

# **Health satellite accounts – Brazil 2005 - 2007**

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## The health satellite accounts

Data from health satellite accounts allows analyses of the entire health system – public and private health care, health insurance and health-related industries.

Income generation and job creation are also covered in this account – data do not just reflect the expenditure and the production approaches.

## **The health satellite accounts**

The health satellite accounts compares production, imports, exports, taxes, consumption data and other aggregates in order to assure coherence and consistency.

The starting point is regular SNA data, but further information are added in order to broaden the scope and detail the information on health industries.

## The health satellite accounts

- In 2006, an inter-ministry document formalized the creation of a group (technicians from IBGE, IPEA Health Ministry, Fiocruz and ANS) to produce Brazil's health accounts.
- In 2008, the group's first publication, *Health economics – 2000-2005* was released. In order to get to the satellite accounts, data coverage was broadened to include Defense Ministry, federal university hospitals and on medical gases production data.
- Public sector data were presented in more detail in the satellite account.

## Health industries

- Pharmaceutical products
- Medical, hospital and dental equipment production
- Medical use gases production
- Commerce of pharmaceutical, medical, orthopedic and dental products
- Health plans and health insurance
- Public health
- Public health (education and defense)
- Hospital activities (private)
- Other health activities (private)
- Private social services

## Basic information

- Production value
- Intermediate consumption
- Value added
- Employments (jobs)
- Income
- Imports and exports
- Final consumption

## Data sources

- Annual Survey of Mining and Manufacturing (PIA/IBGE)
- Annual Survey of Commerce (PAC/IBGE)
- Monthly Survey of Industry – Physical production (PIM-PF/IBGE)
- National Household Sample Survey (PNAD/IBGE)
- Consumer Expenditure Survey (POF/IBGE)
- Foreign Commerce Bureau (Secex)
- Enterprises income declaration (DIPJ/Receita Federal)

## Data sources

- Financial Administration Integrated System (SIAFI/Treasury)
- Brazilian Finance (Finbra/ Treasury)
- Health Public Budget Information System (SIOPS/Health Ministry)
- Outpatient Information System (SIA/DATASUS)
- Hospital Information System (SIH/DATASUS)
- State and Municipal Balance Sheets
- Balance of Payments (BP/Central Banc)
- Medic and Sanitary Survey (AMS/IBGE)
- National Supplementary Health Agency (ANS)



## Data sources

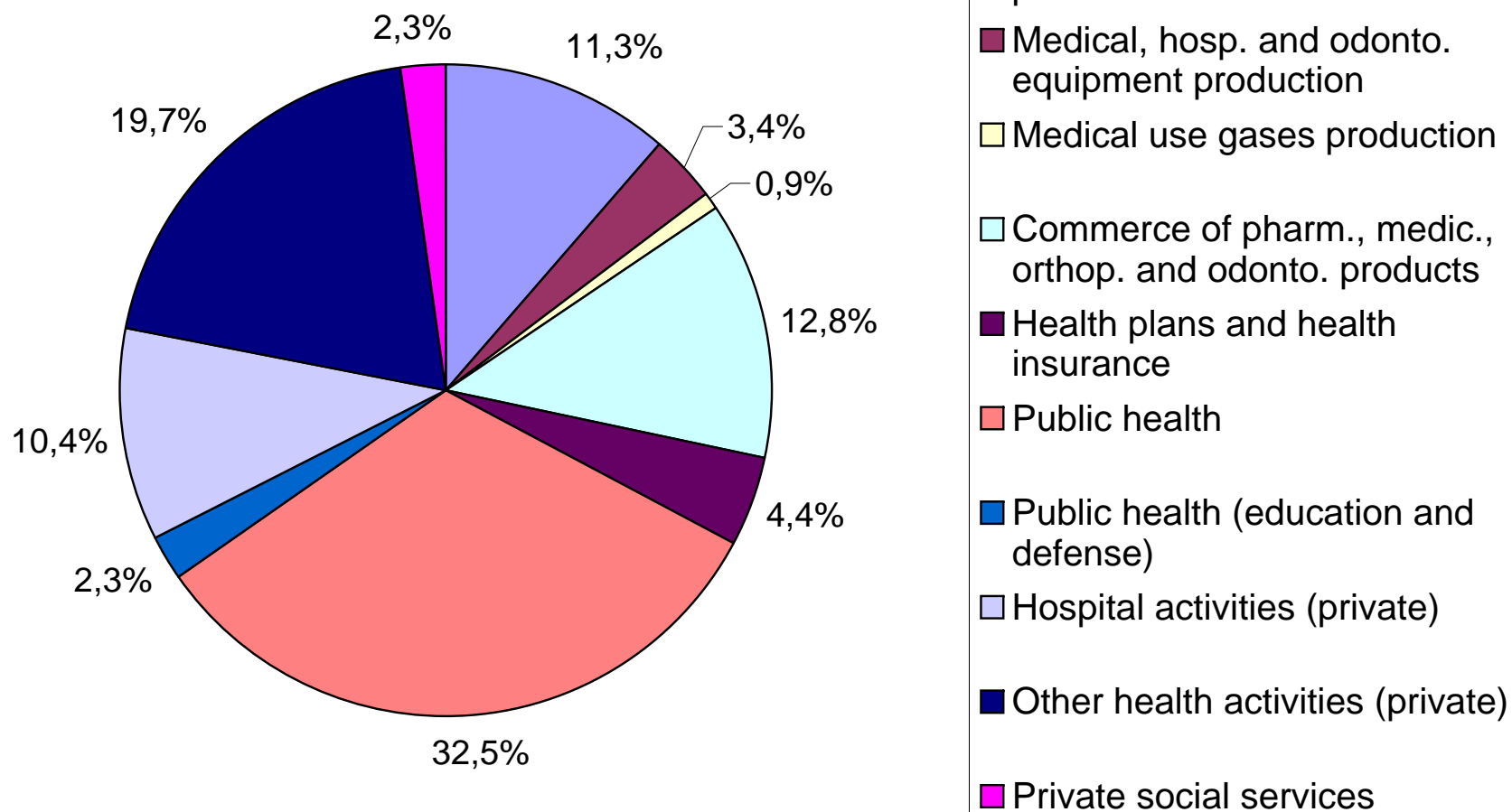
- Federal university hospitals restructuring program (REUHF).
- Integrated Planning and Budget System (SIMEC – Education Ministry).
- Siga Brasil (Senate data system).
- Education Ministry.
- Defense Ministry.

**Value added**

## Value added by industry

Industries	Value added (current 1 000 000 of R\$)		
	2005	2006	2007
<b>Health related industries</b>	<b>100 726</b>	<b>119 047</b>	<b>137 852</b>
Production of pharmaceutical products	12 958	15 148	15 594
Medical, hosp. and odonto. equipment production	3 688	4 284	4 680
Medical use gases production	820	1 176	1 193
Commerce of pharm., medic., orthop. and odonto. products	10 921	13 841	17 683
Health plans and health insurance	4 215	5 072	6 089
Public health	32 466	36 607	44 816
Public health (education and defense)	2 579	2 930	3 134
Hospital activities (private)	10 752	12 283	14 367
Other health activities (private)	19 900	24 823	27 118
Private social services	2 427	2 883	3 178

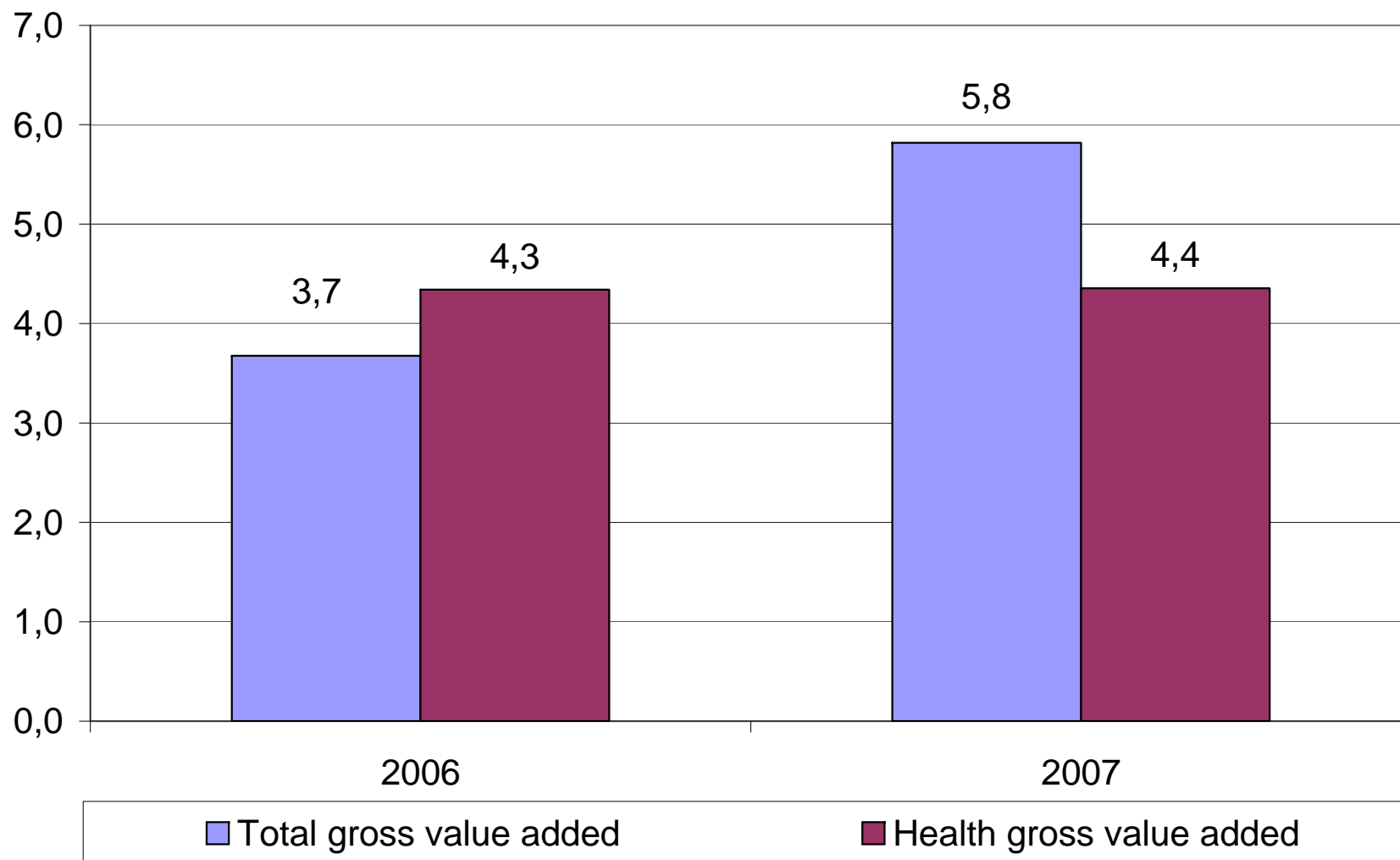
## Health industries' share in health value added – 2007



## Share in total value added

Industries	Value added at basic prices		
	2005	2006	2007
<b>Health value added (in value)</b>	<b>100 726</b>	<b>119 047</b>	<b>137 852</b>
<b>Health value added (% of total economy)</b>	<b>5,5</b>	<b>5,9</b>	<b>6,0</b>
Production of pharmaceutical products	0,7	0,7	0,7
Medical, hosp. and odonto. equipment production	0,2	0,2	0,2
Medical use gases production	0,0	0,1	0,1
Commerce of pharm., medic., orthop. and odonto. products	0,6	0,7	0,8
Health plans and health insurance	0,2	0,2	0,3
Public health	1,8	1,8	2,0
Public health (education and defense)	0,1	0,1	0,1
Hospital activities (private)	0,6	0,6	0,6
Other health activities (private)	1,1	1,2	1,2
Private social services	0,1	0,1	0,1

## Value added volume growth



# **Jobs and income**

## Jobs by industry - 2007

- Data includes not only health professionals but every worker directly employed in the sector's industries.
- Indirect jobs are not included (those where health sector units do not pay the worker directly).
- Jobs are classified into formal, without register and self employment.



## Jobs by industry

Industry	Total jobs		
	2005	2006	2007
<b>Total economy</b>	<b>90 905 673</b>	<b>93 246 963</b>	<b>94 713 909</b>
<b>Health related industries</b>	<b>3 876 180</b>	<b>3 951 612</b>	<b>4 210 910</b>
Production of pharmaceutical products	111 774	110 102	115 578
Medical, hosp. and odonto. equipment production	72 047	71 958	77 757
Medical use gases production	4 261	5 406	5 461
Commerce of pharm., medic., orthop. and odonto. products	681 031	741 825	786 368
Health plans and health insurance	63 642	67 414	76 992
Public health	1 271 483	1 206 071	1 367 930
Public health (education and defense)			
Hospital activities (private)	230 376	249 549	250 526
Other health activities (private)	1 036 380	1 097 147	1 133 343
Private social services	405 186	402 140	396 955

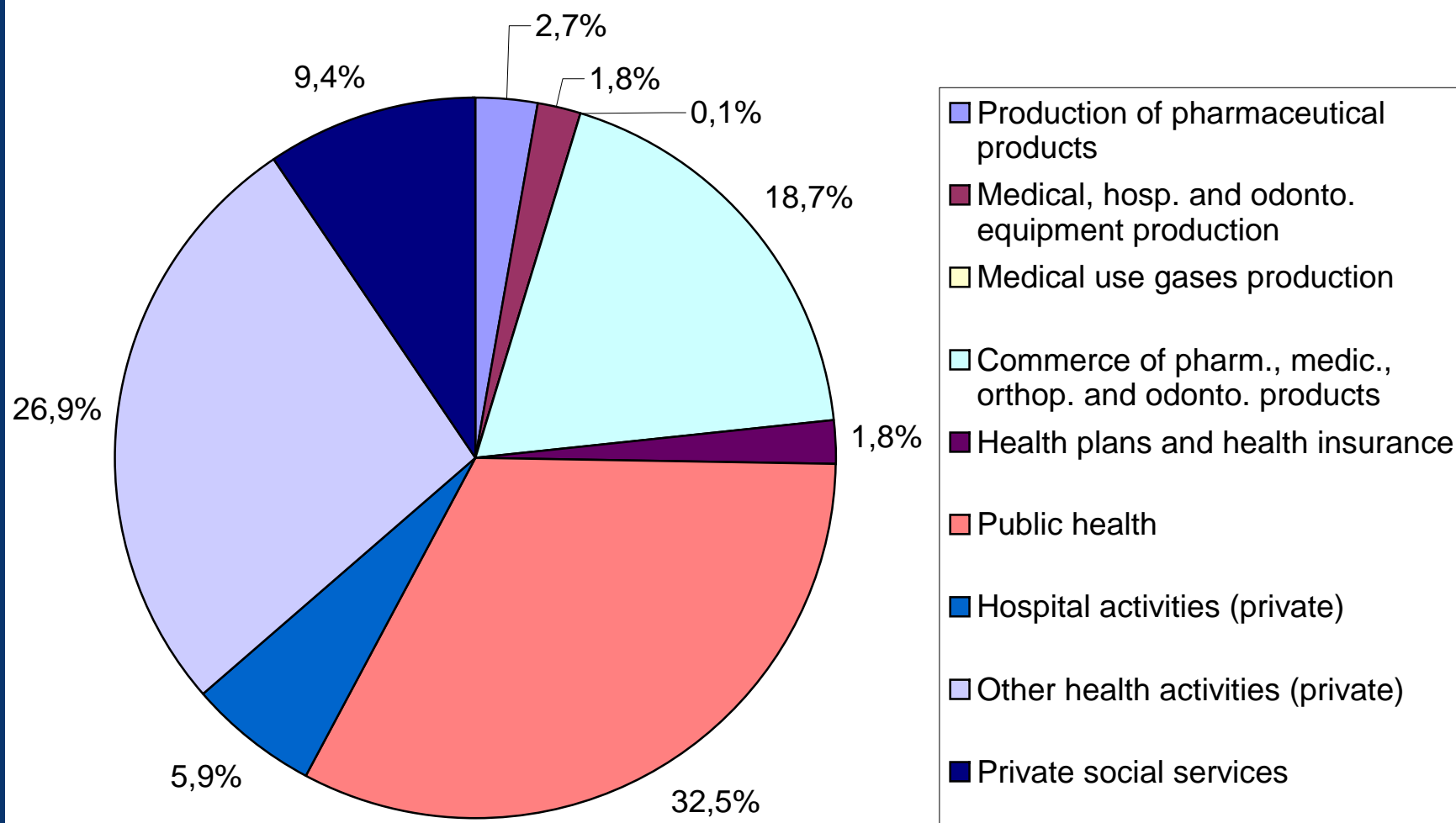
No data available for Public health (education and defense).

- The number of jobs in an industry does not equal the number of people employed in that industry, since people can have more than one job, as in the case of doctors that work in more than one hospital.

## Jobs by industry

- Health industries' jobs – 4.3% of total employment in 2005 - increased to 4.4% in 2007.
- In absolute figures, around 335,000 new jobs were created in health industries in this period.

## Share in total health jobs \* - 2007

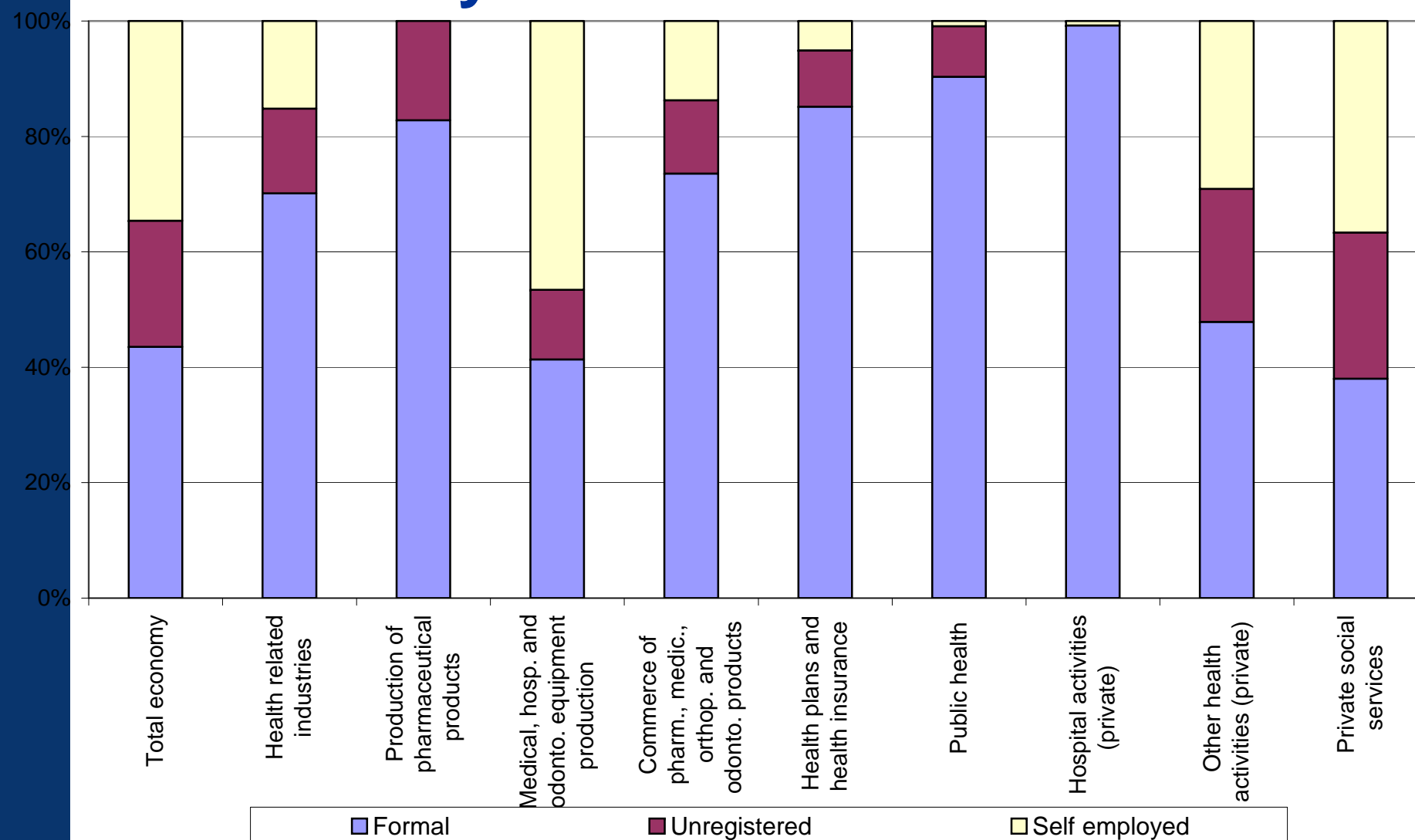


\* Does not include health services in Defense and federal university hospitals.

## **Jobs by market insertion - 2007**

- The main source of data on unregistered and self employed work is the National Household Sample Survey .
- There are two kinds of self employed workers: those that work on their own account and those that have their business but are not registered as enterprises.
- Classified as unregistered are those that work for someone – and so, are not self employed– but have no formal link to their employer.

## Jobs by market insertion - 2007

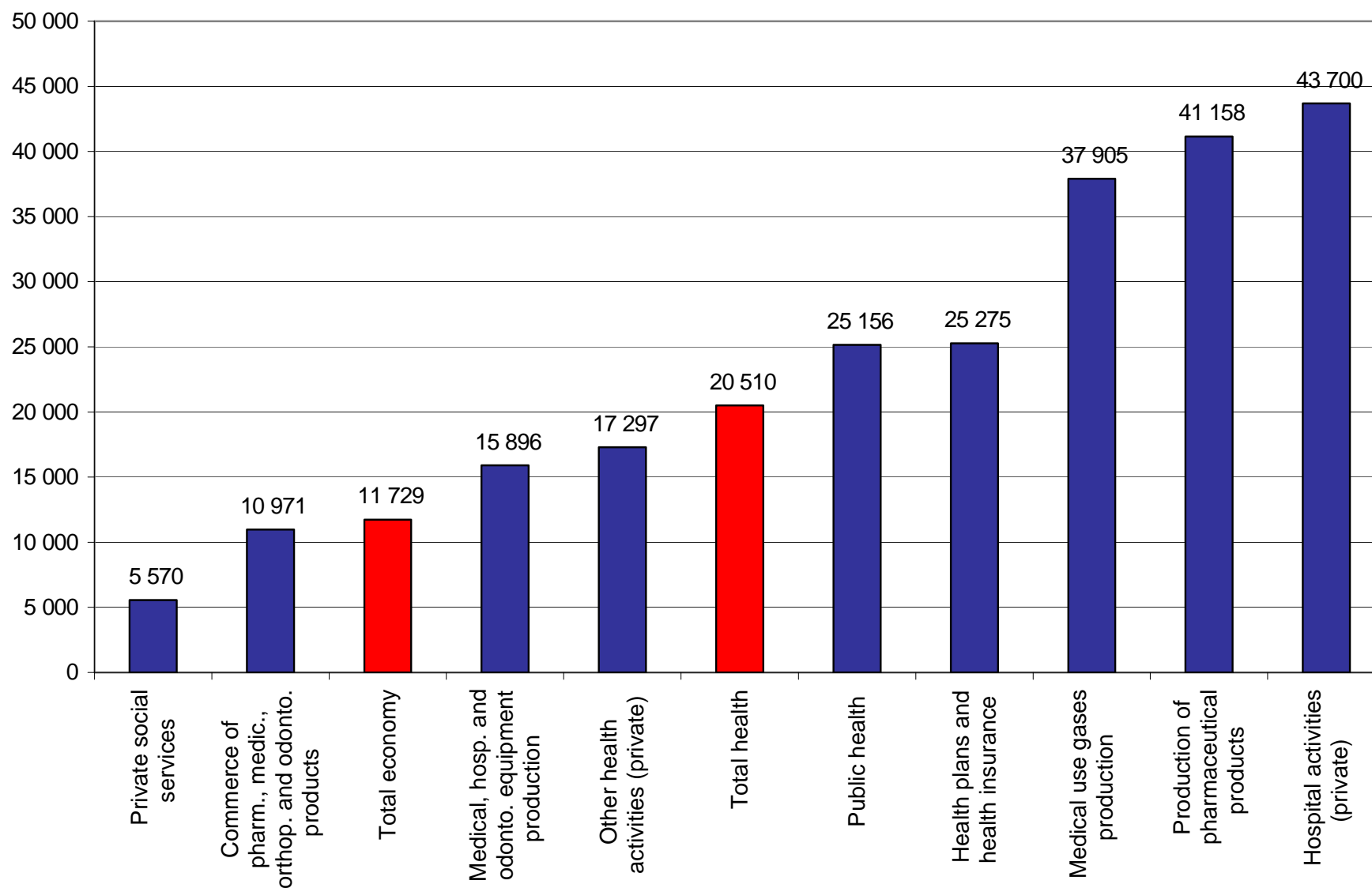


\* It was not possible, in the case of Medicinal gases production, to separate jobs according to insertion. There is also no data on jobs on health in Defense and federal university hospitals.

## Average income by industry - 2007

- Data include, as average income, salaries and total mixed income of each activity divided by their number of jobs.

# Average income by industry - 2007



# Imports and exports



# Imports and exports

## Imports

Products	(1 000 000 current R\$)		
	2005	2006	2007
<b>Total helth</b>	<b>9 987</b>	<b>10 943</b>	<b>11 572</b>
Pharmaceutical products	3 066	2 960	2 089
Pharmaceuticals for human use	4 032	4 638	5 704
Pharmaceuticals for veterinary use	741	856	870
Medical, hosp. and odonto. material	141	128	174
Medical, hosp. and odonto. equipment	1 989	2 333	2 705
Hospital services	18	28	30

## Exports

Products	(1 000 000 current R\$)		
	2005	2006	2007
<b>Total helth</b>	<b>1 878</b>	<b>2 114</b>	<b>2 230</b>
Pharmaceutical products	239	251	187
Pharmaceuticals for human use	619	730	817
Pharmaceuticals for veterinary use	227	319	311
Medical, hosp. and odonto. material	259	257	294
Medical, hosp. and odonto. equipment	492	500	573
Hospital services	42	57	48

## Imports and exports - 2007

- Health related imports amounted to R\$ 11.6 billions in 2007: 3.7% of the country's total imports and 4.5% of the total supply of these goods and services in the economy.
- Exports of these goods and services reached R\$ 2.2 billions: 0.6% of the country's total exports and 0.9% of the total demand for these goods and services.

# Share of imports and exports (%)

## Share of imports on total supply

Products	2005	2006	2007
<b>Total health</b>	<b>4,9</b>	<b>4,7</b>	<b>4,5</b>
Pharmaceutical products	83,2	84,7	82,5
Pharmaceuticals for human use	8,7	9,0	9,9
Pharmaceuticals for veterinary use	16,6	16,7	17,3
Medical, hosp. and odonto. material	6,0	5,1	5,9
Medical, hosp. and odonto. equipment	21,4	21,4	22,4
Hospital services	0,1	0,1	0,1

## Share of exports on total demand

Products	2005	2006	2007
<b>Total health</b>	<b>0,9</b>	<b>0,9</b>	<b>0,9</b>
Pharmaceutical products	6,5	7,2	7,4
Pharmaceuticals for human use	1,3	1,4	1,4
Pharmaceuticals for veterinary use	5,1	6,2	6,2
Medical, hosp. and odonto. material	10,9	10,2	10,0
Medical, hosp. and odonto. equipment	5,3	4,6	4,7
Hospital services	0,1	0,2	0,1

## Health's share in total imports and exports

Products	2005	2006	2007
Total imports	247 362	271 679	315 283
Health related imports	9 987	10 943	11 572
<b>Health share on imports (%)</b>	<b>4,0%</b>	<b>4,0%</b>	<b>3,7%</b>
Total exports	324 842	340 457	355 672
Health related exports	1 878	2 114	2 230
<b>Health share on exports (%)</b>	<b>0,6%</b>	<b>0,6%</b>	<b>0,6%</b>

# **Health goods and services consumption**

# Final consumption expenditure on health

## (2005-2007, by institutional sector and product)

Products	Final consumption (1 000 000 R\$)		
	2005	2006	2007
<b>Households final consumption</b>	<b>103 223</b>	<b>115 064</b>	<b>128 865</b>
Pharmaceuticals for human use	36 407	40 667	44 783
Pharmaceuticals for veterinary use	169	208	229
Medical, hosp. and odonto. material	218	240	249
Medical, hosp. and odonto. equipment	2 009	2 320	2 567
Health plans and health insurance	8 632	9 933	11 686
Hospital services (private)	19 992	19 348	22 344
Othe health services (private)	35 152	41 550	46 102
Private social services	644	798	905
<b>Public adm. final consumption</b>	<b>70 417</b>	<b>83 801</b>	<b>93 383</b>
Pharmaceuticals for human use	3 819	4 302	4 728
Public health	56 529	66 528	76 471
Hospital services (private)	8 851	11 551	10 815
Othe health services (private)	1 193	1 395	1 348
Private social services	25	25	21
<b>NPISH final consumption</b>	<b>1 783</b>	<b>2 126</b>	<b>2 292</b>
Private social services	1 783	2 126	2 292

# Final consumption expenditure (% of GDP)

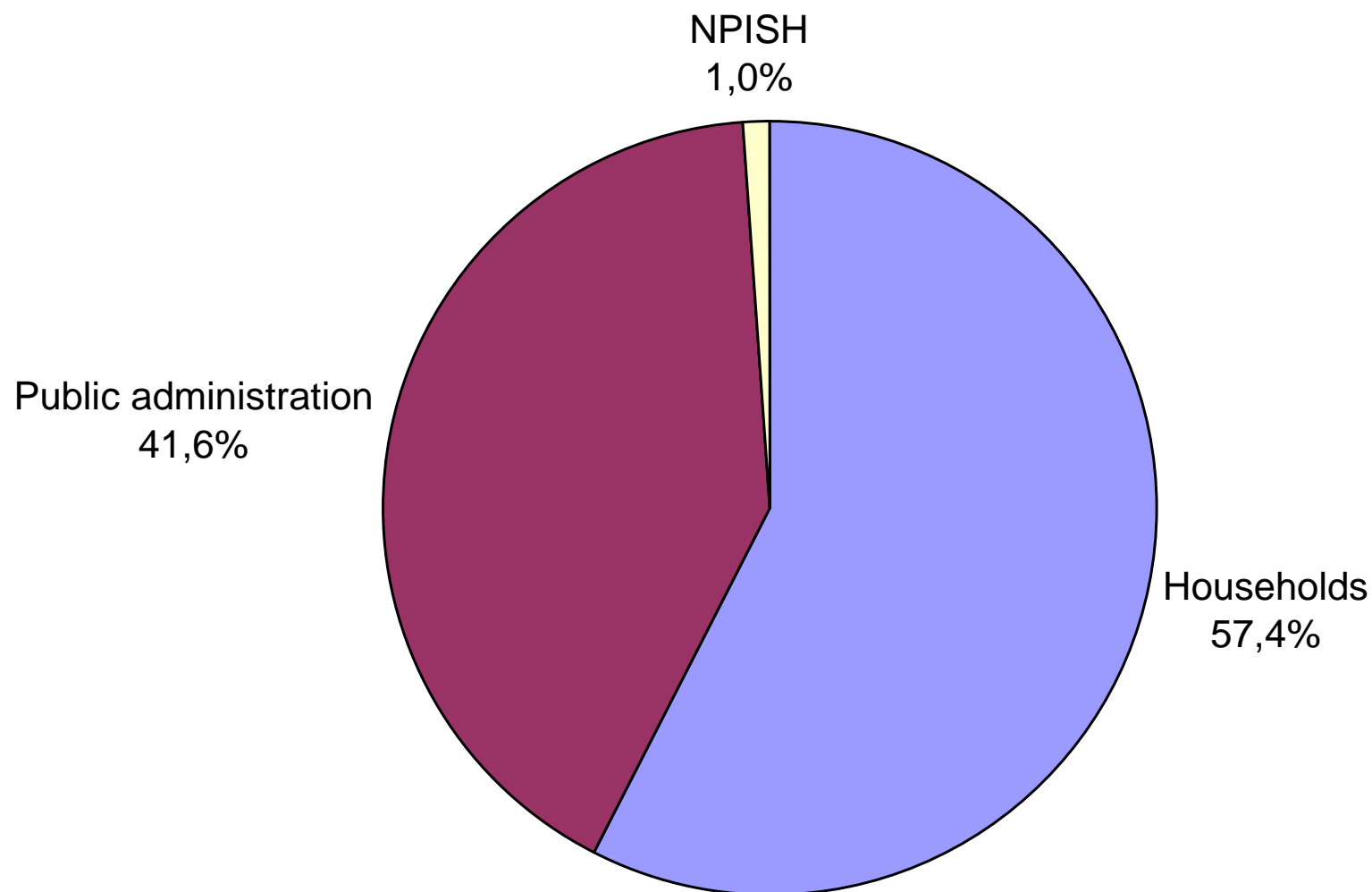
Products	2005	2006	2007
<b>Households final consumption</b>	<b>4,8</b>	<b>4,9</b>	<b>4,8</b>
Pharmaceuticals for human use	1,7	1,7	1,7
Pharmaceuticals for veterinary use	0,0	0,0	0,0
Medical, hosp. and odonto. material	0,0	0,0	0,0
Medical, hosp. and odonto. equipment	0,1	0,1	0,1
Health plans and health insurance	0,4	0,4	0,4
Hospital services (private)	0,9	0,8	0,8
Othe health services (private)	1,6	1,8	1,7
Private social services	0,0	0,0	0,0
<b>Public adm. final consumption</b>	<b>3,3</b>	<b>3,5</b>	<b>3,5</b>
Pharmaceuticals for human use	0,2	0,2	0,2
Public health	2,6	2,8	2,9
Hospital services (private)	0,4	0,5	0,4
Othe health services (private)	0,1	0,1	0,1
Private social services	0,0	0,0	0,0
<b>NPISH final consumption</b>	<b>0,1</b>	<b>0,1</b>	<b>0,1</b>
Private social services	0,1	0,1	0,1

## Health final consumption expenditure as % of GDP

	2005	2006	2007
Households final consumption	4,8	4,9	4,8
Public adm. final consumption	3,3	3,5	3,5
NPISH final consumption	0,1	0,1	0,1
<b>Total</b>	<b>8,2</b>	<b>8,5</b>	<b>8,4</b>



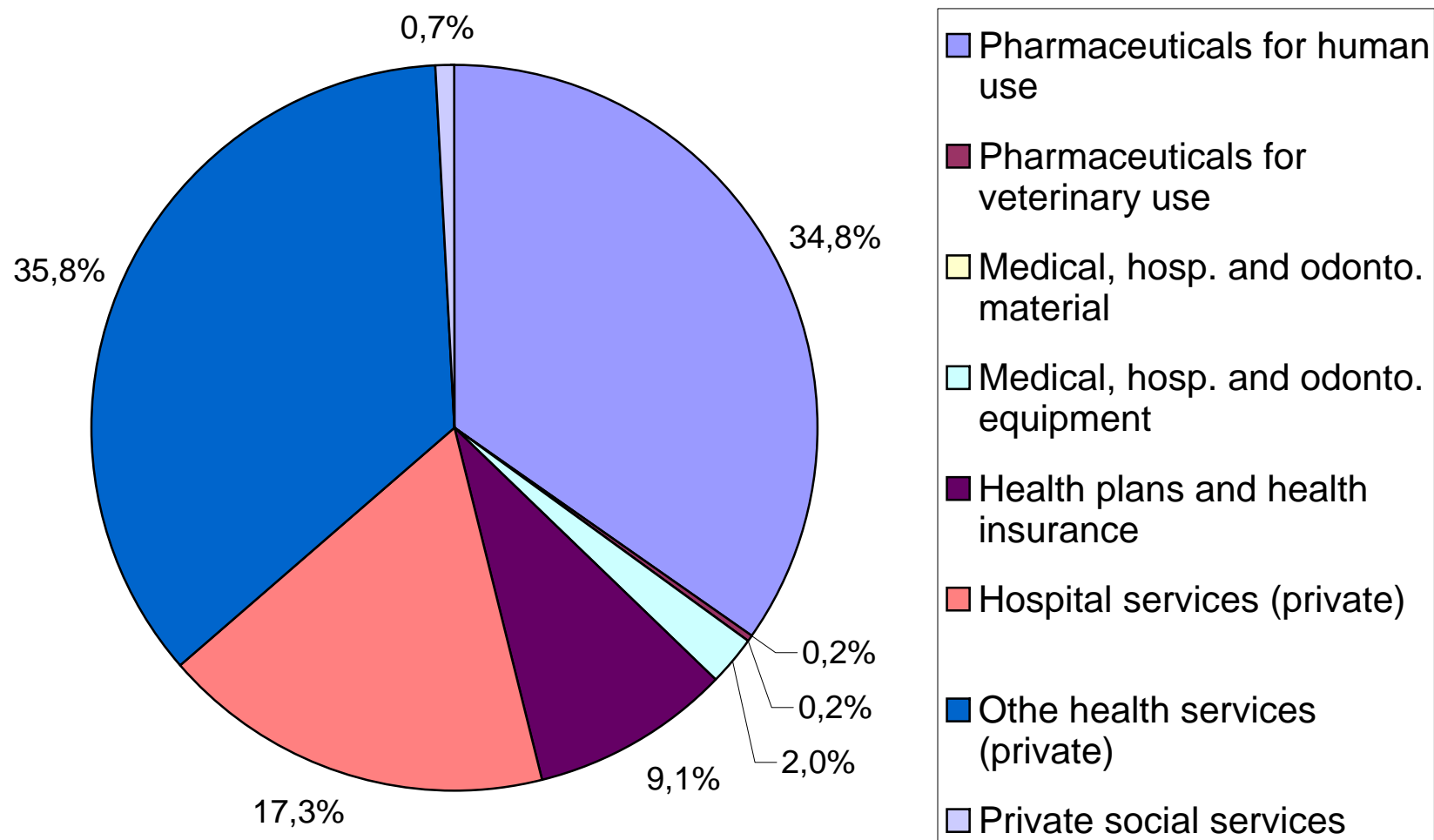
# Health final consumption expenditure – 2007 (by institutional sector)



## Health final consumption expenditure

- Households' share in health final consumption expenditure has fallen from 58.8% in 2005 to 57.4% in 2007.
- Public administrations' rose from 40.1% to 41.6%
- Non for Profit Institutions Serving Households' was around 1.0% in the three years.

# Households final consumption expenditure by product - 2007



## Households final consumption expenditure by product - 2007

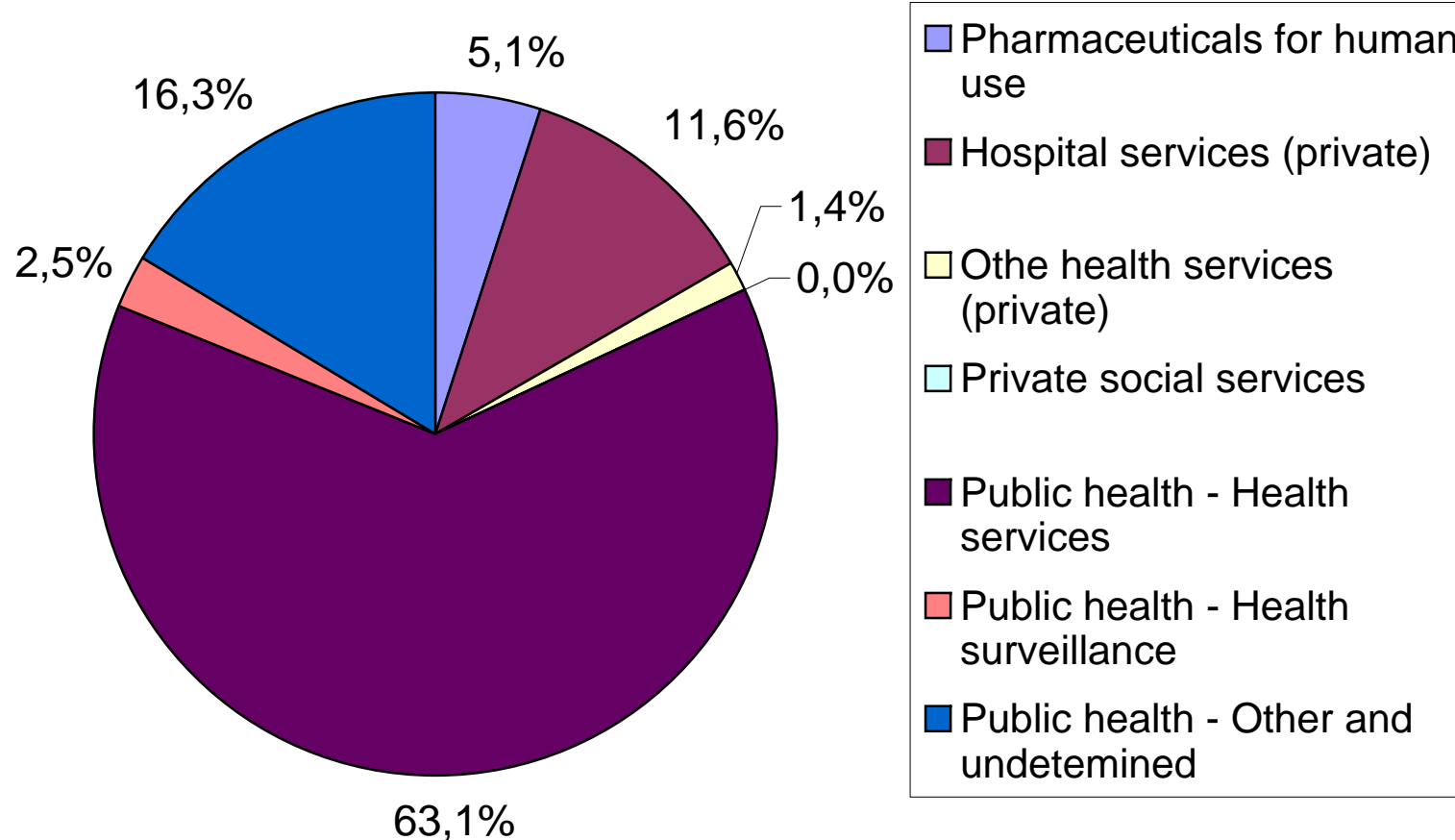
- *Other health services* are the main household expenditure among health goods and services: 35.8% of the total.
- Adding hospital, other health services and private social services, household expenditure reaches 53.8% of household total health expenditure.
- Pharmaceuticals for human use represent 34.8% of households total health expenditure.

## Public adm. expenditure on final consumption of health products- 2007

Products	Final consumption		
	2005	2006	2007
Pharmaceuticals for human use	3.819	4.302	4.728
Hospital services (private)	8.851	11.551	10.815
Othe health services (private)	1.193	1.395	1.348
Private social services	25	25	21
Public health - Health services	45.192	52.317	58.960
Public health - Health surveillance	1.967	2.378	2.307
Public health - Other and undetemined	9.370	11.833	15.204

The Public health product was disaggregated into: 'Health services', 'Health surveillance' and Others and undetermined.

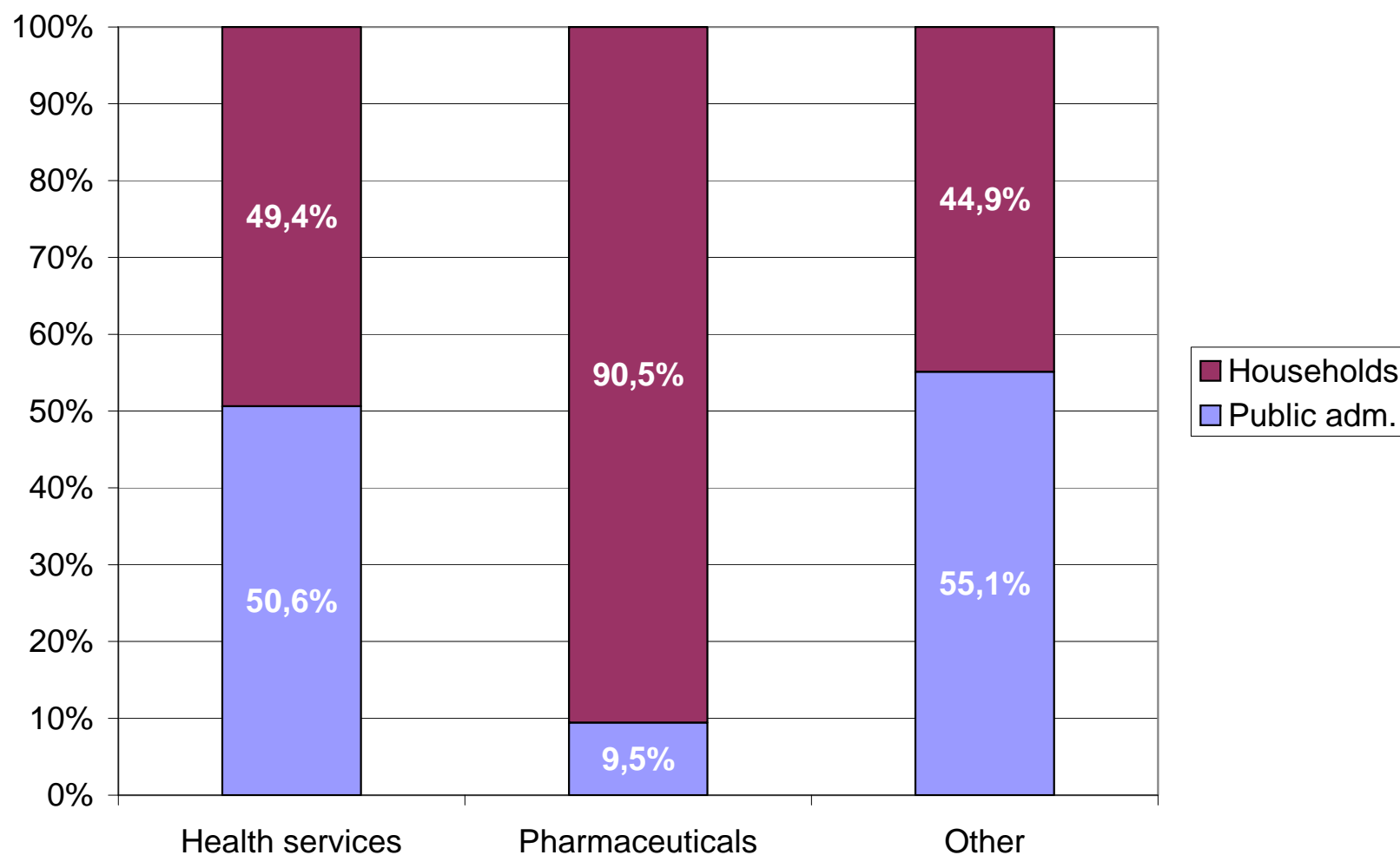
# Public administration final consumption by product - 2007



## **Public administration final consumption by product - 2007**

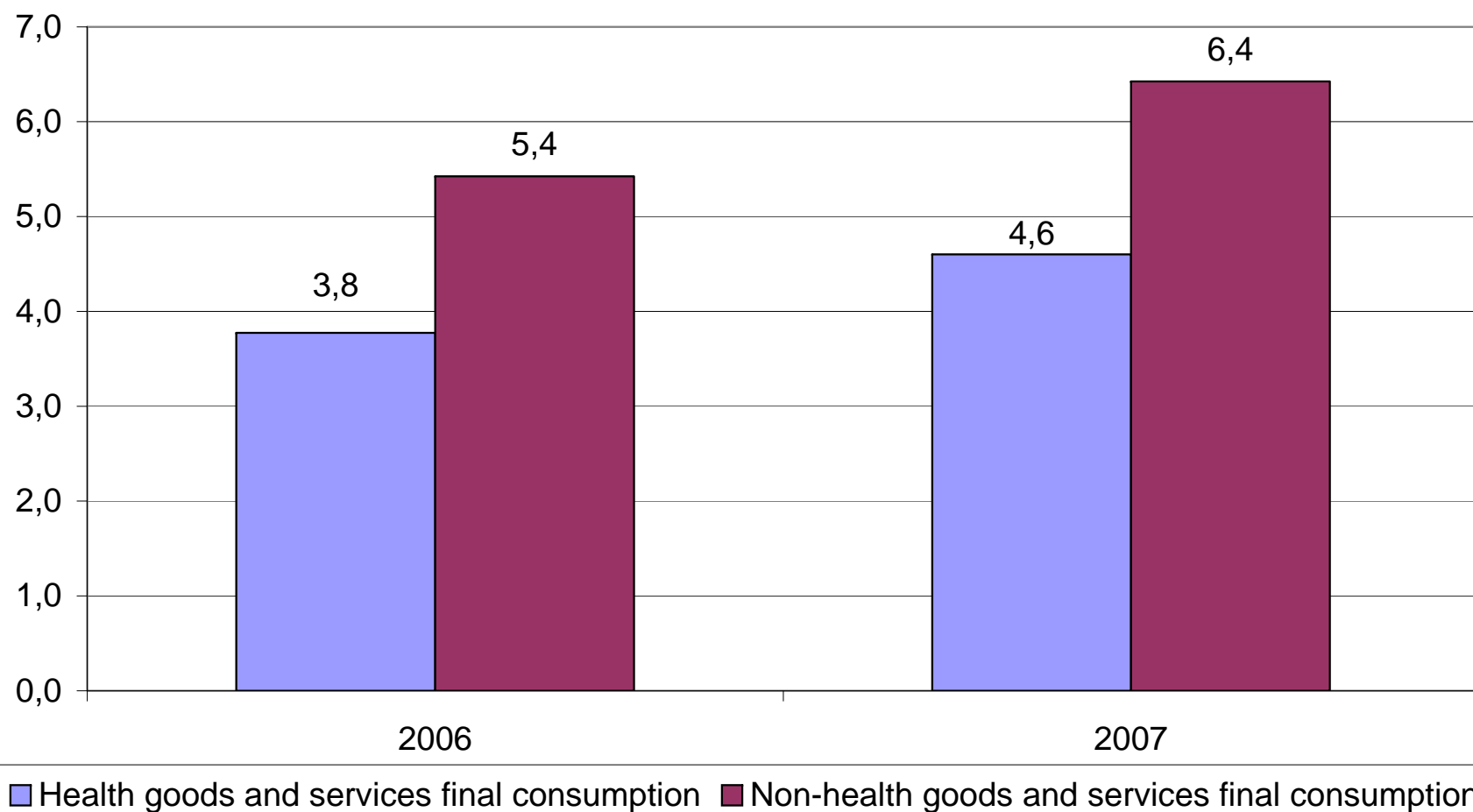
- In 2007, 13.0% of public administration expenditure on health were on private health services and 5.1% on pharmaceuticals to be distributed to households.
- Health services represented, at least, 63.1% of the public administration expenditure on final consumption of health goods and services.

# Households and Public administration: Final consumption expenditure - 2007

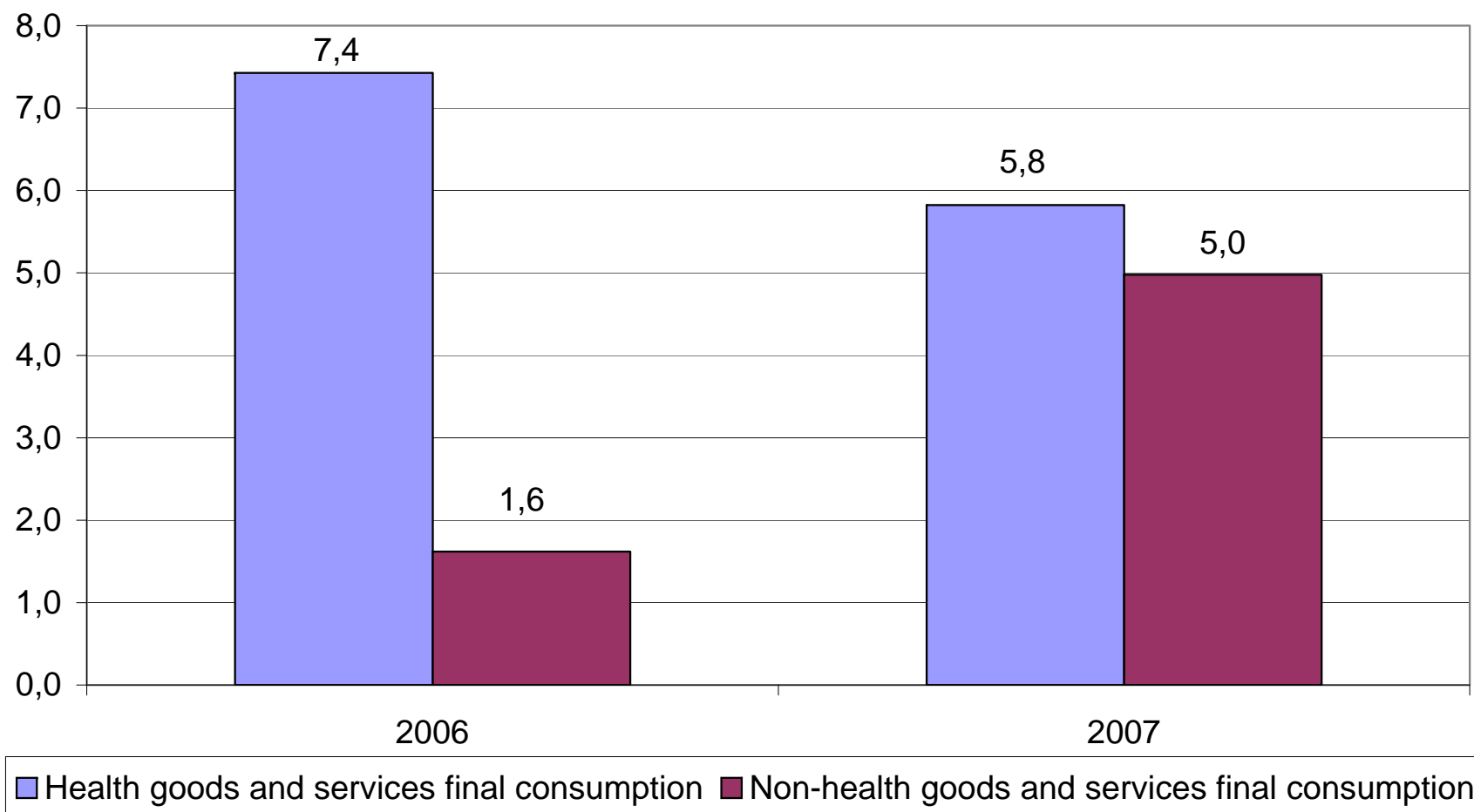




## Volume growth of households final consumption expenditure



# Volume growth of public administration final consumption expenditure



**Thank you**