

# AN ANALYSIS OF EXPENSES STRUCTURE OF HIGHER EDUCATION SCHOOLS IN 2004-2009

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## **Summary:**

*In 2004-2009 the costs of universities activity were systematically growing. Didactical activity was generating the highest costs. These costs exceeded the incomes and non-public universities showed surpluses of income.*

*Public universities showed slight surplus of income over costs of research activity. Whereas, as we consider non-public universities, their costs of research activity significantly exceeded incomes from this activity.*

*Universities had a rigid costs structure. Remunerations constituted the highest share in costs.*

## **Key words**

*Public universities, non-public universities, budget expenses, tangible asset-related and financial plan, unit education cost*

Facing the crisis and little less money spent on education, universities will be forced to rationalize a division of financial sources. However, it is important that all the actions taken in this context will not affect the quality of education and research activity.

## **1. Introduction**

The act of 27<sup>th</sup> July, 2005 – Higher Education Law<sup>1</sup> defined a university as a school providing higher education.

A public university is an institution established by the state which is represented by a proper organ of authority or public administration. On the other hand non-public university is an institution established by a natural person or a legal person that is not a state of self-government legal person.

The act on Higher Education Law guarantees an autonomy to a university in every area of activity on the basis of three general rules: the rule of freedom of education, freedom of scientific research and freedom of artistic creativity.

A university may manage a separate business activity due to organization and finances. An independence in financial resources management is guaranteed to the institution.

The regulation of the Council of Ministers of 22<sup>nd</sup> December, 2006 on detailed rules of financial management of public universities<sup>2</sup> includes regulations according to the rules of financial management of public universities in relation to regulations of the act on accounting. A subjective regulation normalized the rules of financial management of

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<sup>1</sup> The act of 27th July, 2005. – Higher Education Law (Journal of Law No. 164, item 1365 as amended)

<sup>2</sup> The regulation of the Council of Ministers of 22<sup>nd</sup> December, 2006 on detailed rules of financial management of public universities (Journal of Law No.256,item 1796). The regulation came into law on 1<sup>st</sup> January, 2007 and it was preceded by a regulation of the Council of Ministers of 27<sup>th</sup> August, 1991 on detailed rules of financial management of public universities (Journal of Law No. 84, item 380 and No. 112, item 485 and of 2005 No. 101, item 842).

public universities in the area pointed in instructions included in Article 105 of the act on Higher Education Law which is not regulated by this act.

## **2. Areas of costs generation of higher education schools**

According to the regulation of the Council of Ministers of 22<sup>nd</sup> December, 2006 on detailed rules of financial management of public universities, a public university is obliged to prepare an annual tangible asset-related and financial plan, which covers:

- 1) Revenues and costs of a basic operational activity;
- 2) The remaining revenues and operational costs;
- 3) Revenues and financial costs;
- 4) Financial result;
- 5) Funds;
- 6) Information about employment and remunerations.

Additionally a public university submits information about:

- 1) The number of students and participants of post-graduate studies divided on the basis of the form of studies;
- 2) The number of students and participants of post-graduate studies using different forms of financial help;
- 3) The number of places in dormitories;
- 4) Costs of building renovations and premises and buildings of civil engineering, excluding dormitories and canteens;
- 5) Expenses on tangible fixed assets.

The basic operational activity including separate business activity is managed by an organizationally separate unit of a public institution and the cost of which are covered from the revenues gained. A financial outcome from business activity is a component part of a public institution outcome and is allocated for its statutory purposes.

In an annual tangible asset-related and financial plan a public university includes information about employment and remunerations resulting from employment in groups of employees on posts, divided according to personal remuneration and additional annual remuneration with the separation of resources for awards (vice-chancellor's award granted on the basis of rules specified in a statutes of a university).

A public university settles the costs according to the kinds of activities. Costs settlement according to the kinds of activities (didactical activity, research activity, separate business activity) is conducted on the basis of cost register which is based on a generic and calculation section, ensuring preparation of financial statements.

A vice-chancellor of a public university determines rules (politics) of accounting which regulates a register and costs settlement in detail.

According to the regulation of the Council of Ministers of 22<sup>nd</sup> December, 2006 on detailed rules of financial management of public university a basic operational activity of a public university includes such activities as:

- 1) didactical,
- 2) research,
- 3) separate business.

The amount of revenues and own costs according to the kind of activities managed by higher education schools in 2004-2009 is presented in the following Table.

Table 1: Revenues and own costs according to a kind of activity managed by a higher education school (in thousand, PLN).

	Revenues (in thousand, PLN)			Own costs (in thousand, PLN)		
	from didactical activity	from research activity	from separate business activity	of didactical activity	of research activity	of separate business activity
<b>Public universities</b>						
2004	8 988 232,7	1 358 613,2	75 197,8	9 260 612,7	1 345 517,8	76 872,1
2005	10 355 307,2	1 422 070,3	88 394,4	10 572 813,5	1 414 493,4	186 465,9
2006	10 529 959,9	1 499 629,9	88 340,6	10 829 025,6	1 488 560,4	102 627,5
2007	11 315 685,6	1 896 200,2	86 771,2	11 252 321,0	1 885 549,7	112 877,0
2008	11 753 624,0	2 057 236,6	98 934,7	11 940 906,2	2 054 091,3	112 833,9
2009	12 389 974,1	2 277 016,9	86 303,6	12 557 407,1	2 263 483,6	115 286,6
	Revenues (in thousand, PLN)			Own costs (in thousand, PLN)		
<b>Non-public universities</b>						
2004	1 962 501,2	7 712,6	9 501,7	1 851 161,8	13 080,7	8 670,9
2005	2 074 143,0	14 337,1	12 066,2	1 942 330,5	24 648,8	24 857,6
2006	2 243 420,7	33 412,6	15 004,6	2 125 079,2	27 413,9	26 737,4
2007	2 425 691,9	36 661,0	11 441,2	2 270 295,3	49 160,2	15 869,6
2008	2 485 748,8	35 128,5	8 144,6	2 314 601,9	69 235,0	17 303,5
2009	2 782 353,4	53 502,1	7 979,5	2 659 653,0	78 674,0	22 700,8
	Revenues (in thousand, PLN)			Own costs (in thousand, PLN)		
<b>Universities in total</b>						
2004	10 950 733,9	1 366 325,8	84 699,5	11 111 774,5	1 358 598,5	85 543,0
2005	12 429 450,2	1 436 407,4	100 460,6	12 515 144,0	1 439 142,2	211 323,5
2006	12 773 380,6	1 533 042,5	103 345,2	12 954 104,8	1 515 974,3	129 364,9
2007	13 741 377,5	1 932 861,2	98 212,4	13 522 616,3	1 934 709,9	128 746,6
2008	14 239 372,8	2 092 365,1	107 079,3	14 255 508,1	2 123 326,3	130 137,4
2009	15 172 327,5	2 330 519,0	94 283,1	15 217 060,1	2 342 157,6	137 987,4

Source: *Szkoły wyższe i ich finanse w ...*, Informacje i opracowania statystyczne GUS za lata 2004-2009

### 3. A structure of costs form didactical activity of universities in 2004-2009

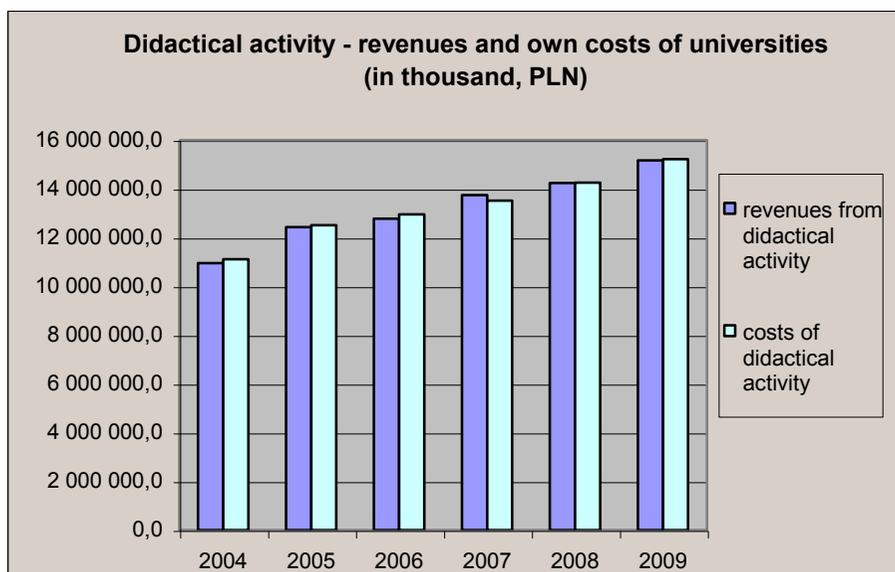
Costs of didactical activity include costs connected with:

- 1) a didactical process during studies, doctoral studies, post-graduate studies and trainings and realization of activities mentioned in Article 94(1) point 2-6, 8,9, and 11 of the act;
- 2) training activities for the teaching personnel;
- 3) maintenance of universities (including renovations), with the exclusion of dormitories and canteens;
- 4) carrying out other activities undertaken by a university within the framework of didactical activity which financed from revenues from didactical activities.

In 2004-2009b revenues and costs from didactical activity of public and non-public universities were systematically growing. Costs of didactical activity of public universities exceeded the revenues. In 2007 the revenues from didactical activity of public universities were higher than incurred costs and in two following years it stayed the same. In the analyzed years 2004-2009 dynamics of costs increase of didactical activity was slightly lower than dynamics of revenues growth: costs increased by 36,9%, revenues by 38,6%.

In the analyzed period 2004-2009 non-public universities showed excess of revenues over costs of didactical activity of about 5%-7%.

Chart 1 : Revenues and costs of didactical activity of universities, 2004-2009 (in thousand, PLN)



Source: *self-study*

#### 4. A structure of costs of research activity of universities in 2004-2009

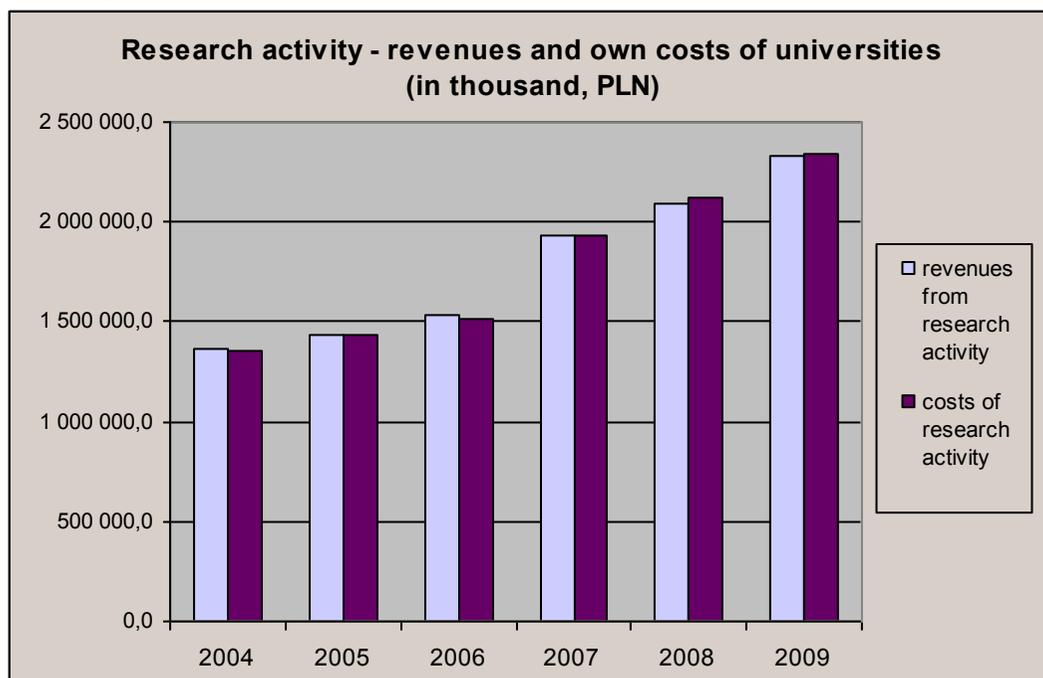
Costs of research activity include costs connected with research activity and development works and research services which are financed from revenues from research activity.

Costs of research activity are settled according to sources of financing and in particular within the framework of:

- 1) resources from budgets (resources gained from the state budget, as stated in Article 97 of the act and resources from the units of territorial self-government or its unions, as stated in Article 94(6), according to the scope of research activity;
- 2) resources from non-refundable foreign assistance;
- 3) fees from services (fees for services, as stated in Article 98(1) point 6 of the act, with the exclusion o revenues form cultural activity).

Revenues and costs of research activity of public and non-public universities were systematically growing. In the analyzed period dynamics of costs of research activity growth exceeded dynamics of revenues growth: costs increased by 72,4%, revenues increased by 70,6%. In the period public universities showed a slight surplus of revenues over costs of research activity. However, non-public universities, with the exception of 2006, showed significant surplus of costs of research activity over revenues resulting from significant dynamics of costs increase significantly exceeding dynamics of revenues. Costs of this kind of activity of non-public universities amounted to 19,7% of revenues in 2008.

Chart 2 : Revenues and costs of research activity of universities in Poland, 2004-2009 (in thousand, PLN)

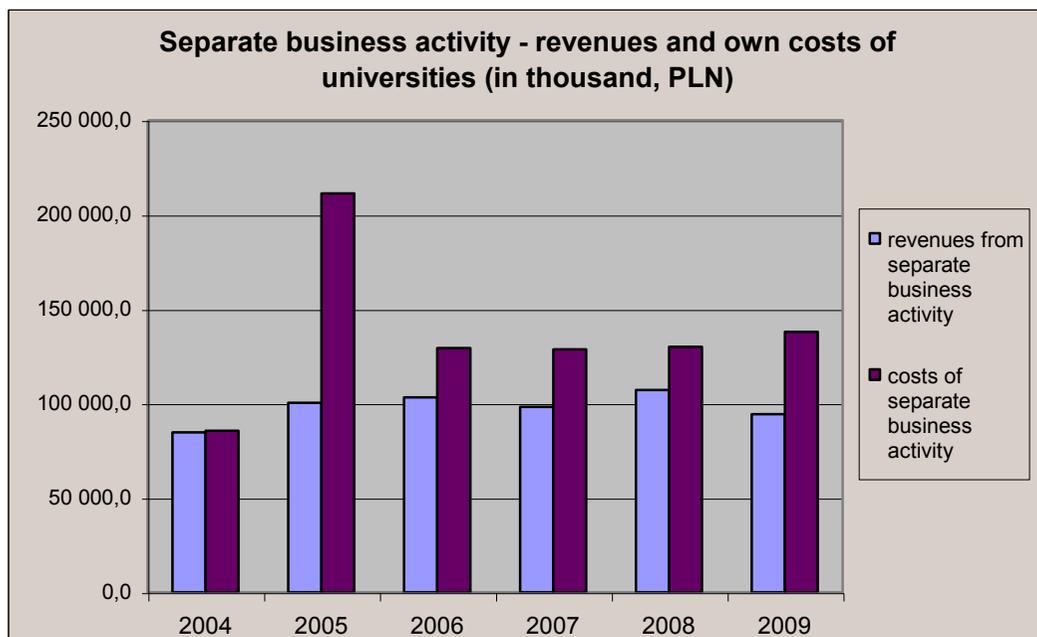


Source: *self-study*

##### **5. A structure of costs of a separated business activity of universities, 2004-2009**

In 2004-2009 costs of separate business activity of public and non-public universities exceeded revenues. Both revenues and costs of separate business activity of universities showed variable dynamics. The highest growth of costs of universities by 125.780,5 thousand PLN was in 2005 (e.g.. almost 2,5 times in relation to 2004) and exceeded twice the amount of universities' revenues from this activity. Costs of separate business activity of non-public universities in 2005 and 2008-2009 exceeded twice the amount of revenues from this activity.

Chart 3: Revenues and costs of separate business activity of universities in Poland in 2004-2009 (in thousand, PLN)



Source: *self-study*

Total costs of universities activity include:

- costs of operational activity which are own costs of operative activity ( e.g. generic costs and balance of changes of products state) from the values of sold goods and materials, from the remaining operational costs,
- financial costs, including major interest and commissions on credits and loans, negative exchange rate differences, losses of sold securities and costs connected with their transfer, interest and fees for received leased financial fixes assets and also default interest on financial liabilities.

#### **6. A structure of generic costs of universities in 2004-2009**

Costs of basic operational activity which are understood on the basis of source documents as specified kinds of activities are treated as direct costs. Costs of universities activity, including costs of remunerations and generic costs which are not included in direct costs of specified activities, constitute indirect costs. Indirect costs can be divided into faculty costs and general costs of a university. The way and rules of indirect costs settlement with reference to particular kinds of activities and maintenance of dormitories and canteens are stated by vice-chancellor, unless concluded agreements provide otherwise.

The amount of generic costs incurred by universities in Poland in 2004-2009 is presented in the following Table.

Table 2 : Generic costs of universities in Poland in 2004-2009 (in thousand, PLN)

Public universities	Costs in total	Including											
		depreciation	materials consumption	electricity consumption	contracted services	taxes and fees	remunerations	including personal	staff benefits	including social insurance premium	remaining costs	including special equipment	including business trips
2004	10 715 474,1	568 126,9	475 774,8	308 594,0	812 270,4	46 692,6	6 349 226,5	5 320 679,2	1 546 940,6	1 095 020,2	607 848,3	175 979,9	150 003,2
2005	12 212 974,2	614 023,6	508 246,4	329 927,4	917 558,2	69 261,7	7 369 417,3	6 204 982,4	1 805 057,0	1 241 235,5	599 482,6	166 300,7	155 681,3
2006	12 471 741,1	593 865,9	526 000,0	338 773,2	908 416,5	111 286,3	7 571 295,4	6 305 117,8	1 816 227,5	1 247 259,6	605 876,3	147 305,1	156 309,3
2007	13 262 874,0	587 010,5	933 310,0	351 304,1	1 040 244,6	128 980,2	7 913 360,5	6 805 778,0	1 817 118,9	1 290 415,6	842 849,3	328 524,5	168 121,3
2008	14 105 225,6	639 378,8	617 914,2	392 599,8	1 152 895,7	144 038,0	8 448 004,1	7 264 896,2	1 834 985,8	1 250 939,9	875 409,2	335 872,8	182 617,1
2009	14 998 963,1	657 364,7	621 064,1	470 653,0	1 149 688,8	176 473,2	9 003 277,1	7 787 773,9	1 925 465,7	1 305 653,8	994 976,5	353 377,2	183 673,2
Non-public universities	Costs in total	Including											
		depreciation	materials consumption	electricity consumption	contracted services	taxes and fees	remunerations	including personal	staff benefits	including social insurance premium	remaining costs	including special equipment	including business trips
2004	1 873 308,5	100 634,5	77 658,6	25 961,1	323 124,5	20 279,1	1 063 124,9	633 809,6	141 775,4	115 820,6	120 750,4	604,8	16 461,5
2005	1 994 061,5	106 771,7	77 646,2	29 143,2	344 631,7	19 264,9	1 131 500,9	697 188,3	152 902,3	124 298,0	132 200,6	445,2	15 186,9
2006	2 181 116,3	114 260,8	84 071,9	35 260,3	374 886,2	21 929,9	1 240 507,3	803 579,7	168 002,5	139 770,4	142 197,4	635,3	15 915,4
2007	2 334 378,9	120 692,8	126 654,3	34 685,4	397 139,5	22 992,8	1 344 110,3	884 602,6	175 862,7	155 089,4	146 926,5	788,6	17 259,5
2008	2 399 924,7	124 523,2	87 812,2	36 157,4	418 524,8	24 086,0	1 386 585,9	911 149,2	177 448,5	145 536,9	144 786,7	890,2	15 191,3
2009	2 755 407,1	135 964,4	104 045,9	46 980,6	479 583,4	21 366,9	1 599 567,9	1 052 855,3	212 399,9	171 588,6	155 508,1	1 006,5	17 826,3
Universities in total	Costs in total	Including											
		depreciation	materials consumption	electricity consumption	contracted services	taxes and fees	remunerations	including personal	staff benefits	including social insurance premium	remaining costs	including special equipment	including business trips
2004	12 588 782,6	668 761,4	553 433,4	334 555,1	1 135 394,9	66 971,7	7 412 351,4	5 954 488,8	1 688 716,0	1 210 840,8	728 598,7	176 584,7	166 464,7
2005	14 207 035,7	720 795,3	585 892,6	359 070,6	1 262 189,9	88 526,6	8 500 918,2	6 902 170,7	1 957 959,3	1 365 533,5	731 683,2	166 745,9	170 868,2
2006	14 652 857,4	708 126,7	610 071,9	374 033,5	1 283 302,7	133 216,2	8 811 802,7	7 108 697,5	1 984 230,0	1 387 030,0	748 073,7	147 940,4	172 224,7
2007	15 597 252,9	707 703,3	1 059 964,3	385 989,5	1 437 384,1	151 973,0	9 257 470,8	7 690 380,6	1 992 981,6	1 445 505,0	989 775,8	329 313,1	185 380,8
2008	16 505 150,3	763 902,0	705 726,4	428 757,2	1 571 420,5	168 124,0	9 834 590,0	8 176 045,4	2 012 434,3	1 396 476,8	1 020 195,9	336 763,0	197 808,4
2009	17 754 370,2	793 329,1	725 110,0	517 633,6	1 629 272,2	197 840,1	10 602 845,0	8 840 629,2	2 137 865,6	1 477 242,4	1 150 484,6	354 383,7	201 499,5

Source: *Szkoły wyższe i ich finanse w...*, Informacje i opracowania statystyczne GUS za lata 2004-2009

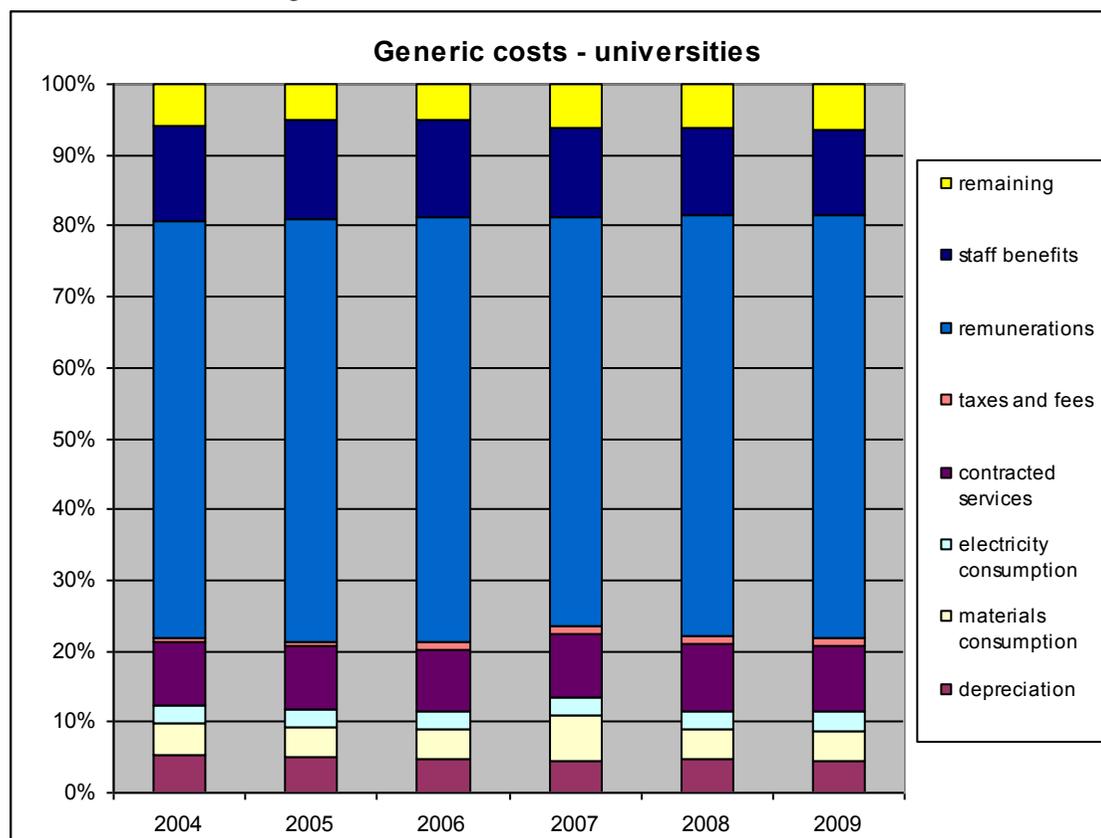
The highest percentage in costs of universities in the analyzed period (2004-2009) constituted:

- remunerations (from 58,9% to 60,1%),
- other staff benefits (from 12,0% to 13,8%),
- contracted services (from 8,8% to 9,5%).

In total the aforementioned costs constituted 81%-82,5% of a total sum of incurred costs of public and non-public universities in the analyzed period.

The lowest percentage in a structure of generic costs of universities constituted taxes and fees (2004 – 0,5%, 2009- 1,1%) although in the analyzed period they increased three times. The following Chart presents a structure of generic costs of universities in the analyzed period.

Chart 4 : A structure of generic costs of universities in Poland in 2004-2009



Source: *self-study*

This high percentage of remunerations in a structure of generic costs means that in a situation of financial problems (resulting from upcoming demographical changes) rationalization of costs can be performed only by adjusting the employment<sup>3</sup>. This means about low flexibility of university costs structure. What follows universities attempting to

<sup>3</sup> *Diagnoza stanu szkolnictwa wyższego w Polsce*, Raport Ernst & Young i Instytutu Badań nad Gospodarką Rynkową, Listopad 2009, str. 67

lower the costs of their activity can look for savings only in remuneration area, including personal, by reducing the number of employed.

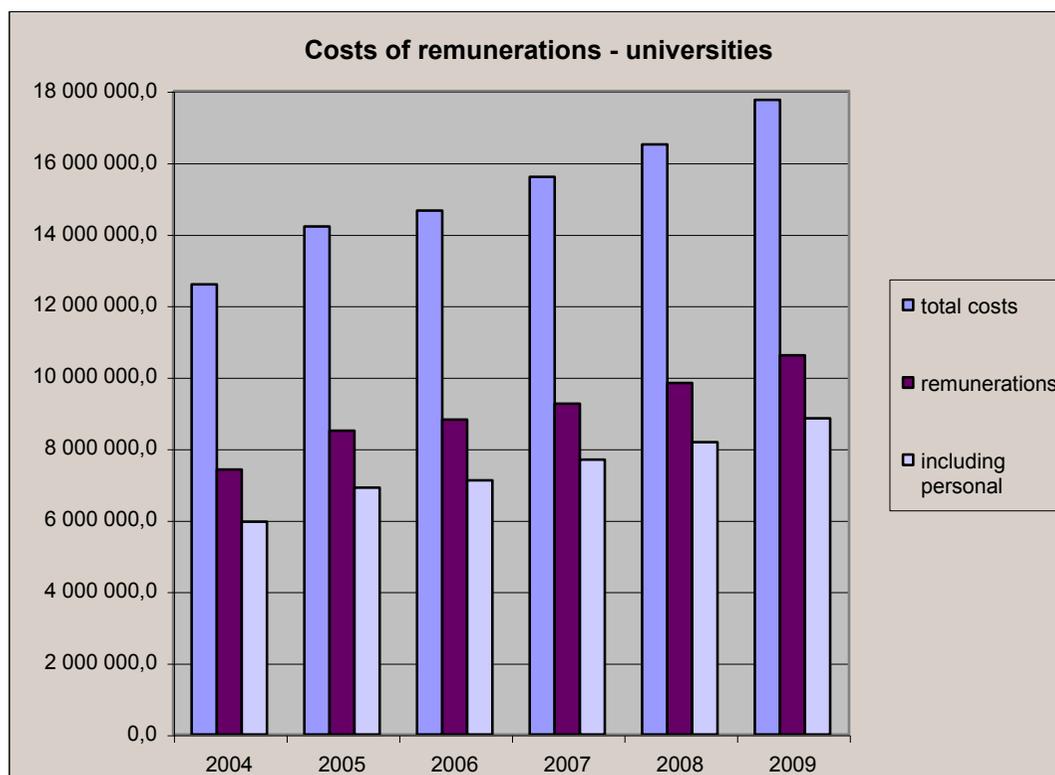
Dynamics of costs incurred growth in total by universities (both public and non-public) is similar to dynamics of remunerations growth. In the analyzed period dynamics of remunerations growth (including personal remuneration), fees and taxed exceeded dynamic of total costs growth.

The most significant dynamics in 2009 – in relation to the beginning of the analysis in 2004 – was noticed according to the following generic costs of universities:

- taxes and fees – triple growth (of about 195,4%),
- remaining costs – increase of about 57,9%, including costs classified as special equipment – of about 100,7%,
- electricity consumption – growth of about 54,7%,
- contracted services – growth of about 43,5%
- and remunerations – growth of about 43,0%, including personal remunerations – 48,5%.

The following Chart presents relation of remunerations (including personal remunerations) to costs in total incurred by universities in 2004-2009

Chart 5: Costs of remuneration of universities in Poland in 2004-2009.



Source: *self-study*

## 7. Conclusions

In 2004-2009 costs of university activities were systematically growing. The highest costs were generated by didactical activity. Costs of didactical activity of public universities exceeded revenues and non-public universities noticed increase in revenues over costs of didactical activity. Public universities noticed slight increase of revenues over

costs of research activity. According to non-public universities their costs of research activity significantly exceeded their revenues from this activity. Universities had fixed structure of costs. The highest percentage in generic costs incurred by universities constituted remunerations.

Analyzing the level of educational costs incurred by public and non-public universities, it is vital to say that in those latter they are significantly lower. On the basis of GUS calculations 'average' individual cost of education for each student calculated according to option I in 2007 at public universities amounted to 119224 PLN, non-public - 5606 PLN, and according to option II – 10330 PLN and 5469 PLN. In comparison with the previous year there was growth by 6,2 % at public universities and at non-public universities it decreased by 1,2%.”

Introduction of competition to a higher education sector (fair competition) in the area of public resource allocation between public and non-public universities, will definitely contribute to rationalization of widely understood disbursement in this sector. This, without a question, will influence the improvement of education quality and researches and will increase the effectiveness of a public resource.

### **Bibliography**

*Diagnoza stanu szkolnictwa wyższego w Polsce*, Raport Ernst & Young i Instytutu Badań nad Gospodarką Rynkową, Listopad 2009

Gierek M., *Rynek uczelni niepublicznych w Polsce*, Szkoła Główna Handlowa – Oficyna Wydawnicza, Warszawa 2007

Materiały informacyjne zawarte na stronie internetowej GUS <http://www.stat.gov.pl>:

*Szkoły wyższe i ich finanse w 2004 r.*, Informacje i opracowania statystyczne, GUS Warszawa 2005

*Szkoły wyższe i ich finanse w 2005 r.*, Informacje i opracowania statystyczne, GUS Warszawa 2006

*Szkoły wyższe i ich finanse w 2006 r.*, Informacje i opracowania statystyczne, GUS Warszawa 2007

*Szkoły wyższe i ich finanse w 2007 r.*, Informacje i opracowania statystyczne, GUS Warszawa 2008

*Szkoły wyższe i ich finanse w 2008 r.*, Informacje i opracowania statystyczne, GUS Warszawa 2009

*Szkoły wyższe i ich finanse w 2009 r.*, Informacje i opracowania statystyczne, GUS Warszawa 2010

Materiały informacyjne zawarte na stronie internetowej MNiSW <http://www.nauka.gov.pl/finansowanie>

Słabońska Teresa, *Główne źródła finansowania uczelni publicznych*, Materiały z Krakowskiej Konferencji Młodych Uczonych 2009, [www.profuturo.agh.edu.pl](http://www.profuturo.agh.edu.pl)

Rozporządzenie Rady Ministrów z dnia 22 grudnia 2006 r. w sprawie szczegółowych zasad gospodarki finansowej uczelni publicznych (Dz. U. Nr 246, poz. 1796)

Ustawa z dnia 8 października 2004 r. o finansowaniu nauki (tekst jednolity - Dz. U. z 2008 r. Nr 169, poz. 1049 z późn. zm.)

Ustawa z dnia 29 września 1994 r. o rachunkowości (Dz. U. Nr 121, poz. 591 z późn. zm.; tekst jednolity - Dz. U. z 2009 r. Nr 152, poz. 1223)

Ustawa z dnia 27 lipca 2005 r. – Prawo o szkolnictwie wyższym (Dz. U. Nr 164, poz. 1365 z późn. zm.)