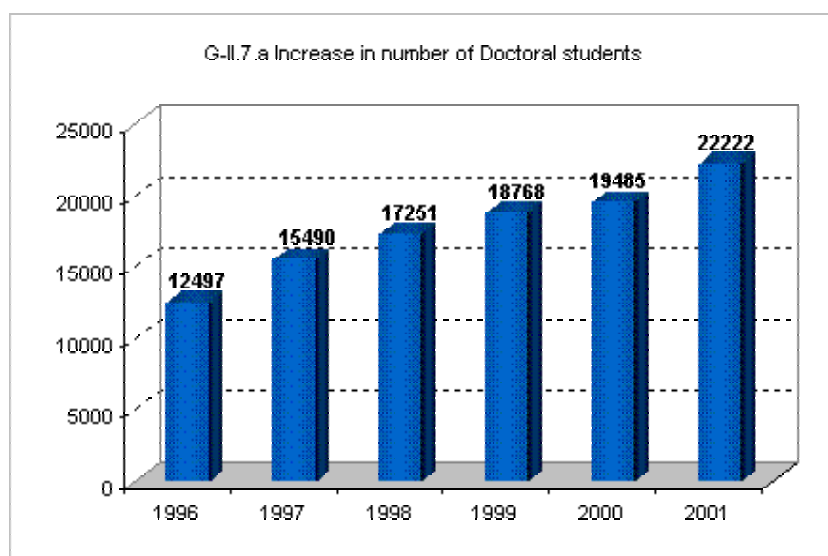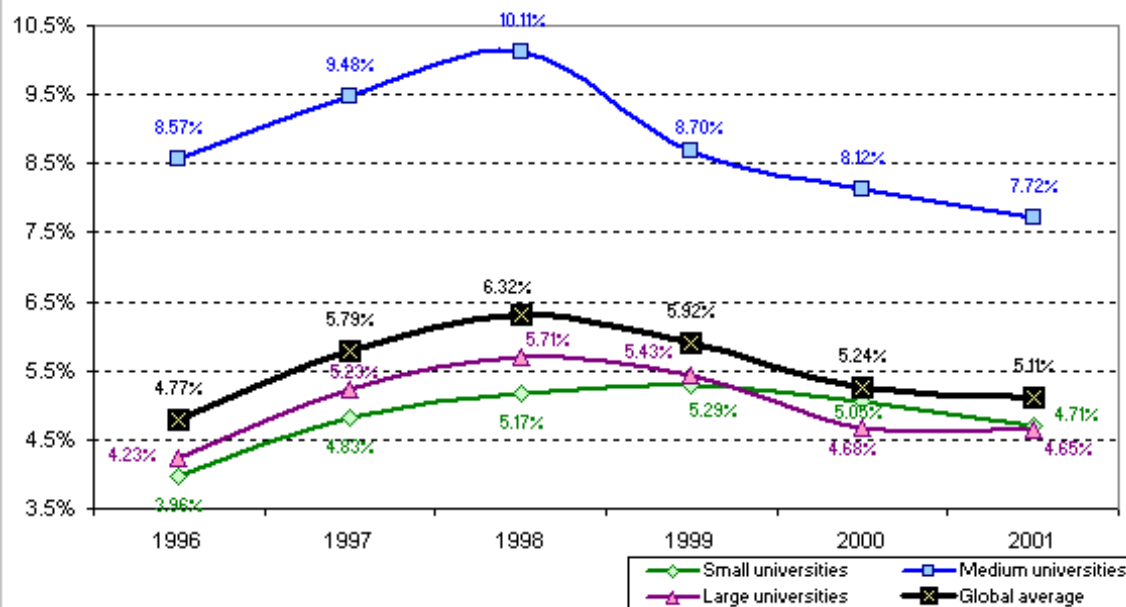
II.7.   Increase in the number of full-time doctoral students

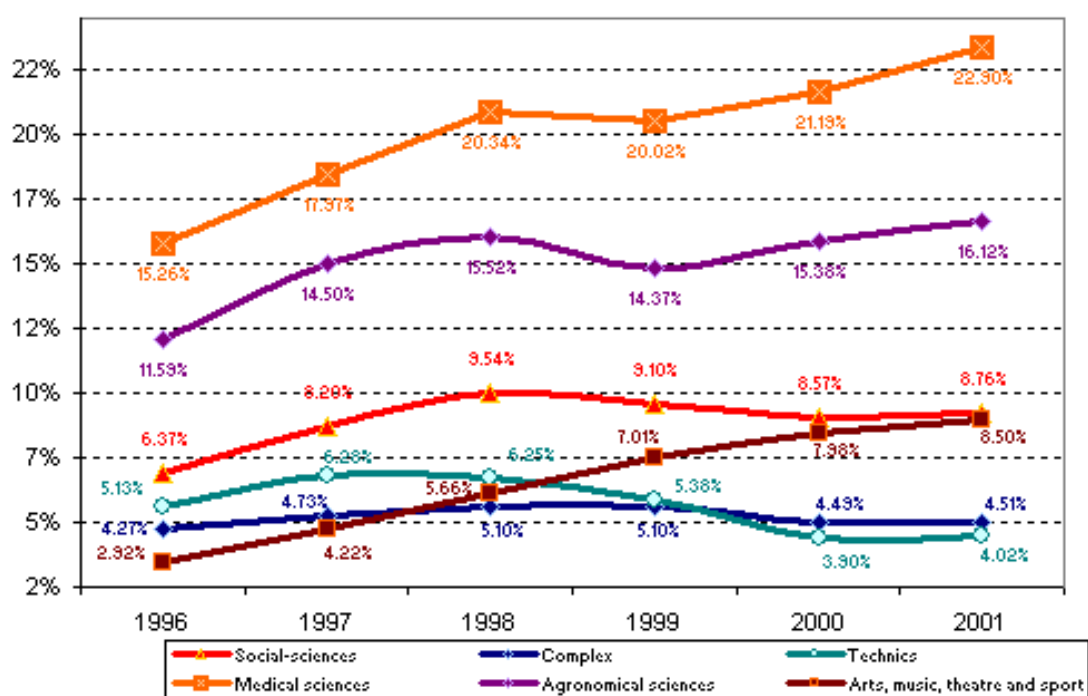See the graphic G-II.7. The evolution of full-time doctoral students.

G-II.7.a Increase in number of Doctoral students

Year	Number
1996	12497
1997	15490
1998	17251
1999	18768
2000	19485
2001	22222

G-II.7.b The number of Doctoral students with fees in the total number of Doctoral students

Year	Doctoral studies with fees	Doctoral students without fees
1996	106	12391
1997	164	15326
1998	240	17011
1999	314	18454
2000	509	18976
2001	709	21513

■ Doctoral studies with fees
■ Doctoral students without fees

G-II.7.c The proportion of Doctoral students number

Year	Proportion
1996	4.77%
1997	5.79%
1998	6.32%
1999	5.92%
2000	5.24%
2001	5.11%

G-II.7.d The proportion of Doctoral students number - by universities size

Year	1996	1997	1998	1999	2000	2001
Medium universities	8.57%	9.48%	10.11%	8.70%	8.12%	7.72%
Global average	4.77%	5.79%	6.32%	5.92%	5.24%	5.11%
Large universities	4.23%	5.23%	5.71%	5.43%	4.68%	4.65%
Small universities	3.96%	4.83%	5.17%	5.29%	5.05%	4.71%

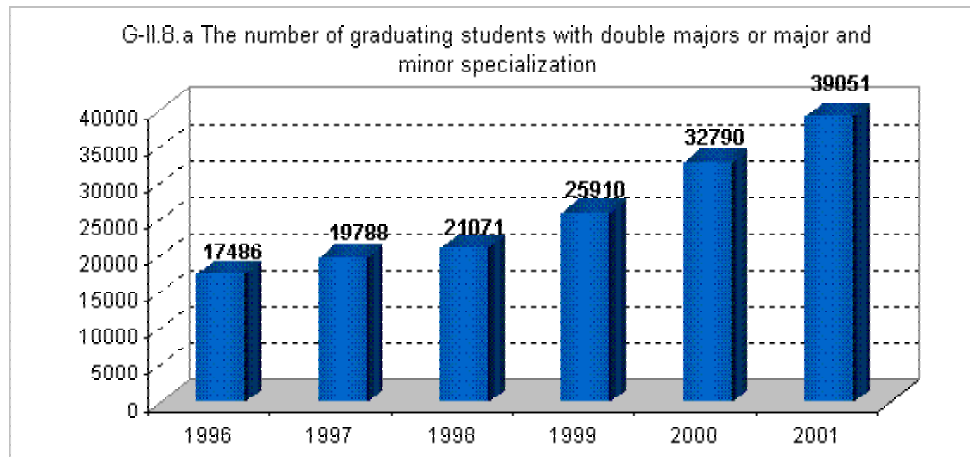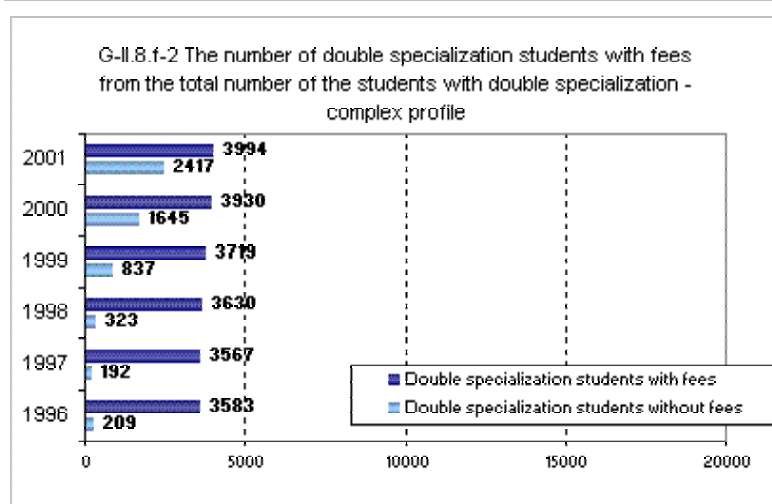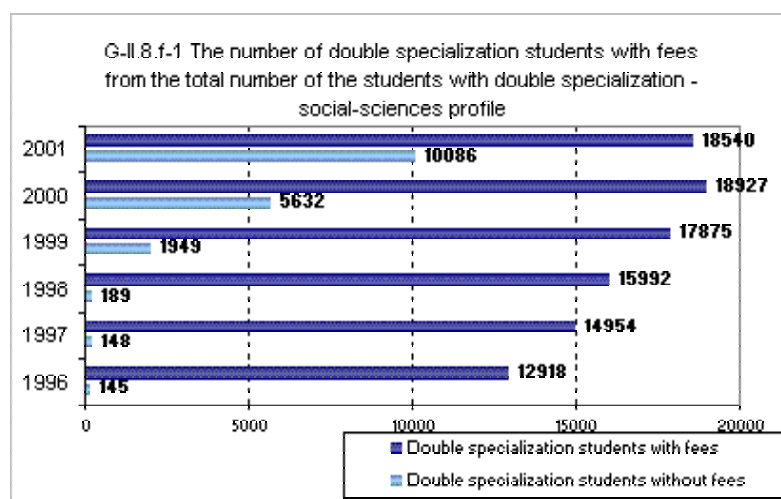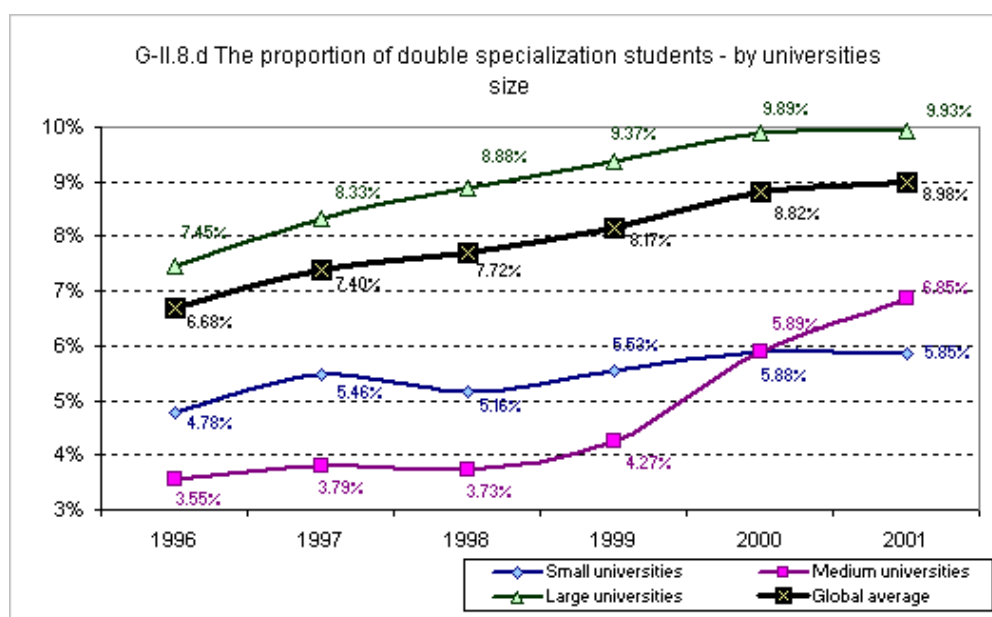Legend: Small universities, Medium universities, Large universities, Global average

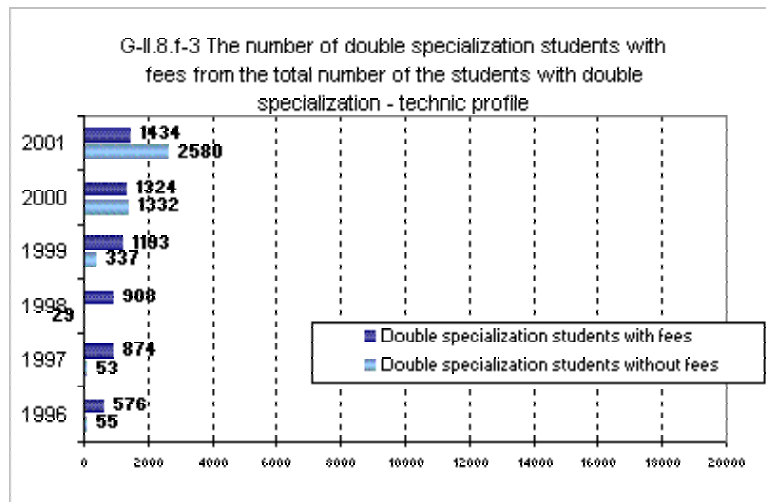G-II.7.e The proportion of Doctoral students in the total number of students (long-form studies) - by profiles

Year	1996	1997	1998	1999	2000	2001
Medical sciences	15.26%	17.37%	20.34%	20.02%	21.19%	22.50%
Agronomical sciences	11.59%	14.50%	15.52%	14.37%	15.38%	16.12%
Social-sciences	6.37%	8.29%	9.54%	9.10%	8.57%	8.76%
Technics	5.13%	6.28%	6.25%	5.38%	3.90%	4.02%
Complex	4.27%	4.73%	5.10%	5.10%	4.49%	4.51%
Arts, music, theatre and sport	2.92%	4.22%	5.66%	7.01%	7.96%	8.50%

Legend: Social-sciences, Complex, Technics, Medical sciences, Agronomical sciences, Arts, music, theatre and sport

22

II.8. **Increase in the proportion of undergraduate students graduating with double majors or major and minor concentrations**

See the graphic G-II.8. The proportion of undergraduate students graduating with double major or major and minor concentrations.
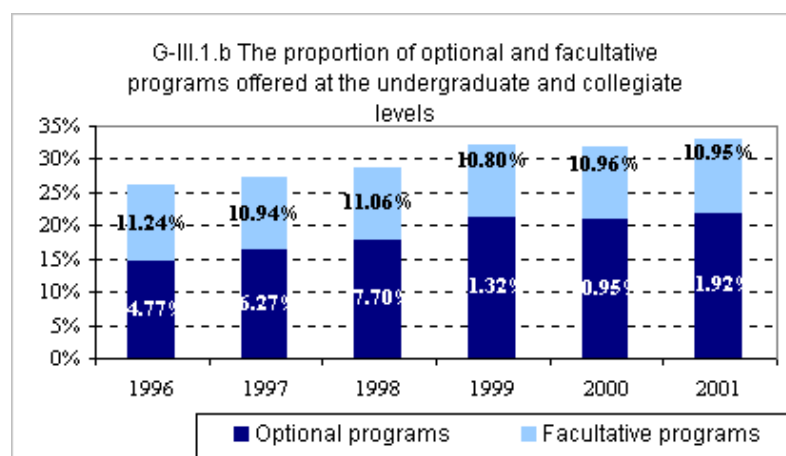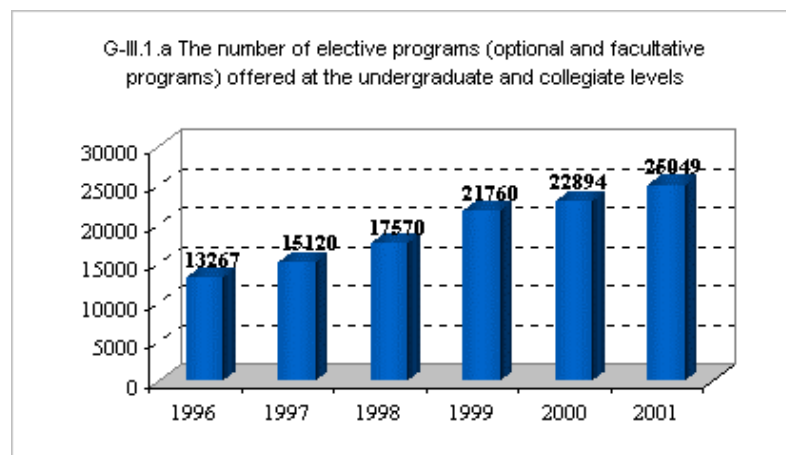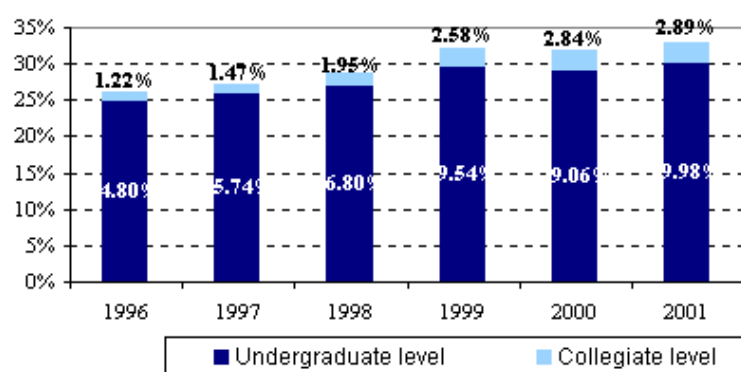

G-II.8.a The number of graduating students with double majors or major and minor specialization

G-II.8.b The structure of the number of graduating students with double major or major and minor specialization

■ Double specialization students without fees ■ Double specialization students with fees

G-II.8.c The proportion of the number of graduating students with double major or major and minor specialization

G-II.8.d The proportion of double specialization students - by universities size

G-II.8.f-1 The number of double specialization students with fees from the total number of the students with double specialization - social-sciences profile

G-II.8.f-2 The number of double specialization students with fees from the total number of the students with double specialization - complex profile

G-II.8.f-3 The number of double specialization students with fees from the total number of the students with double specialization - technic profile

III. Programs/Staffing:

III.1. Increase in the number of elective programs and proportion of elective coursework offered at the undergraduate and collegiate levels.
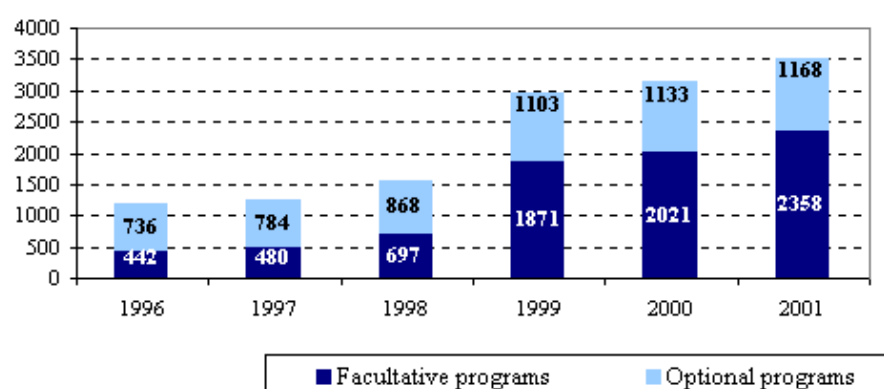
See the graphics G-III.1.a) The number of elective programs offered at the undergraduate and collegiate levels and G-III.1.b) The proportion of elective coursework offered at the undergraduate and collegiate levels.
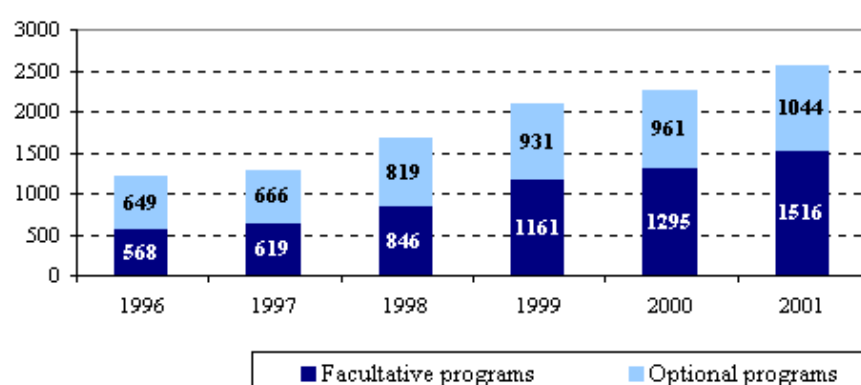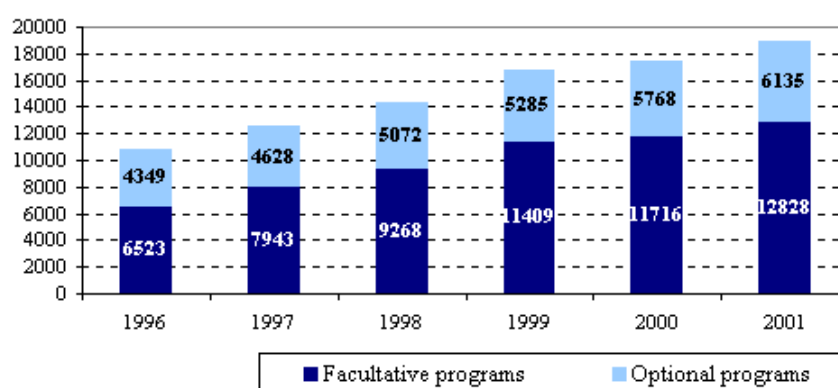

G-III.1.a The number of elective programs (optional and facultative programs) offered at the undergraduate and collegiate levels

G-III.1.b The proportion of optional and facultative programs offered at the undergraduate and collegiate levels

G-III.1.c The proportion of elective coursework offered at the undergraduate and collegiate levels

Year	Undergraduate level	Collegiate level
1996	24.80%	1.22%
1997	25.74%	1.47%
1998	26.80%	1.95%
1999	29.54%	2.58%
2000	29.06%	2.84%
2001	29.98%	2.89%

G-III.1.d The structure of the elective coursework in small universities (with 5,000 or fewer students)

Year	Facultative programs	Optional programs
1996	442	736
1997	480	784
1998	697	868
1999	1871	1103
2000	2021	1133
2001	2358	1168

G-III.1.e The structure of the elective coursework in the medium universities (between 5,000 and 10,000 students)

| Year	Facultative programs	Optional programs
1996	568	649
1997	619	666
1998	846	819
1999	1161	931
2000	1295	961
2001	1516	1044

26

G-III.1.f The structure of elective coursework in large universities (with 10,000 or more students)
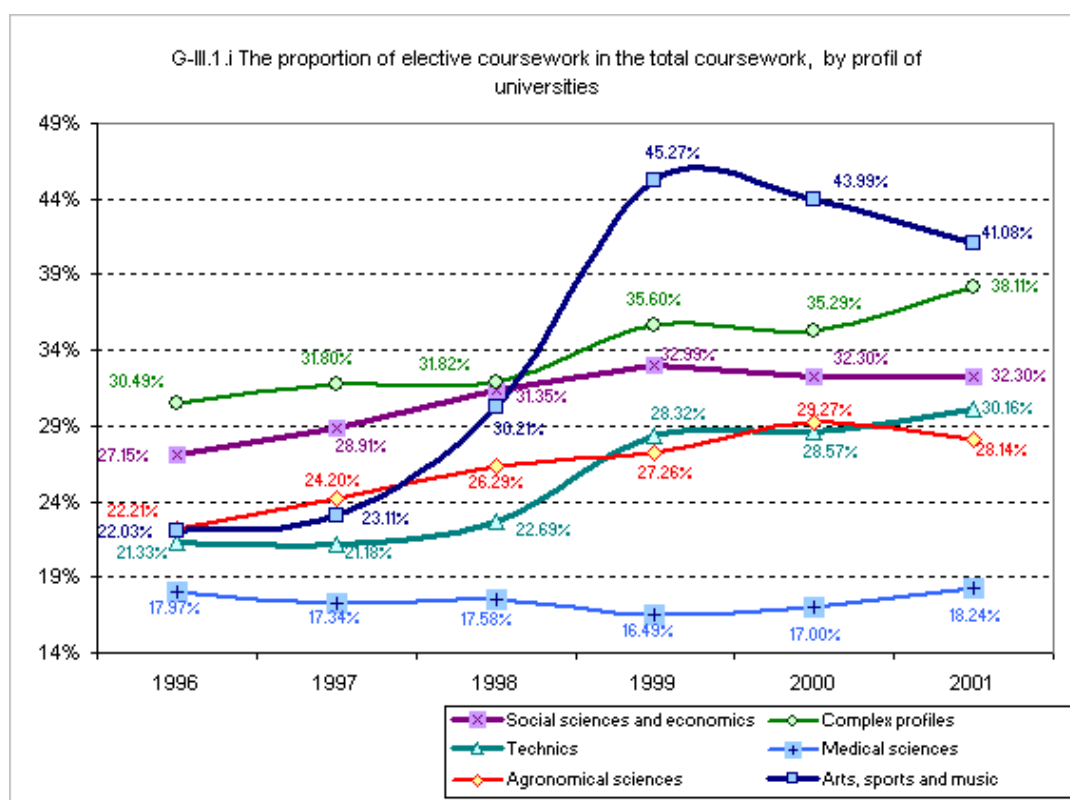

G-III.1.g The proportion of optional coursework in the total number of coursework, by the dimension of universities
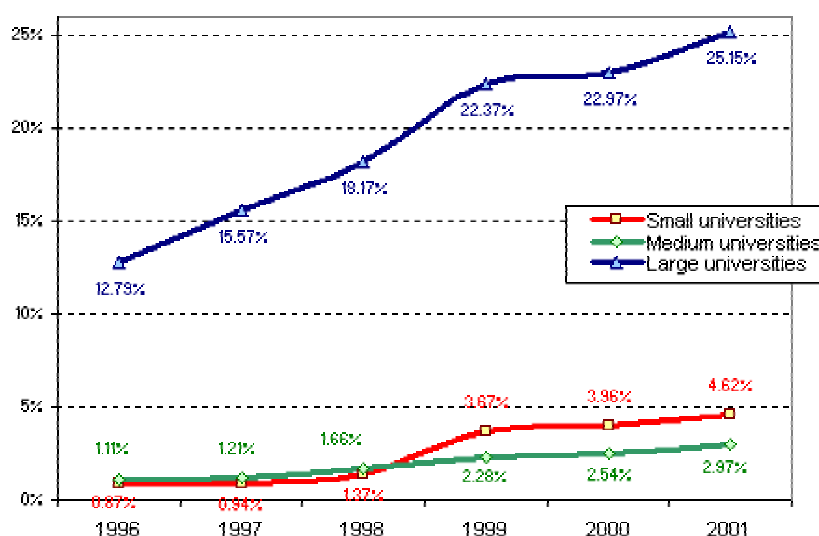

G-III.1.h The proportion of elective coursework in the total number of coursework, by the dimension of universities

G-III.1.i The proportion of elective coursework in the total coursework, by profil of universities
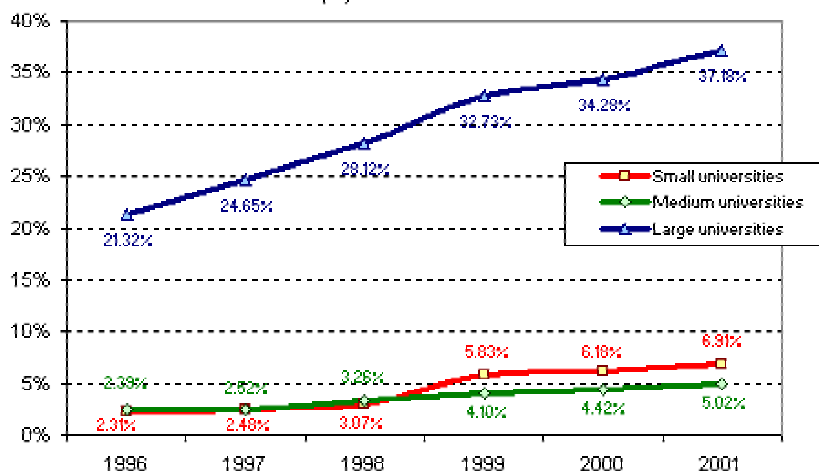
III.2. **Increase in the number of institutions using a credit system for undergraduate degree, diploma or certificate programs**

See the graphic G-III.2. The number of institutions using credit system for undergraduate degree, diploma or certificate programs.

G-III.2.a The number of institutions using a credit system

G-III.2.b The proportion of institutions using a credit systems

G-III.2.c The credit system, by the dimension of universities

G-III.2.d The proportion credit system, by profil of universities
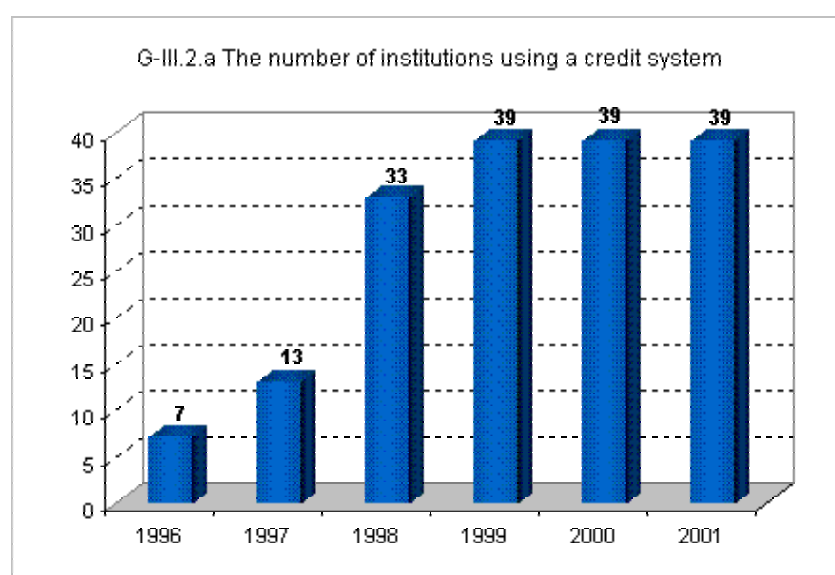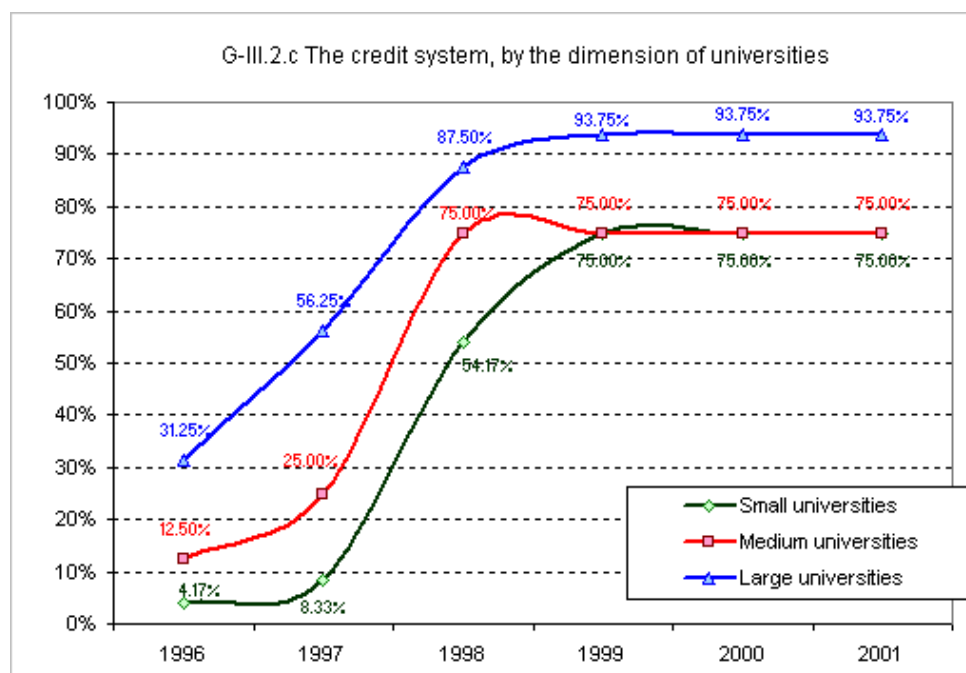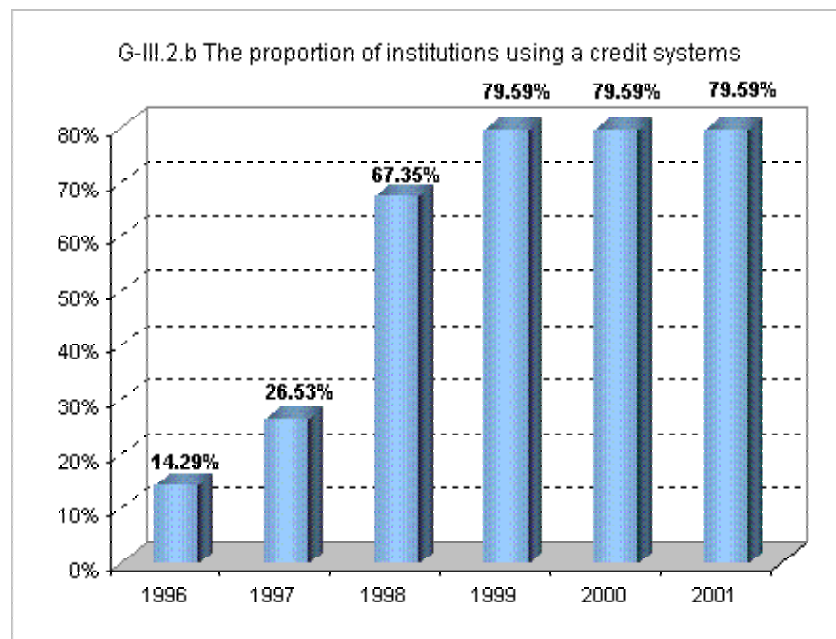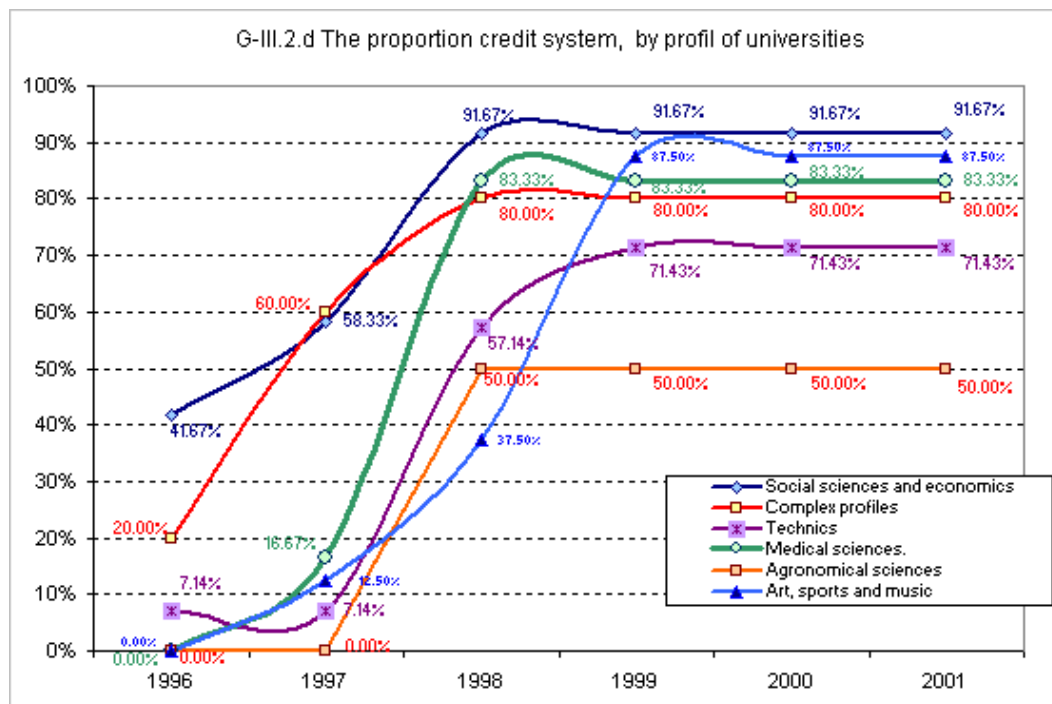
III.3.   Reduction in variation in student to staff ratio in economics, management, social sciences and law among higher education institutions.
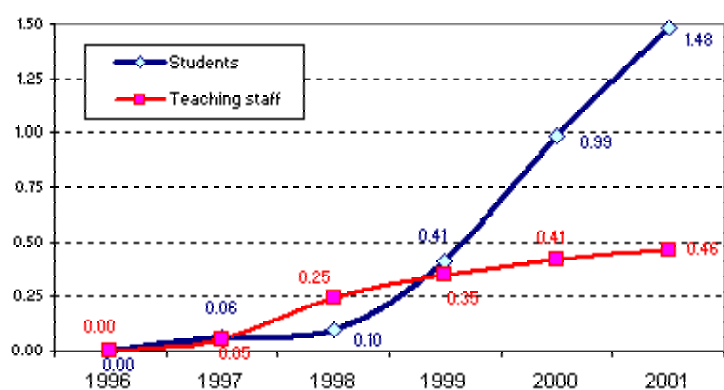
See the graphic G-III.3. The variation in student to staff ratio in economics, management, social sciences and low among higher education institutions.

G-III.3.a The variation in student to staff ratio in economics, management, social sciences and low among higher education institutions
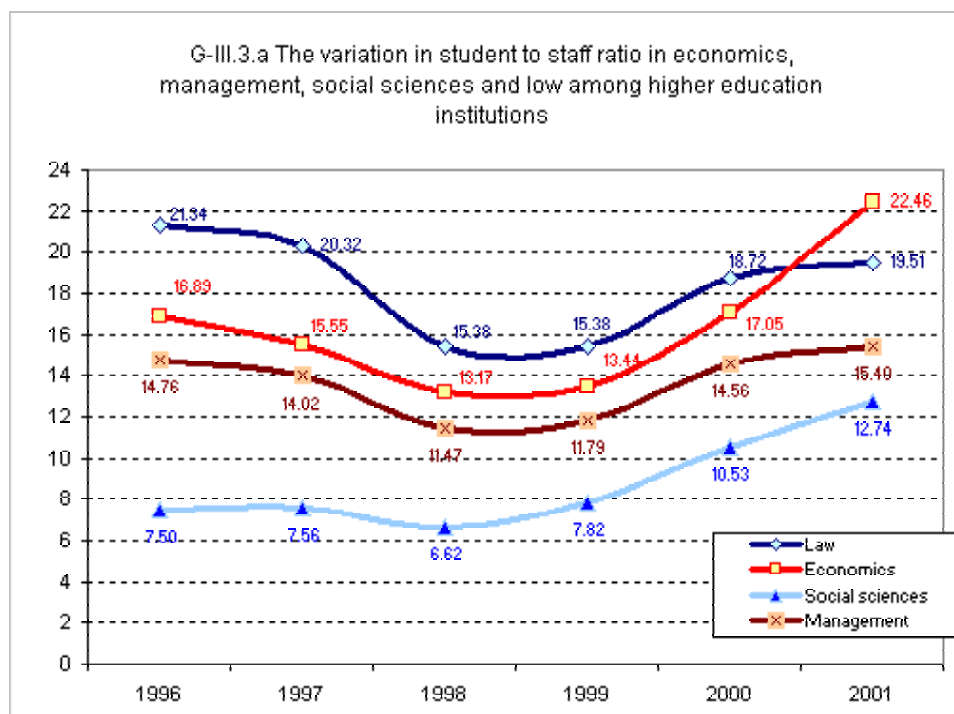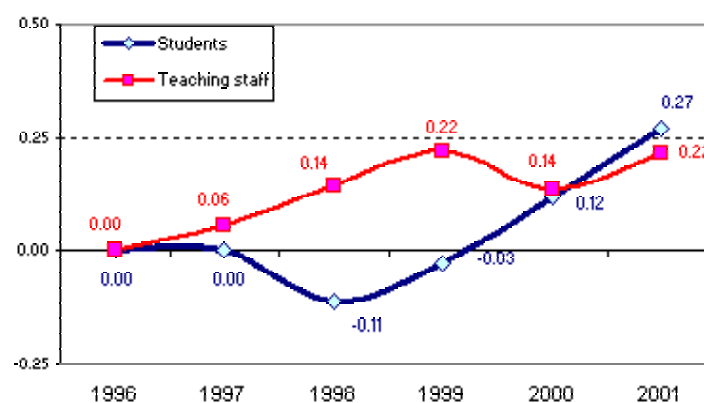
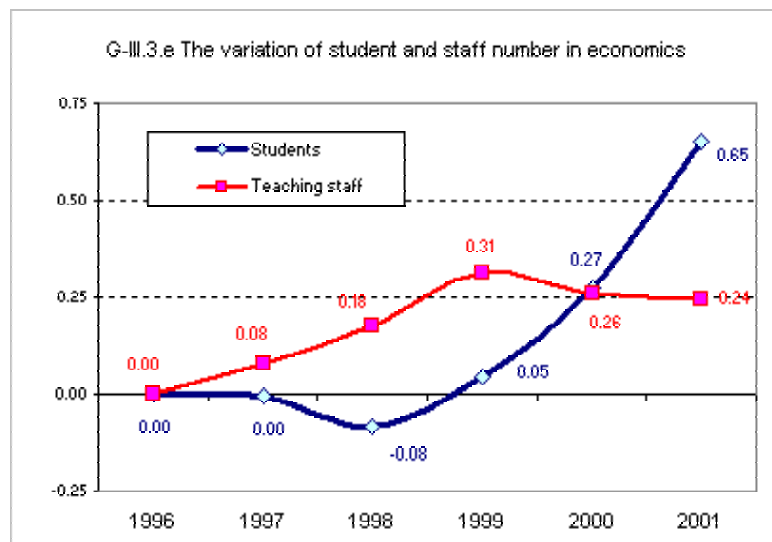G-III.3.b The variation of student and staff number in low profile
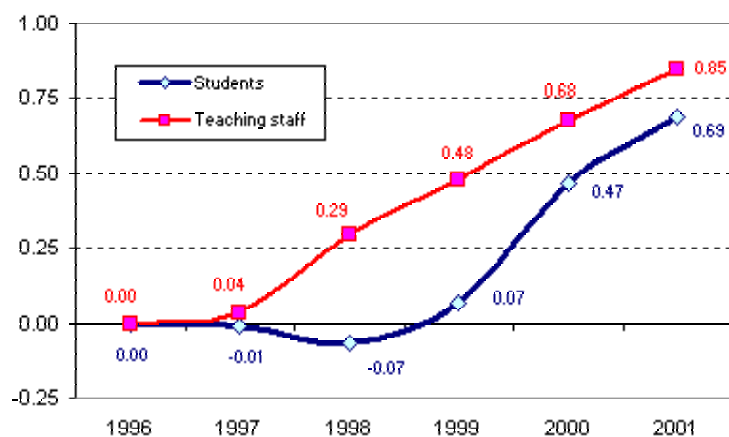
G-III.3.c The variation of student and staff number in social sciences

G-III.3.d The variation of student and staff number in management profile

G-III.3.e The variation of student and staff number in economics

III.4.   Reduction in the number of academic staff vacancies.

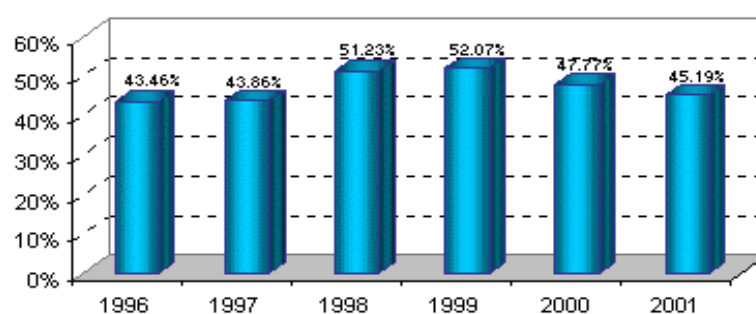See the graphic G-III.4. The number of academic staff vacancies.

G-III.4.a The number of academic staff vacancies

See the graphic G-III.4. The number of academic staff vacancies.
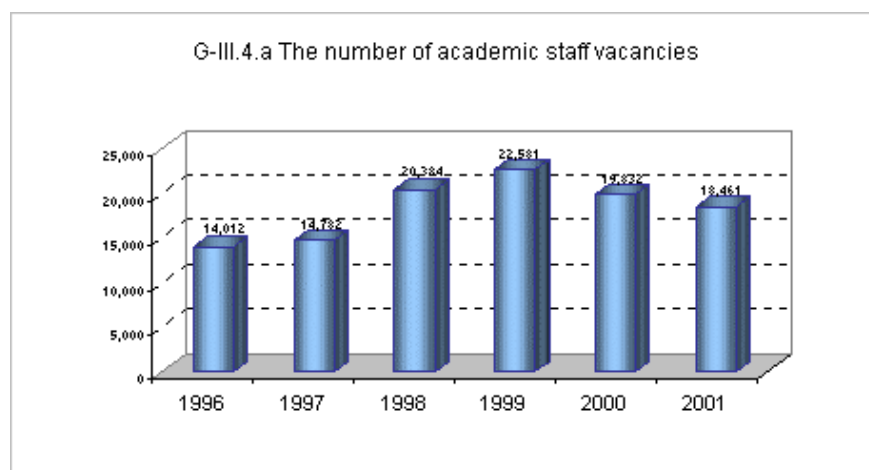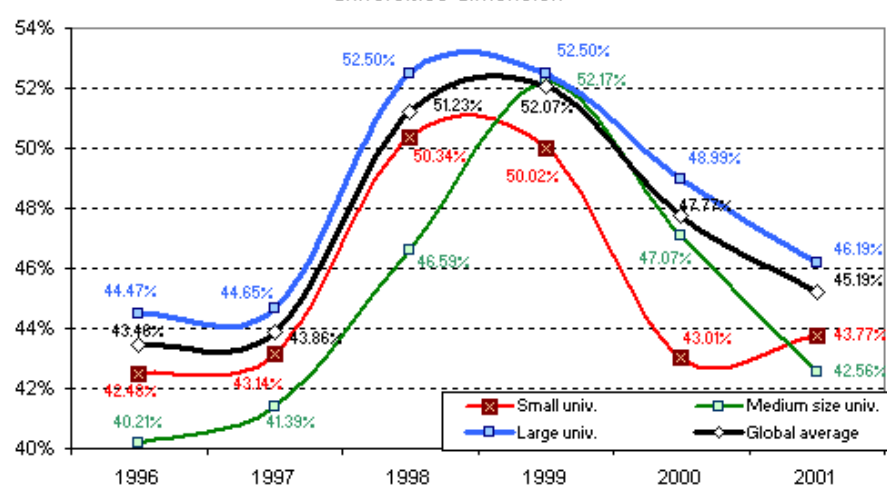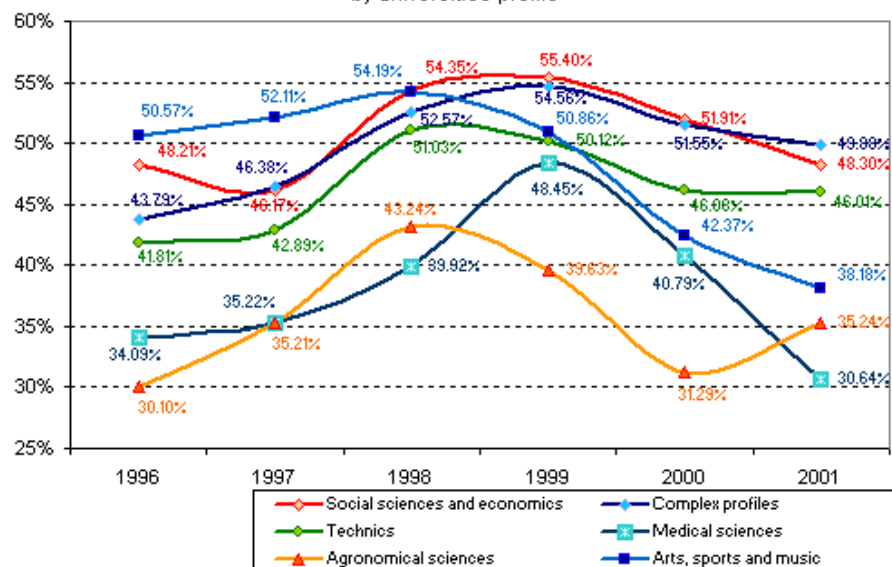

G-III.4.b The number of academic staff
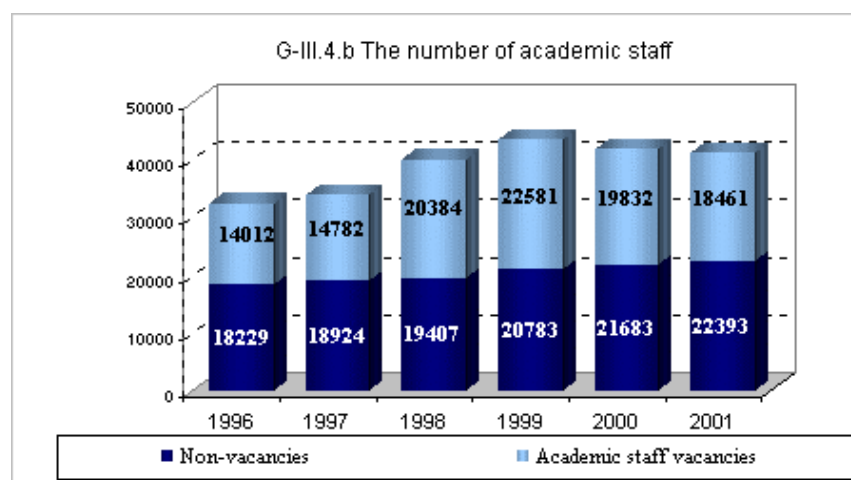
G-III.4.c The ratio between academic staff vacancies and academic staff positions

G-III.4.d The proportion of the academic staff vacancies, by the universities dimension

G-III.4.e The proportion of academic staff vacancies, by universities profile

III.5.   Increase in the proportion of academic staff at the level of lecturer or above qualified with doctoral or equivalent degrees.

See the graphic G-III.5. The proportion of academic staff at the level of lecturer or above qualified with doctoral or equivalent degrees.

G-III.5.a The proportion of academic staff at the level of lecturer or above qualified with doctoral degree

G-III.5.b The proportion of academic staff qualified with doctoral degree in total number of academic staff
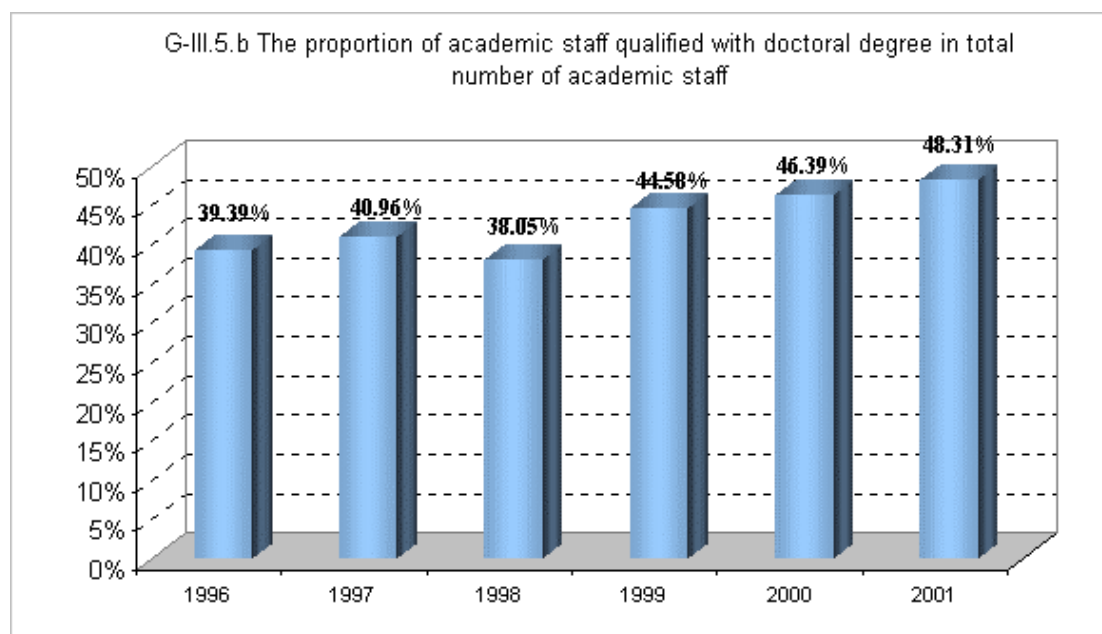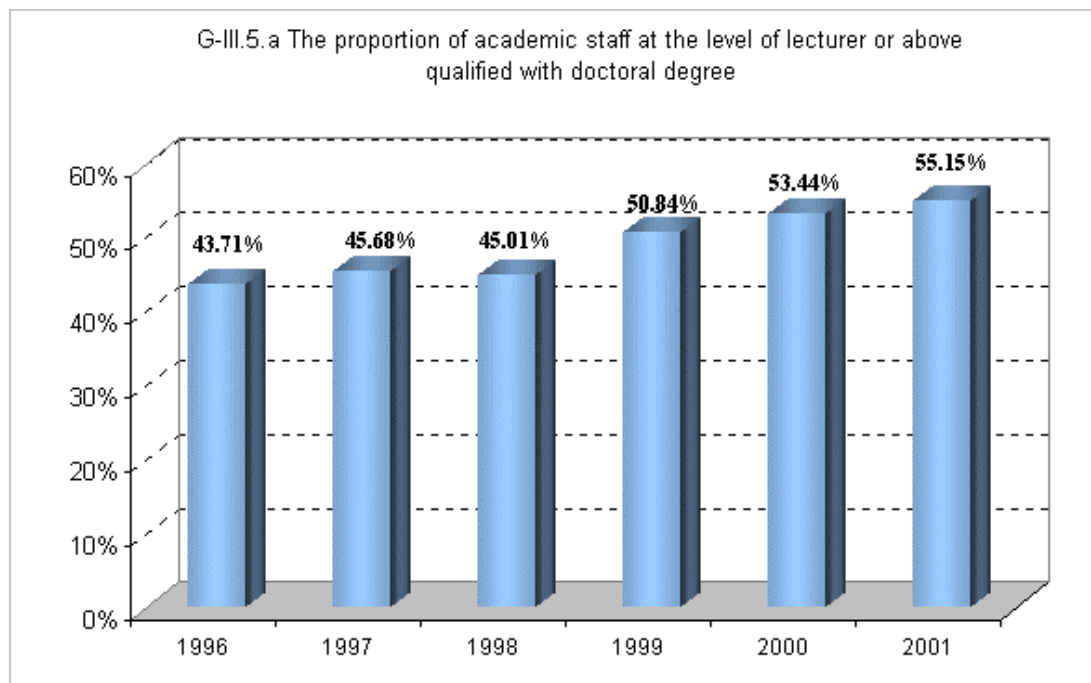
G-III.5.c The number of academic staff at the level of lecturer or above qualified with doctoral or equivalent degrees

Year	Value
1996	7829
1997	8334
1998	8311
1999	10393
2000	11073
2001	11939

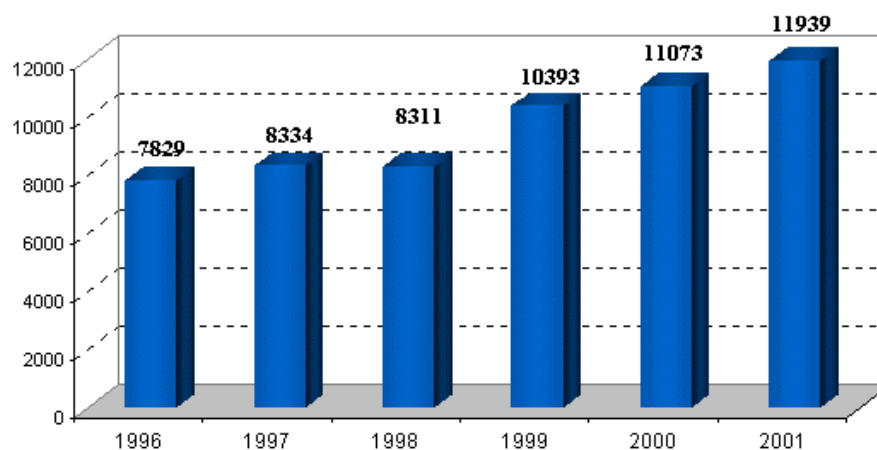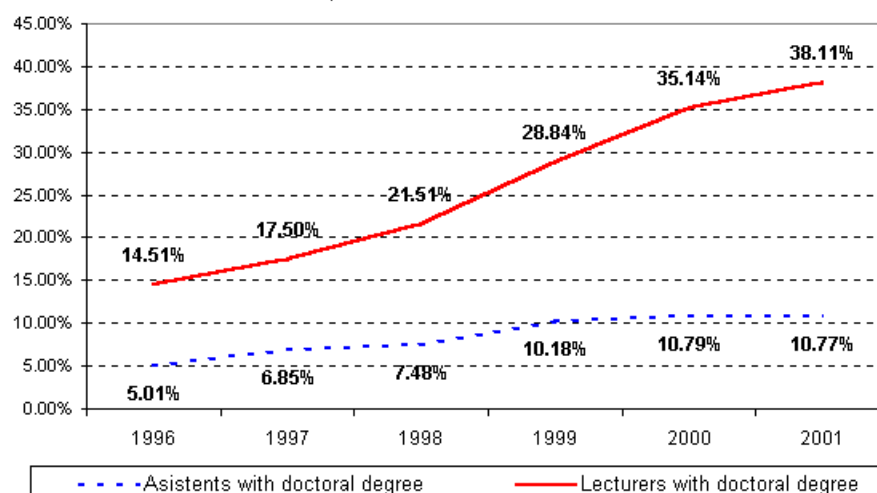**G-III.5.d The proportion of academic staff with doctoral degrees in academic staff, for the lecturer and assistant**

Year	Asistents with doctoral degree	Lecturers with doctoral degree
1996	5.01%	14.51%
1997	6.85%	17.50%
1998	7.48%	21.51%
1999	10.18%	28.84%
2000	10.79%	35.14%
2001	10.77%	38.11%

- - - Asistents with doctoral degree   —— Lecturers with doctoral degree

G-III.5.e The proportion of academic staff with doctoral degrees in total number of academic staff, for the small universities (< 5000 students)

Year	Value
1996	40.23%
1997	40.07%
1998	37.96%
1999	41.27%
2000	41.63%
2001	44.03%

G-III.5.f The proportionof academic staff with doctoral degrees in the total number of academic staff, for the medium universities (between 5000 and 10000 students)

G-III.5.g The proportion of academic staff with doctoral degrees in the total number of academic staff, for the large universities (> 10000 students)

G-III.5.h The proportion of assistants with doctoral degrees in total number of assistants, by size of universities

Legend: Small universities, Medium size universities, Large universities

Data points:
- 10.15%, 12.83%, 13.01%, 15.44%, 15.43%, 18.57%
- 4.50%, 4.57%, 7.19%, 7.99%, 9.45%, 8.73%
- 8.59%, 9.20%, 8.21%
- 3.00%, 4.50%, 5.05%

G-III.5.i The proportion of lecturer with doctoral degrees in the total number of lecturer, by size of universities

Legend: Small universities, Medium size universities, Large universities

Data points:
- 21.26%, 22.49%, 23.96%, 31.50%, 42.30%, 45.45%
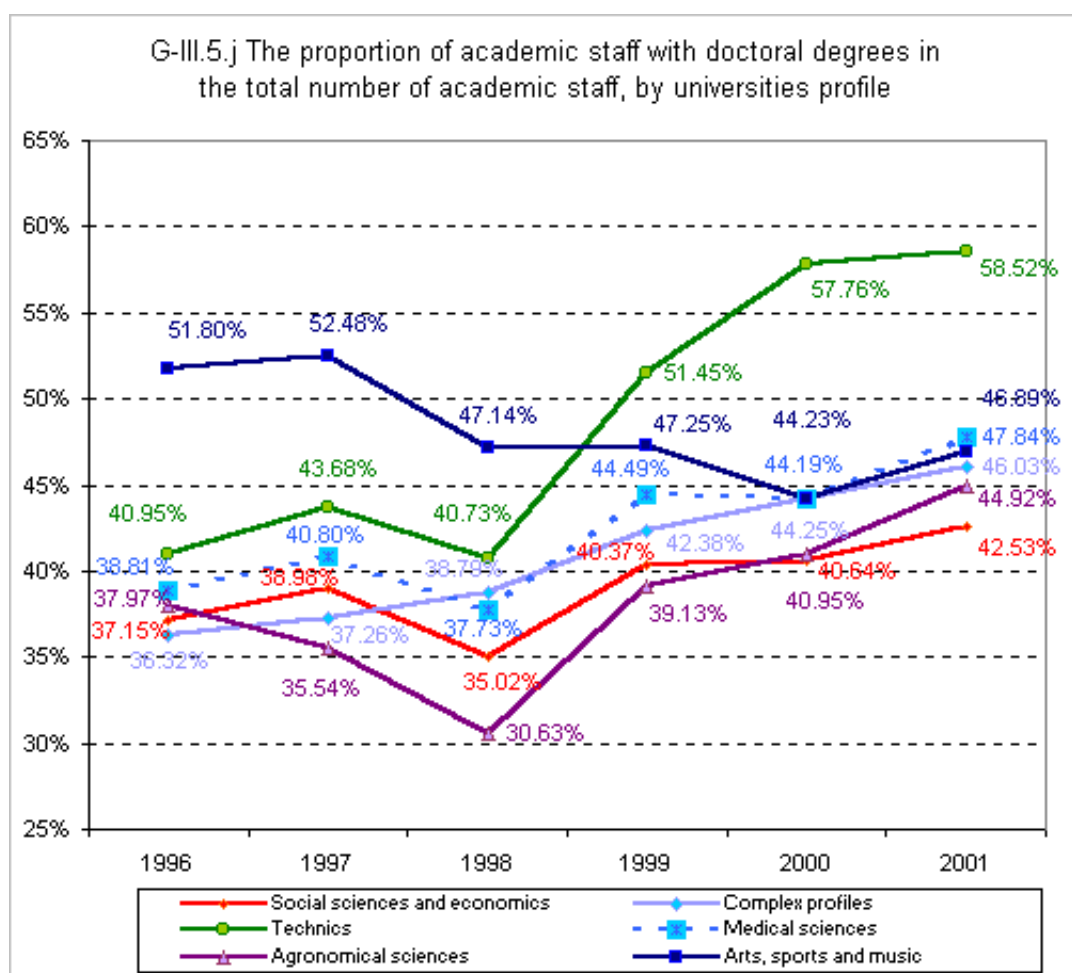- 14.09%, 17.98%, 22.87%, 30.97%, 36.99%, 39.57%
- 9.86%, 11.05%, 14.00%, 18.92%, 22.46%, 26.63%

G-III.5.j The proportion of academic staff with doctoral degrees in the total number of academic staff, by universities profile

III.6. **Increase the staff in accredited private higher education institutions** (the data from the CNEEA are in processing).

IV.   *Research:*

IV.1.   Increase in the support for fundamental research in universities (see the graphics G. IV.1.1, G. IV.1.2, G. IV.1.3.).

According to the information rising from questionnaire the sources of founds for research are coming from World Bank Loan (NURC), EU grants (NURC, ANSTI, Romanian Academy) and national programs (Orizont, National Plan for Research-Development and Innovation).

The diagram (G1) shows trends of the total amount of found available in universities for research from all funding sources.

There were presented both trends in ROL and USD equivalent. USD trend (G2) is aiming to give a real view on the level of existing founds because the trends in ROL are very sensitive to the inflation (G3).

The G2 asks for a more detailed analyze on the received dates consistence, followed by an analyze of the weight of every component (source of founds) within the indicator.

For example we received reliable dates about the EU founds only from 9 universities. Some universities sent descriptive information about EU founds research projects (table 4.4 from questionnaire asked for indicator IV.4) and, unfortunately, no any financial information about these projects (table 4.1 from questionnaire is blank).

At this moment we try to identify the existing mistakes within reported data and to find the way for make data more reliable.

IV.2.   Reduction in the number of years needed to complete doctoral programs (see the graphic IV.2.).

IV.3.   Increase in the success rate of Rumanian researchers seeking research funding from competitive European funding sources (see the graphic IV.3).

IV.4.   Increase in the number of academic staff/postgraduate and postdoctoral students involved in funded collaborative research with colleagues in foreign countries (graphic IV.4)**.**

IV.1. Increase in the support for fundamental research in universities

According to the information rising from questionnaire the sources of founds for research are coming from World Bank Loan (NURC), EU grants (NURC, ANSTI, Romanian Academy) and national programs (Orizont, National Plan for Research-Development and Innovation).
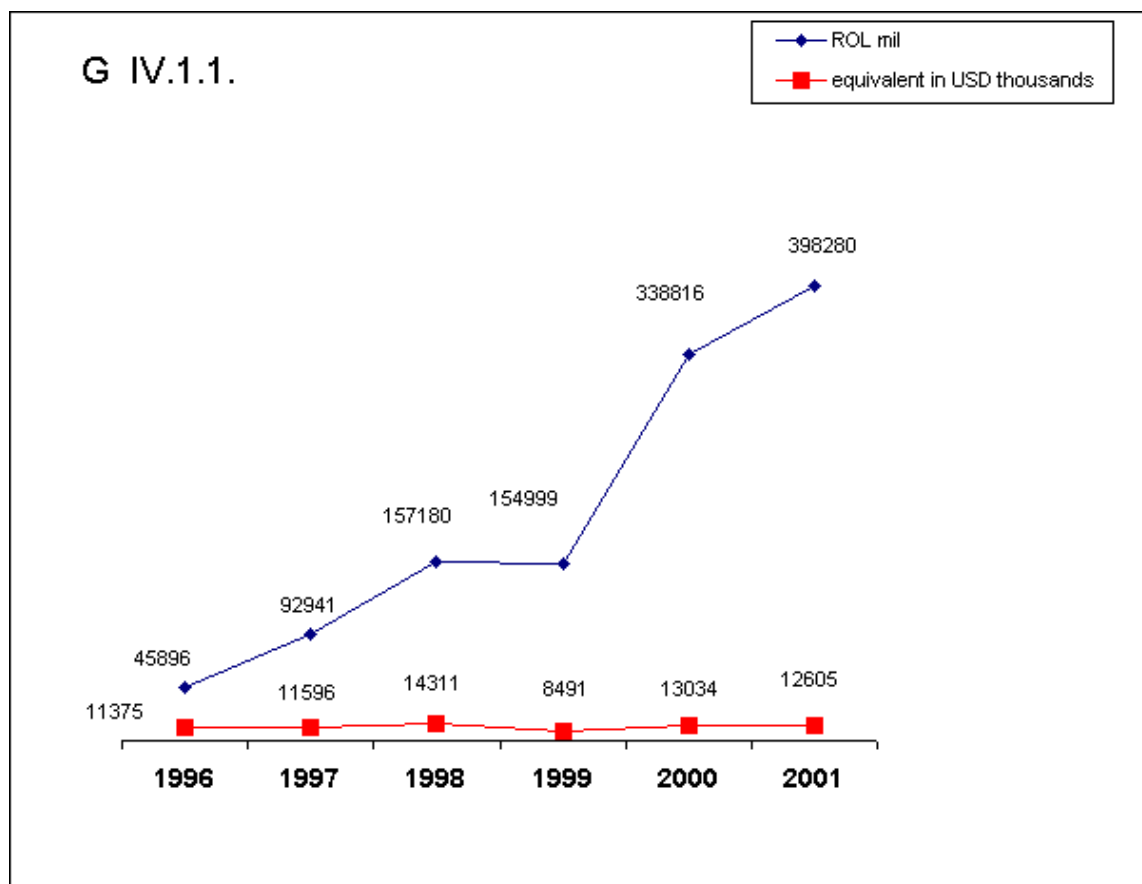
The diagram (G1) shows trends of the total amount of found available in universities for research from all funding sources.

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The G2 asks for a more detailed analyze on the received dates consistence, followed by an analyze of the weight of every component (source of founds) within the indicator.
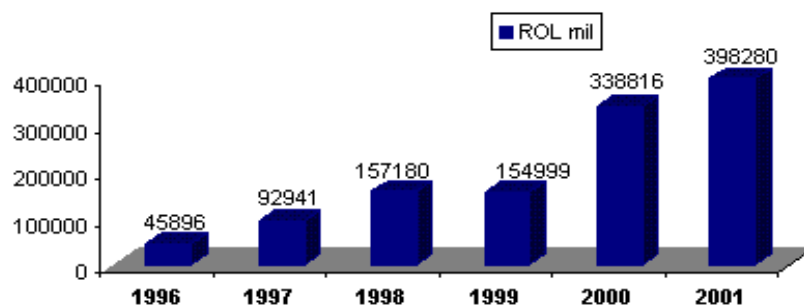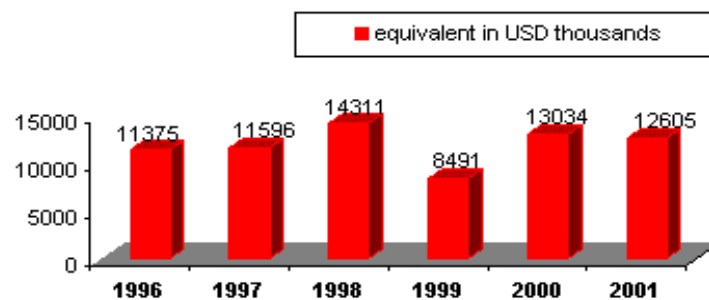
For example we received reliable dates about the EU founds only from 9 universities. Some universities sent descriptive information about EU founds research projects (table 4.4 from questionnaire asked for indicator IV.4) and, unfortunately, no any financial information about these projects (table 4.1 from questionnaire is blank).

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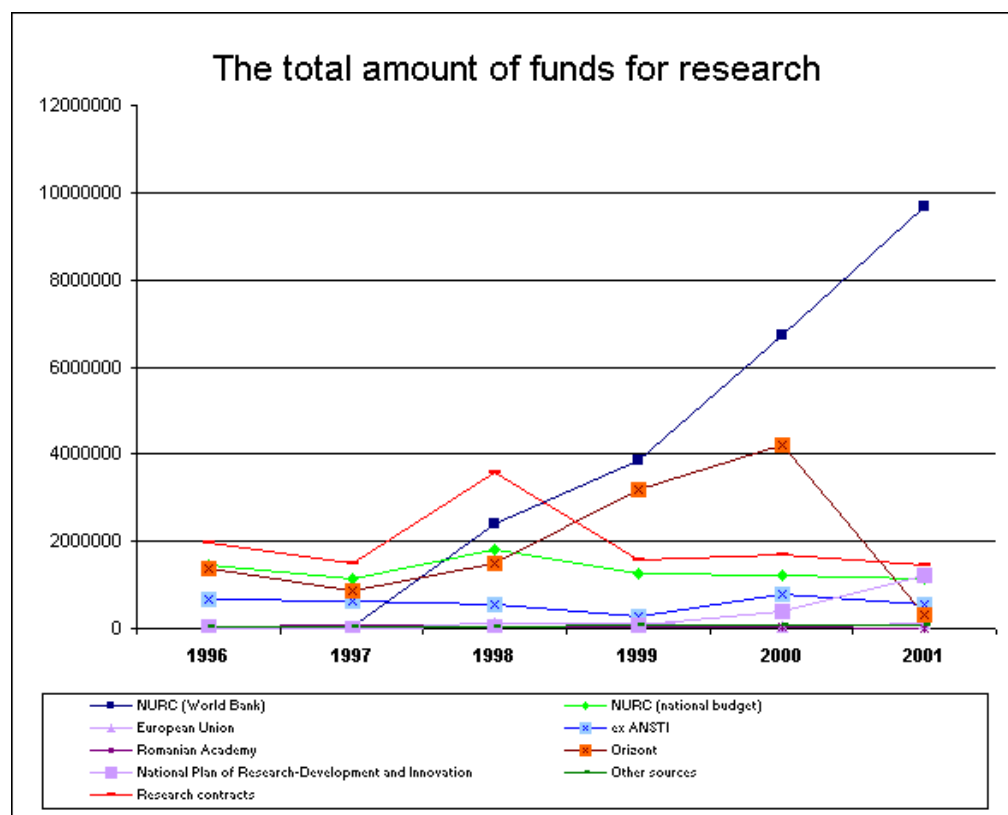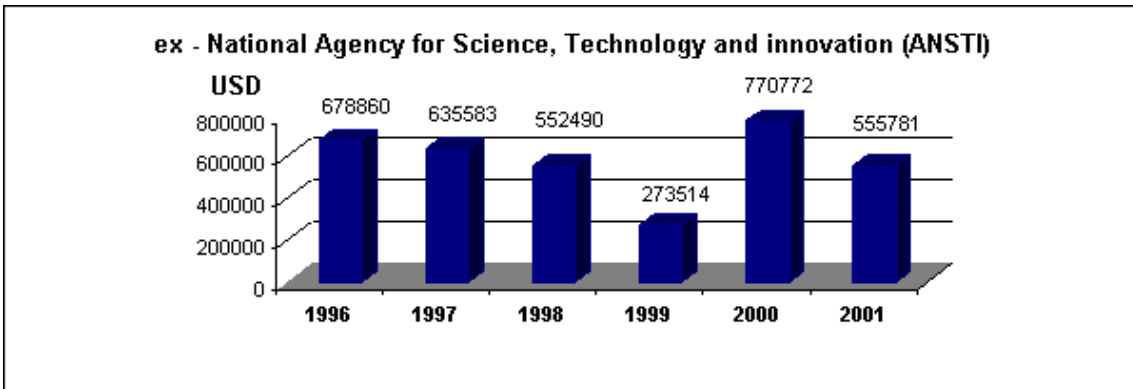
G IV.1.2.

equivalent in USD thousands

1996: 11375, 1997: 11596, 1998: 14311, 1999: 8491, 2000: 13034, 2001: 12605

ROL mil

1996: 45896, 1997: 92941, 1998: 157180, 1999: 154999, 2000: 338816, 2001: 398280

Other information regarding funding sources for academic and research activity

Funds for research programs:

The total amount of funds for research

NURC (World Bank), NURC (national budget), European Union, ex ANSTI, Romanian Academy, Orizont, National Plan of Research-Development and Innovation, Other sources, Research contracts

NURC (World Bank)

USD

Year	Value
1996	3470
1997	51117
1998	2392243
1999	3874502
2000	6738767
2001	9689401

NURC (national budget)

USD

Year	Value
1996	1443395
1997	1135021
1998	1827916
1999	1261046
2000	1232613
2001	1148938

European Union

USD

Year	Value
1996	0
1997	42757
1998	110808
1999	108737
2000	52152
2001	109517

ex - National Agency for Science, Technology and innovation (ANSTI)

USD

Year	Value
1996	678860
1997	635583
1998	552490
1999	273514
2000	770772
2001	555781

The Romanian Academy

USD

Year	Value
1996	33829
1997	78241
1998	45051
1999	30485
2000	22273
2001	8684

Orizont

USD

Year	Value
1996	1360297
1997	876222
1998	1480015
1999	3202942
2000	4215033
2001	330474

The National plan for Research-Development and Innovation

USD

Year	Value
1996	50682
1997	16625
1998	32505
1999	81457
2000	391179
2001	1203722

Research contracts

USD

Year	Value
1996	1957589
1997	1509420
1998	3561777
1999	1590030
2000	1706916
2001	1466247

Other sources

USD

Year	Value
1996	38281
1997	44977
1998	36811
1999	64891
2000	95849
2001	60525

the total amount of funds for research programs

USD

Year	Value
1996	5566394
1997	4389956
1998	10039607
1999	10481282
2000	15225546
2001	14573266

Funds for academic programs

The total amount of funds for academic programs

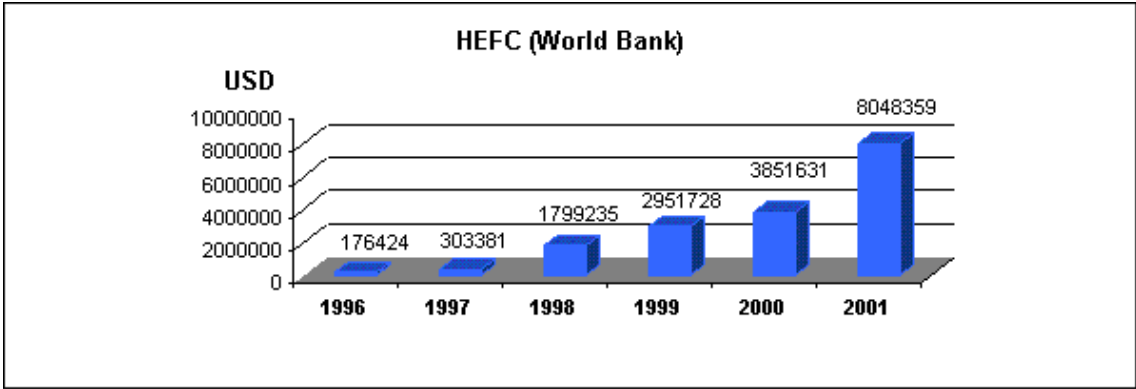Legend: World Bank (HEFC), TEMPUS, LEONARDO da VINCI, Other sources, SOCRATES (ERASMUS)

HEFC (World Bank)

USD

Year	Value
1996	176424
1997	303381
1998	1799235
1999	2951728
2000	3851631
2001	8048359

TEMPUS

USD

Year	Value
1996	30498637
1997	11832439
1998	8043522
1999	4922761
2000	3399804
2001	1438317

SOCRATES (ERASMUS)

USD

Year	Value
1996	0
1997	0
1998	3356251
1999	5126081
2000	3443637
2001	3910878

LEONARDO da VINCI

USD

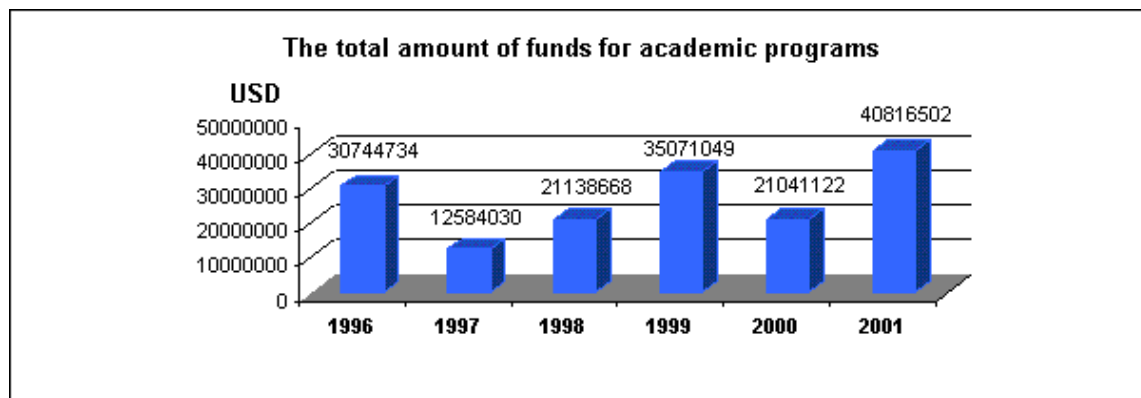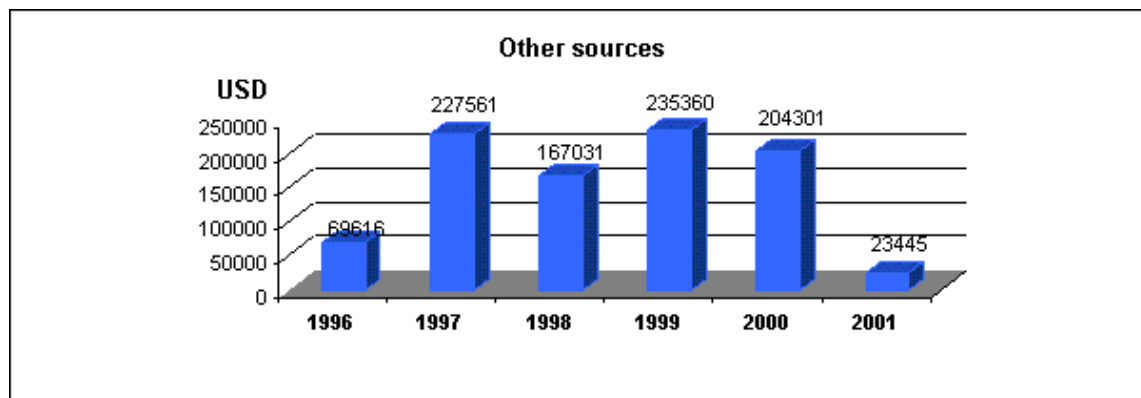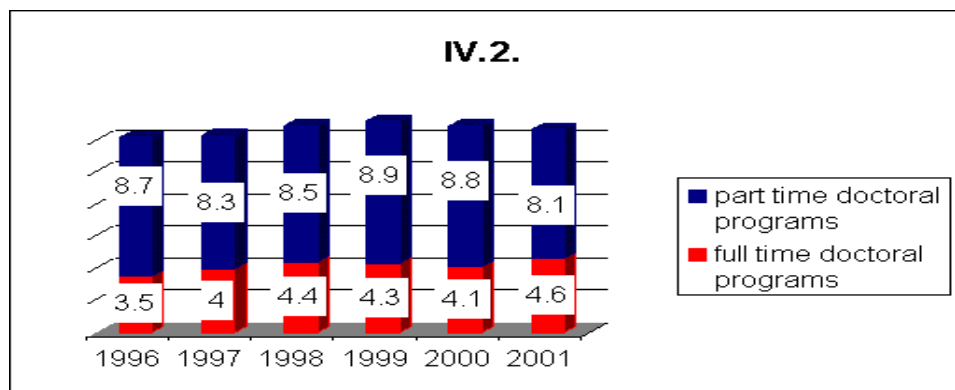| Year	Value
1996	0
1997	220711
1998	572840
1999	407822
2000	363027
2001	1477925

Other sources


The total amount of funds for academic programs

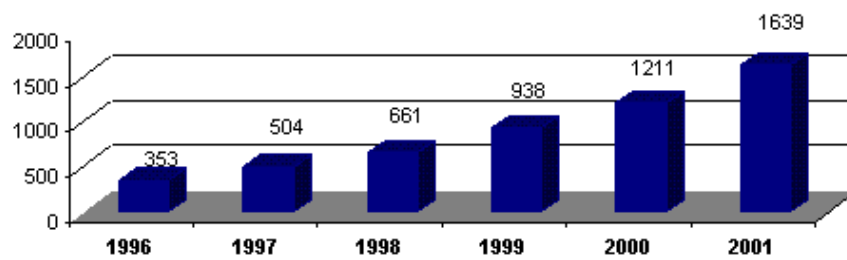**IV.2. Reduction in the number of years needed to complete doctoral programs**

The part time doctoral programs asks for a more in detail analyse from the point of view of average number of years need to complete a doctoral program, in the light of new regulation about PhD programs (37/1999).
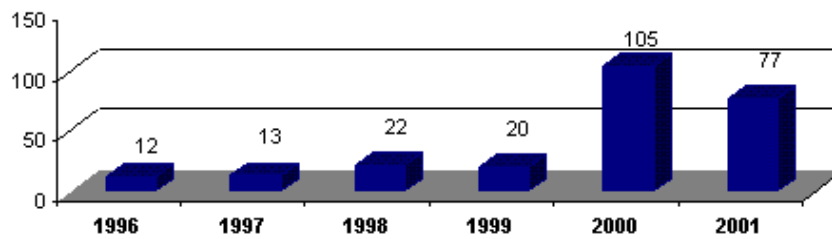
Other information regarding doctoral programs

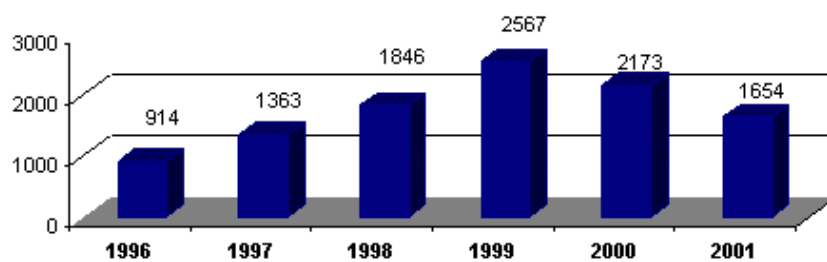**Number of PhD students - part time doctoral programs**

Year	Number
1996	15901
1997	17502
1998	18619
1999	20252
2000	20302
2001	22816
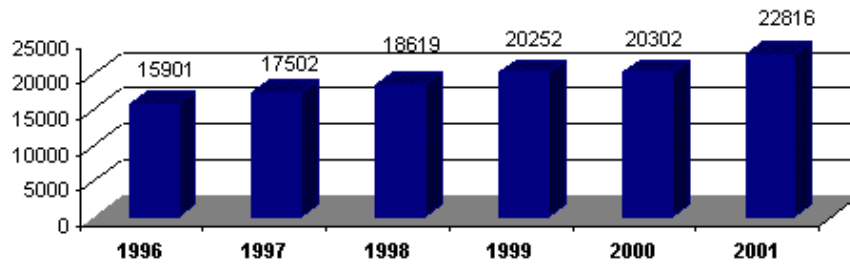
Number of PhD students - full time doctoral programs

Year	Number
1996	353
1997	504
1998	661
1999	938
2000	1211
2001	1639

Number of doctor's degree awarded - full time doctoral programs

Year	Number
1996	12
1997	13
1998	22
1999	20
2000	105
2001	77

Number of doctor's degree awarded - part time doctoral programs

Year	Number
1996	914
1997	1363
1998	1846
1999	2567
2000	2173
2001	1654

Number of posgraduate programs

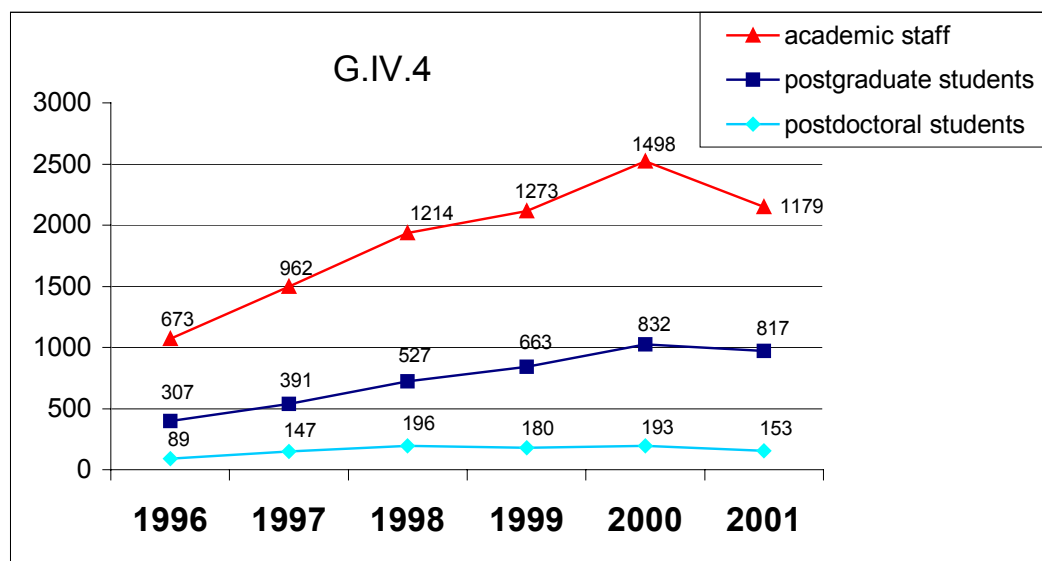Student enrolment at postgraduate programs
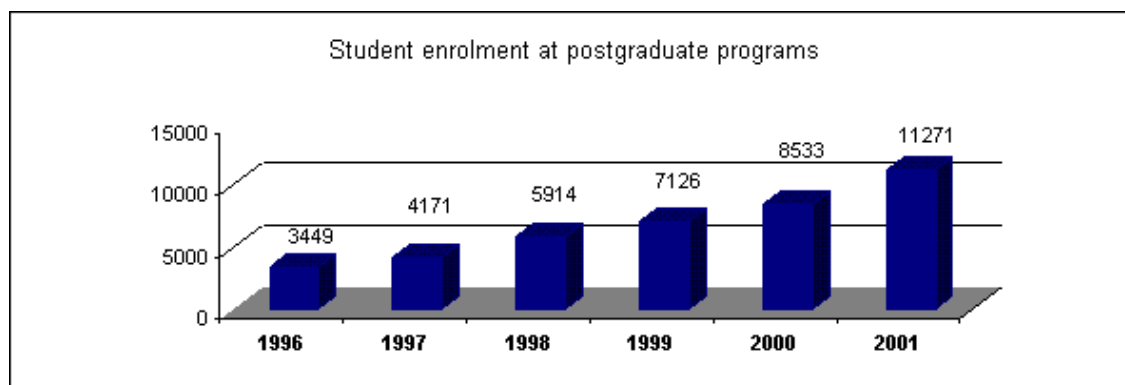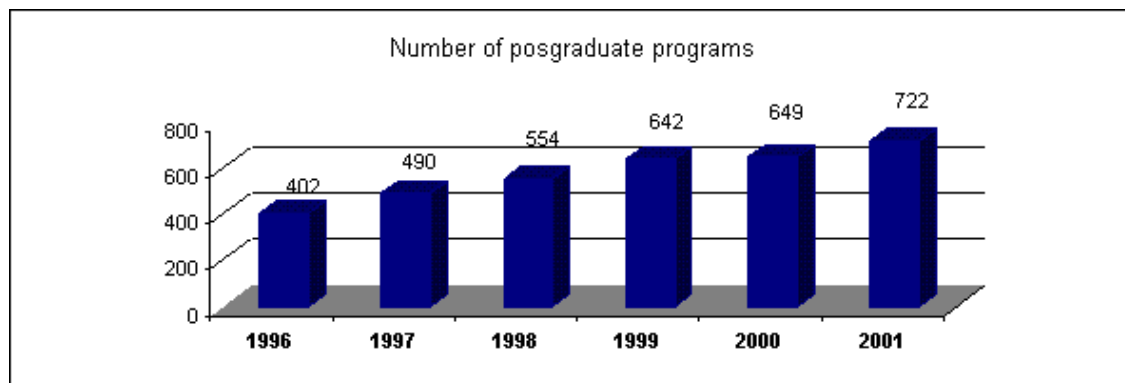
IV. 3 Increase in the success rate of Romanian researchers seeking research funding from competitive European funding sources (see the graphic IV.3).

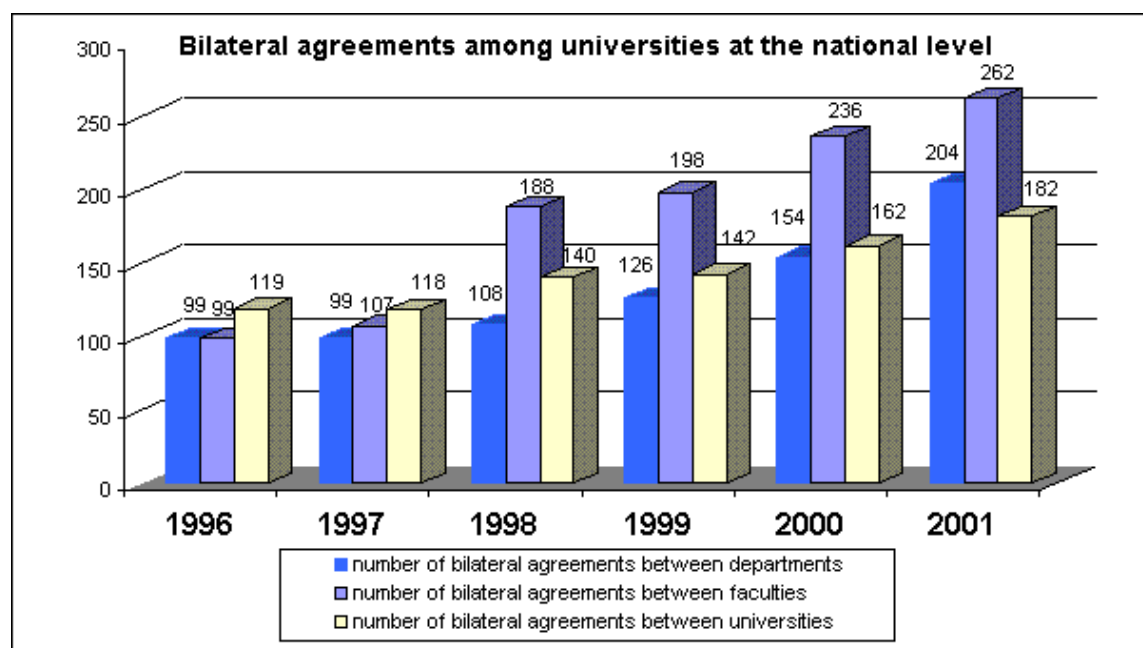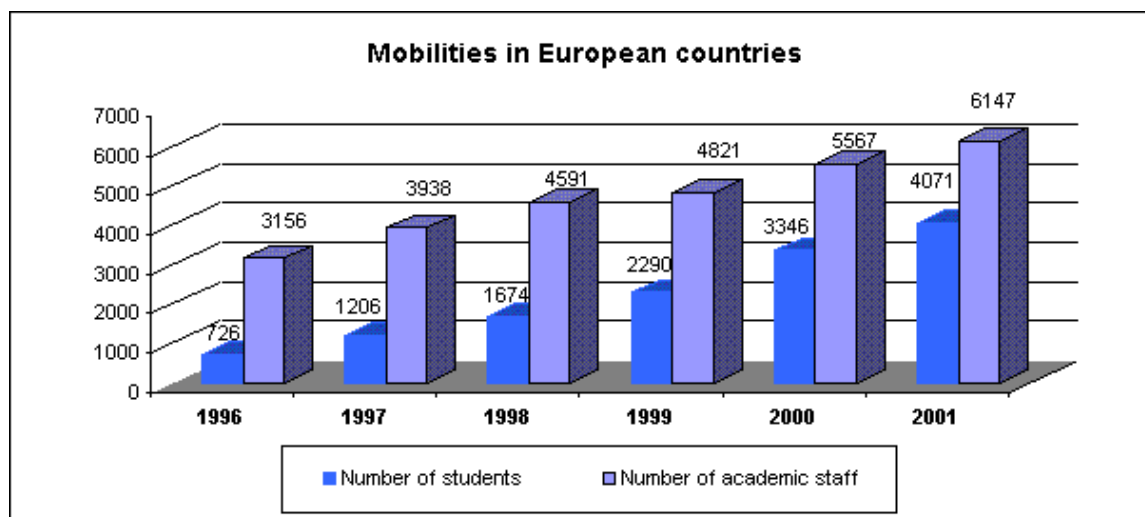Note: this information was received only from 9 universities

This information was received only from 9 universities (see the note from IV.1).
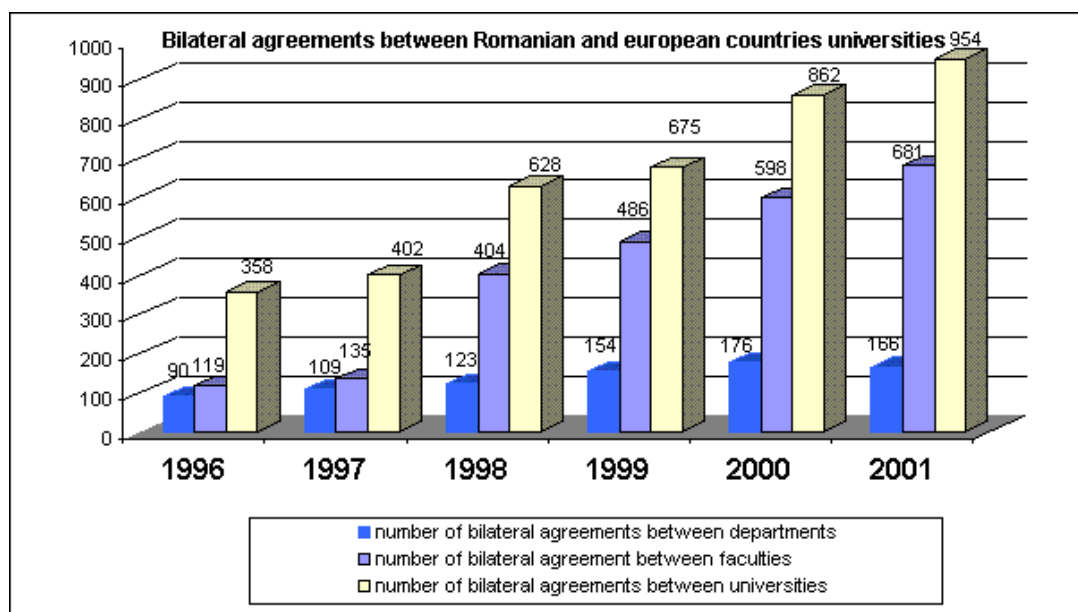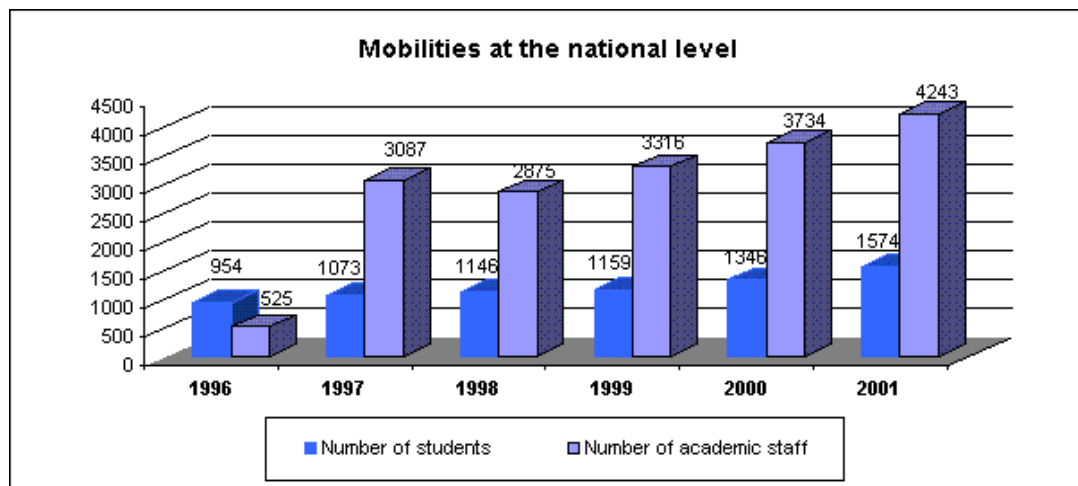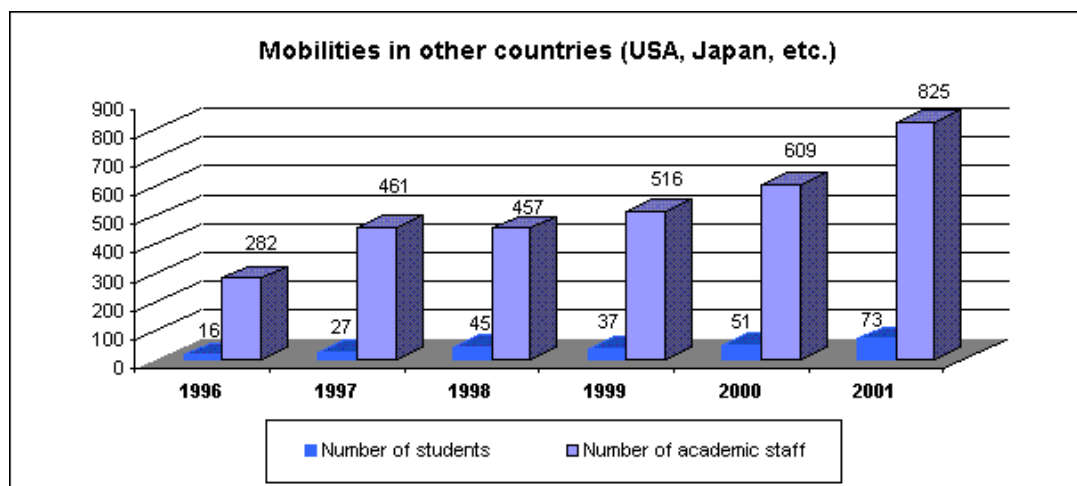
IV.4. Increase in the number of academic staff/postgraduate and postdoctoral students involved in funded collaborative research with colleagues in foreign countries (graphic IV.4).

G.IV.4

Legend: academic staff; postgraduate students; postdoctoral students

academic staff: 673 (1996), 962 (1997), 1214 (1998), 1273 (1999), 1498 (2000), 1179 (2001)
postgraduate students: 307 (1996), 391 (1997), 527 (1998), 663 (1999), 832 (2000), 817 (2001)
postdoctoral students: 89 (1996), 147 (1997), 196 (1998), 180 (1999), 193 (2000), 153 (2001)
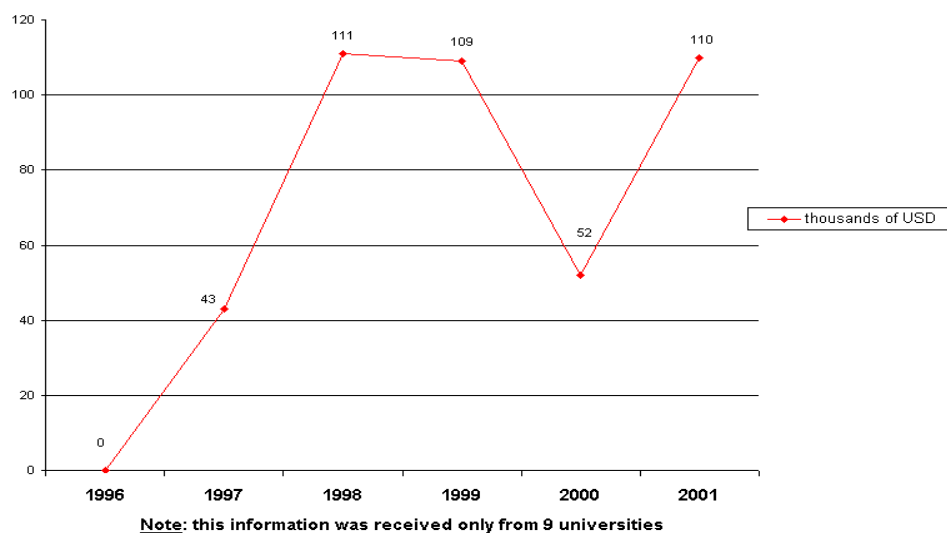
Other information regarding collaborative programs with colleagues from foreign countries

Bilateral agreements among universities at the national level

number of bilateral agreements between departments: 99 (1996), 99 (1997), 108 (1998), 126 (1999), 154 (2000), 204 (2001)
number of bilateral agreements between faculties: 99 (1996), 107 (1997), 188 (1998), 198 (1999), 236 (2000), 262 (2001)
number of bilateral agreements between universities: 119 (1996), 118 (1997), 140 (1998), 142 (1999), 162 (2000), 182 (2001)

Mobilities at the national level

Year	Number of students	Number of academic staff
1996	954	525
1997	1073	3087
1998	1146	2875
1999	1159	3316
2000	1346	3734
2001	1574	4243

Bilateral agreements between Romanian and european countries universities

Year	number of bilateral agreements between departments	number of bilateral agreement between faculties	number of bilateral agreements between universities
1996	90	119	358
1997	109	135	402
1998	123	404	628
1999	154	486	675
2000	176	598	862
2001	166	681	954

Mobilities in European countries

Year	Number of students	Number of academic staff
1996	726	3156
1997	1206	3938
1998	1674	4591
1999	2290	4821
2000	3346	5567
2001	4071	6147

Bilateral agreements between Romanian and other countries universities (USA, Japan, etc.)

Chart values by year:

Year	number of bilateral agreements between departments	number of bilateral agreements between faculties	number of bilateral agreements between universities
1996	19	16	68
1997	21	20	83
1998	24	19	109
1999	32	28	107
2000	38	29	127
2001	41	38	128

Mobilities in other countries (USA, Japan, etc.)

Year	Number of students	Number of academic staff
1996	16	282
1997	27	461
1998	45	457
1999	37	516
2000	51	609
2001	73	825

V. ***Institutional Management*** (*the data form universities are currently compared and consolidated with the data from other sources*)***:***

V.1. **Increase in use of forward budget planning by institutions and cost, efficiency performance based internal resource allocation mechanisms.**

V.2. **Increase in the number of institutions carrying out cyclical review of academic programs.**

V.3. **Increase in the proportion of institutional budgets allocated on a discretionary basis.**

V.4. **Increase in the number of institutions establishing specialised units with professionally trained staff to manage student financial support and services, recruit private financing, use of physical and financial assets and alumni relations, use of**
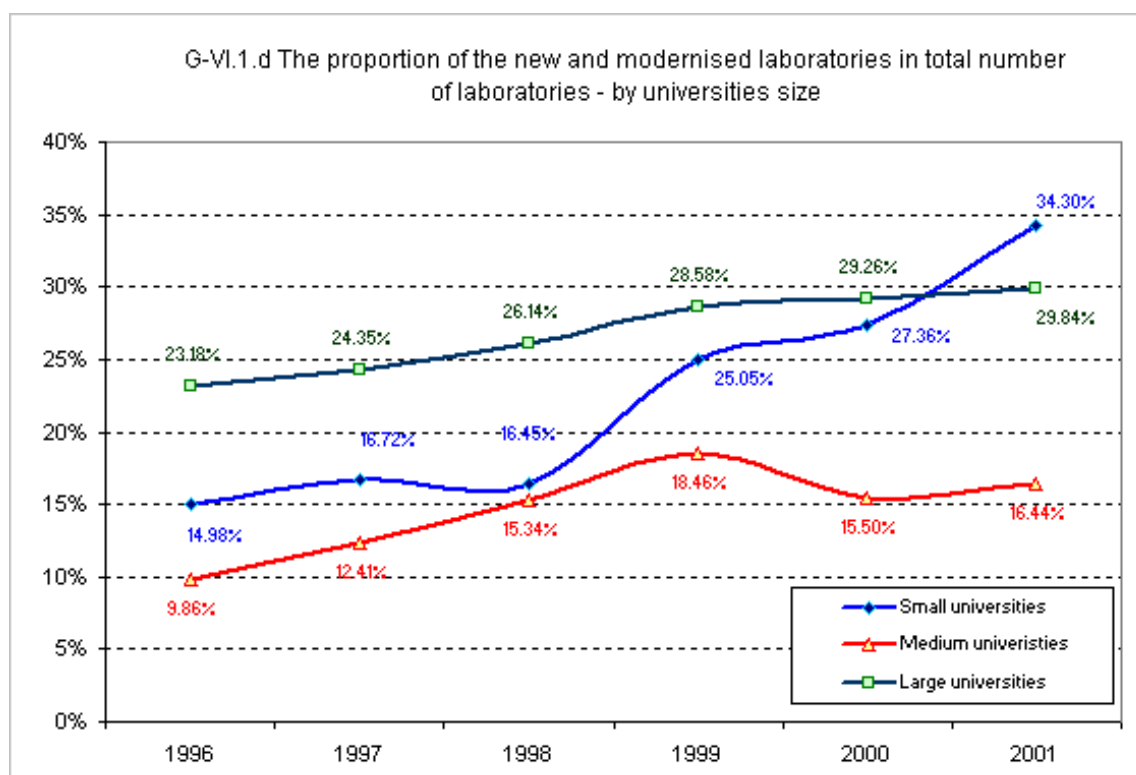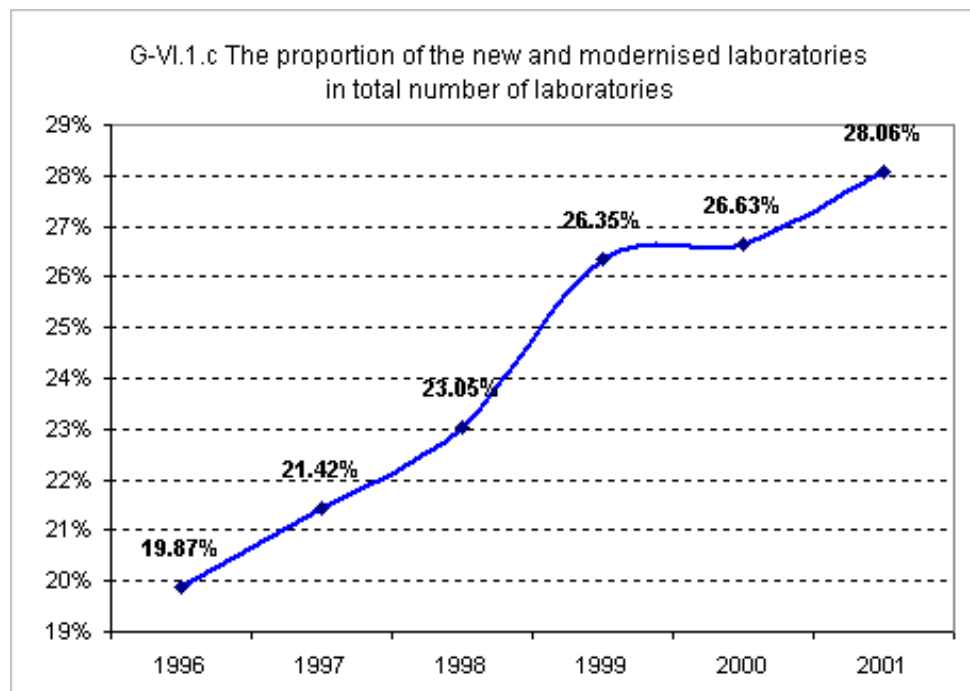
instructional and research facilities, instructional support services, research funding and industrial relations, and personnel services.
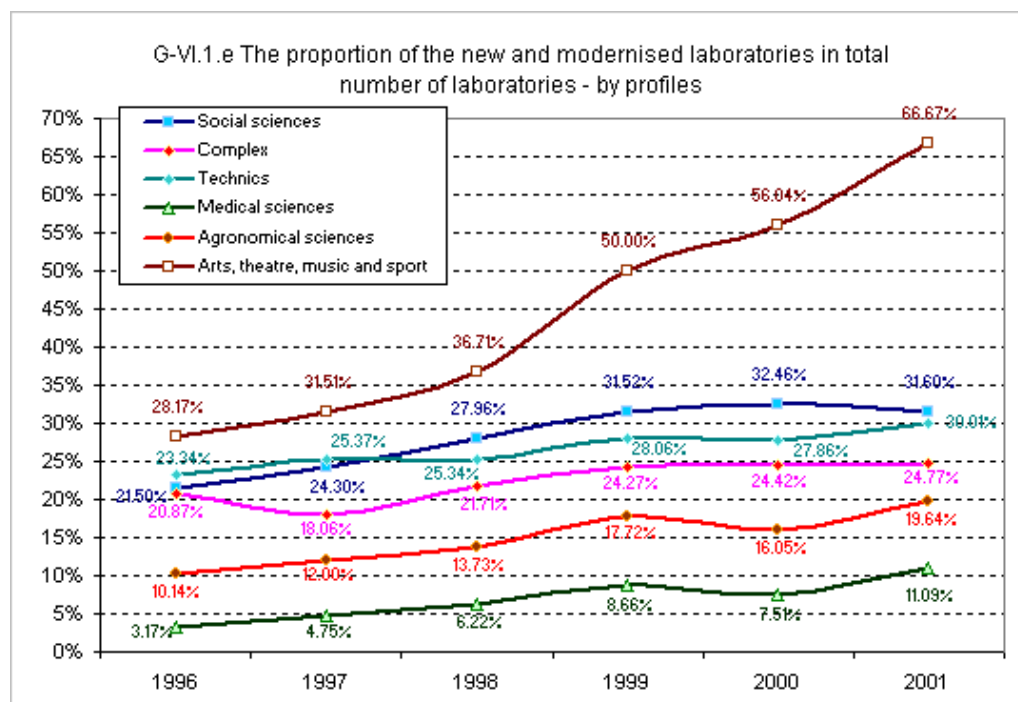
VI. *Curricula Improvement and New Teaching/ Evaluation Methods*

VI.1. Increase in new and modernised labs

See the graphic G-VI.1. The number new and modernized laboratories.

G-VI.1.a The number of new and modernised laboratories

G-VI.1.b The structure of the new and modernised laboratories

G-VI.1.c The proportion of the new and modernised laboratories
in total number of laboratories

G-VI.1.d The proportion of the new and modernised laboratories in total number
of laboratories - by universities size

53

G-VI.1.e The proportion of the new and modernised laboratories in total number of laboratories - by profiles

VI.2.   Increase in new teaching programs

See the graphic G-VI.2. The number of new teaching programs.

G-VI.2.a The proportion of new teaching programs

G-VI.2.b The number of new teaching programs in the total number of teaching programs

G-VI.2.c New teaching programs
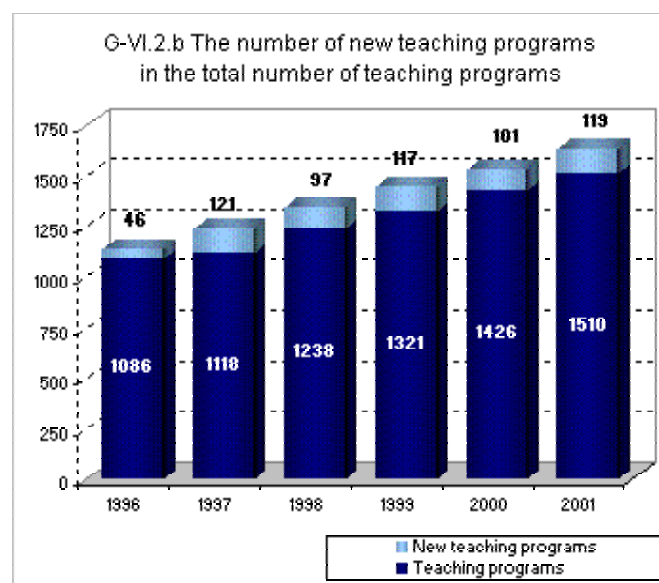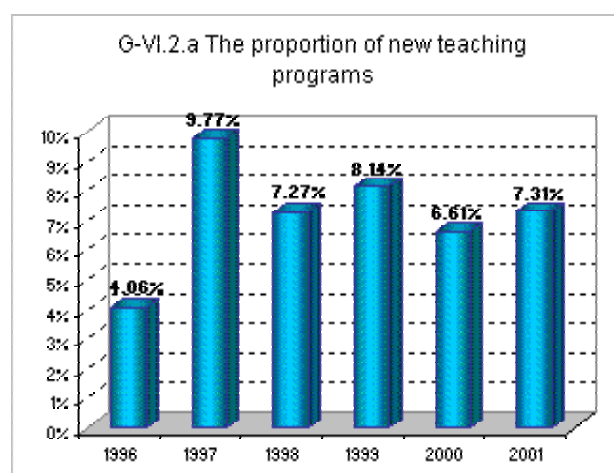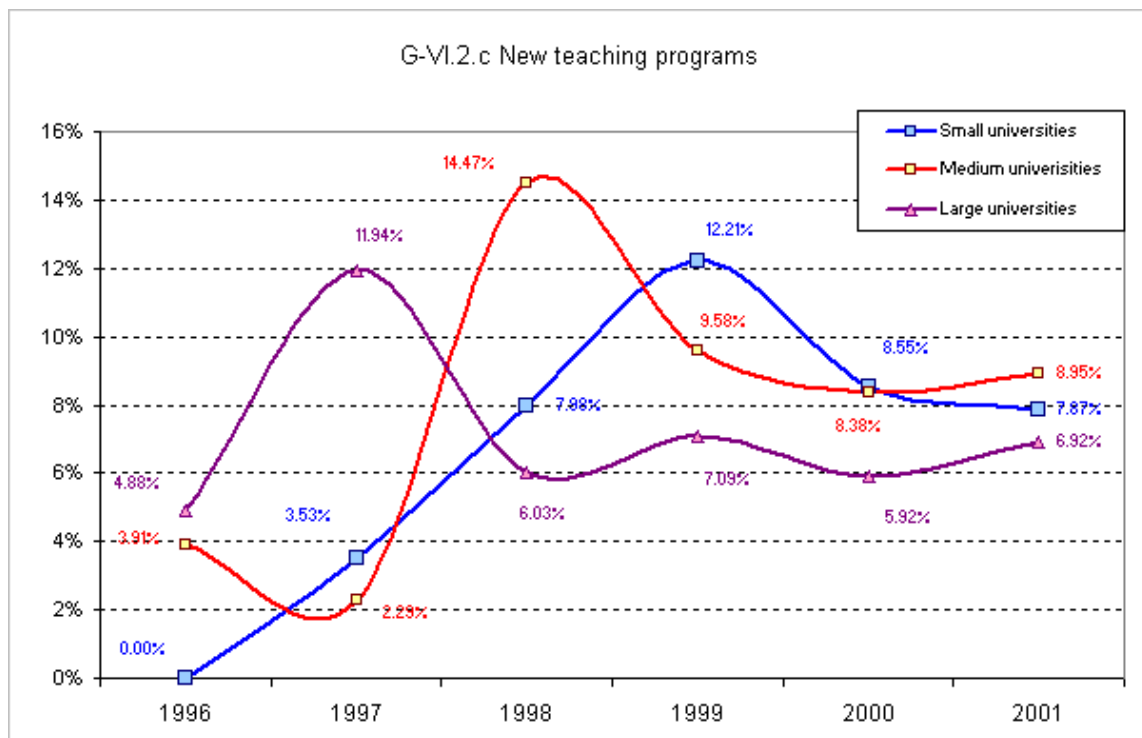
VI.3. **Increase in multi-media teaching materials** (*the data form universities are currently compared and consolidated with the data from other sources*)

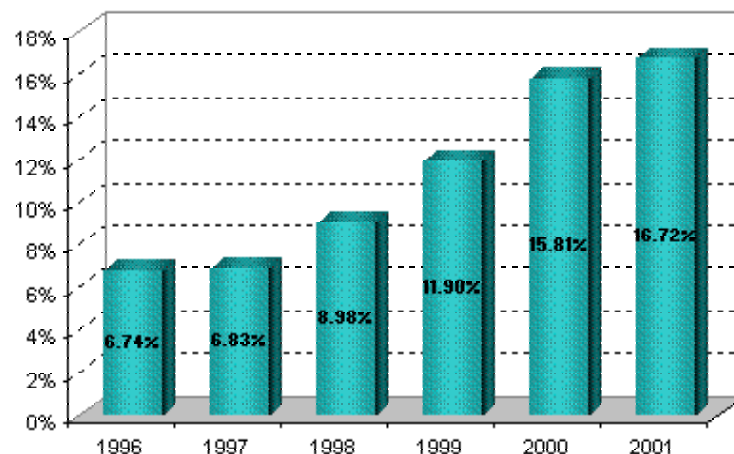G-VI.3.a The proportion of multi-media teaching materials
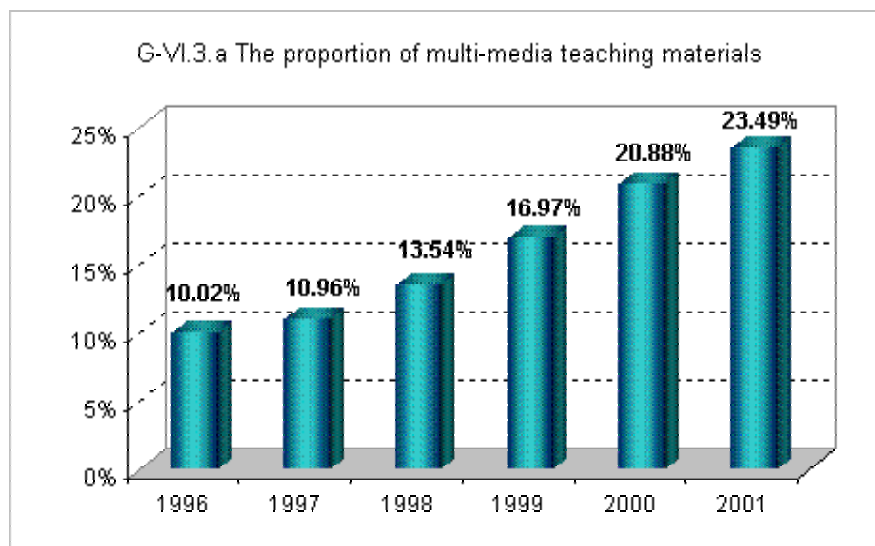
G-VI.3.b The proportion of multi-media teaching methods
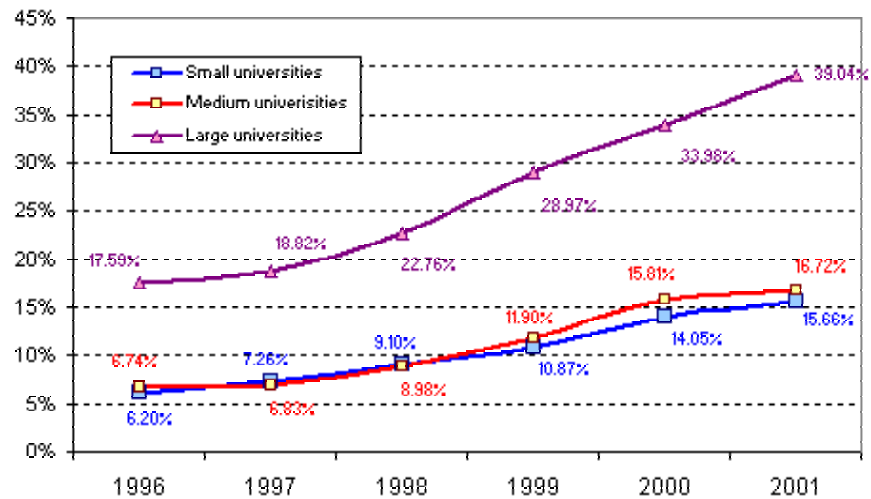
G-VI.3.b-1 The proportion of multi-media teaching methods for small universities (less than 5,000 students)
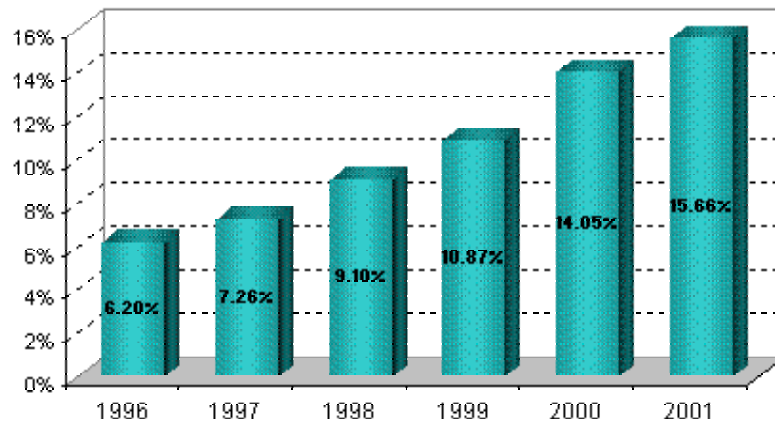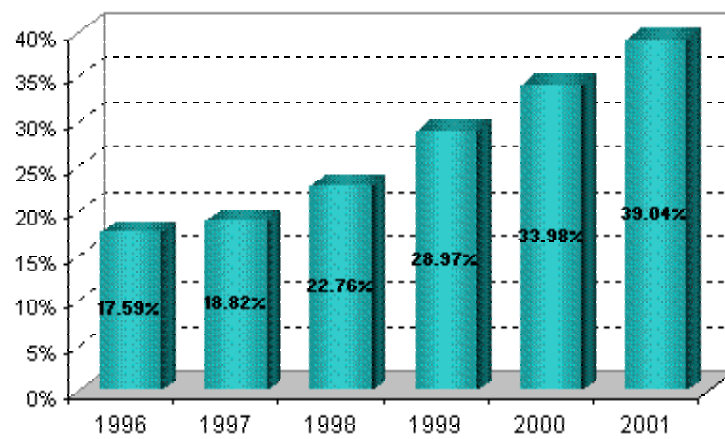

G-VI.3.b-2 The proportion of multi-media teaching methods for medium universities (the students number between 5,000 and 10,000 students)
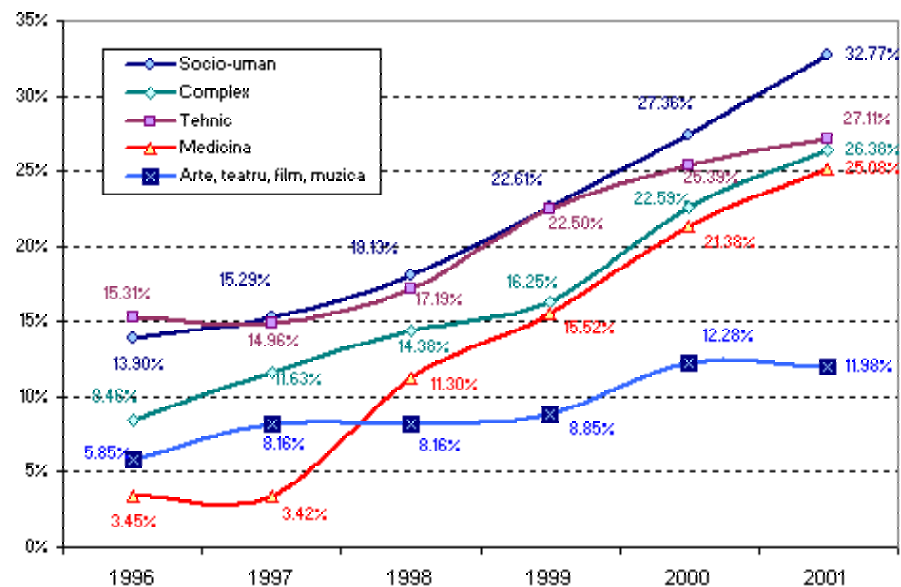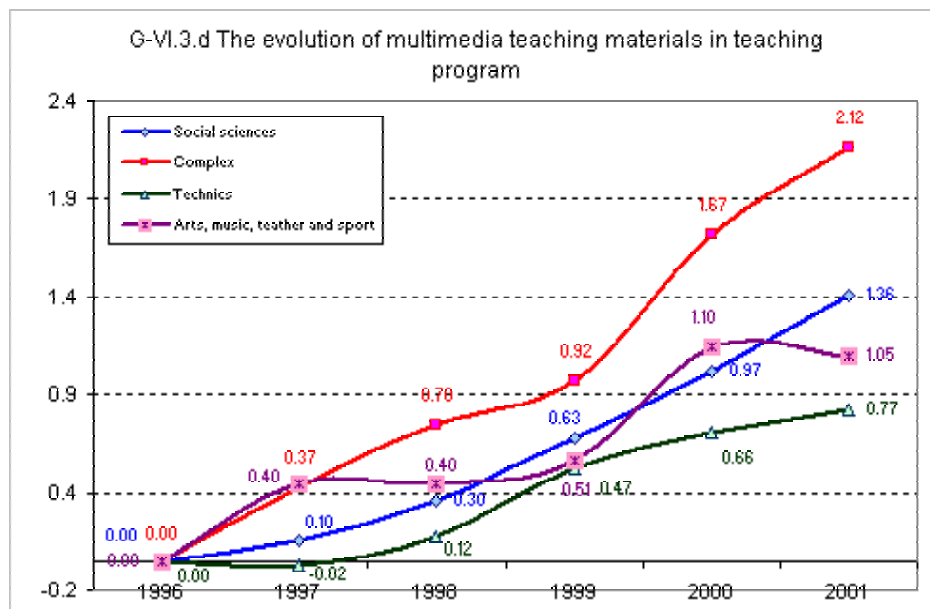
G-VI.3.b-3 The proportion of multi-media teaching methods for large universities (more than 10,000 students)

G-VI.3.c The proportion of multi-media teaching materials - by profiles

G-VI.3.d The evolution of multimedia teaching materials in teaching program

VI.4. **Increase in training stages abroad** (in no. of weeks) **for**

   VI.4.a. academic staff

   VI.4.b. student

(*the data form universities are currently compared and consolidated with the data from other sources*)