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Health insurance in Hungary: What the reforms bring from the view of effectiveness, equity and security

Csaba Dózsa
National Health Insurance Fund
Hungary

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Csaba Dózsa
Deputy Director
National Health Insurance Fund
Hungary

DEMOGRAPHY AND PUBLIC HEALTH IN HUNGARY

The Republic of Hungary has 10,188 million inhabitants of which 1,811 million live in Budapest, the capital of the country. Almost half of country's population resides in communities of less than 20,000 inhabitants each.

While life expectancy in Western European countries improved during the 1980's partly due to dropping rates of cardiovascular diseases this tendency continued to worsen in Hungary as did deaths from cancer, liver cirrhosis and external causes such as accidents and suicide. Hungary has thus far completed an epidemiological transition. However, a special policy of health care for an ageing population is to be implemented. Life expectancy at birth in Hungary in 1997 was 75.1 years for women and 66.1 years for men compared to 80.9 years and 74.6 years in the European Union.

Mortality and morbidity due to unhealthy lifestyle, such as high consumption of alcohol, increasing rate of smoking and high fat and sugar diet are thought to be important causative factors. The factors contributing to the health status of population are complex, however include social and economic factors as well as access to good quality health services.

MAIN REFORMS IN THE HUNGARIAN HEALTH INSURANCE SYSTEM

Following the introduction of Germany's sickness insurance system effected by Chancellor Bismarck, the first Act on mandatory sickness insurance for Hungary's factory workers was introduced in 1889. Back then, the centralized system of national sickness insurance was laid down for the 20th century. Before and after World War II, both the services provided by the insurance system and the group of the insured had been extended.

In the 1970's and 1980's, the health insurance system was defined by Act No. II of 1975, which regulated both the health and pension insurance schemes. In 1991, having returned to the practice of the first decade of this century, the self-governments became responsible for supervising and managing the social funds. They were the governing bodies of the separated Health Insurance Fund and Pension Insurance Fund.

The health care policy implemented during the 1990's reforms have brought about significant changes to the former fixed annual budget system. The system of payment has become more performance based and payment mechanisms are determined of the type of services. The National Health Insurance Fund introduced the per capita system for family doctors, a fee-for-service system for out-patient health care services. Hospitals are financed through Diagnosis Related Groups (DRG) introduced in the early 1990's. The procedure is managed by both the National Health Insurance Fund and the Information Center for Health (GYÓGYINFOK). In case of chronic in-patient care the number of days spent in hospital is the underlying basis for payments.

In 1998 a package of acts have been enacted in order to restructure and redefine the social insurance system. Acts No. LXXX and LXXXIII of 1997 define the scope of citizens eligible to social insurance services, private pension, the financing of the above benefits, and the benefits of mandatory health insurance. In 1999 the newly elected Parliament decided upon the supervision of the social insurance funds by a State Secretary.

Following the election in May of 1998, supervision of the National Health Insurance Fund was assumed by the Prime Minister's Office. In 1999 supervision of the institution was transferred to the Ministry of Finance and in the year 2001 it was taken over by the Ministry of Health.

At the moment the Hungary's Health Insurance Fund is a separated monetary fund within the State Budget. The budget of this fund is approved by the Parliament usually for one calendar year. The National Health Insurance Fund (NHIF) is a separate administrative organization as well under the supervision of the Ministry of Health. The National Health Insurance Fund directs the administrative functions of the insurance branch and controls the calculation and payment of benefits.

The collection of contributions, the operation of the contribution account and the financial control have been the functions of the National Tax Office, since 1 January 1999.

In 1998, in the framework of the Act No.XCI. of 1998 on the state budget for the year 1999 the Managed Care as pilot project was introduced in Hungary. The practical implementation of the pilot project started at 1 July in 1999 with 9 health care providers, with 161,076 insured person and also with 104 contracted general practitioners. After the revision of the providers in 2001, 7 health facilities with 493,076 person and with 315 general practitioners remained in the project.

THE BENEFIT PACKAGE AT THE NHIF

Benefits in kind (health services provided by the suppliers financed by NHIF) and **benefits in cash** provided by the National Health Insurance Fund are as follows:

Health services provided free of charge:

- Preventive medical examinations,
- Medical care by family physicians (primary health care services),
- Dental care,
- Out-patient care,

- In-patient care,
- Delivery care,
- Medical rehabilitation,
- Patient transportation,
- Accident health supply.

Cost allowances to health care services:

- Drug cost allowance,
- Medical aids cost allowances,
- Travel cost reimbursement,
- International medical cost reimbursement.

Co-payment is charged in the following instances:

- Orthodontical treatment under the age of 18,
- Tooth-keeping and replacement above the age of 18,
- Extra meal and accommodation for in-patients,
- Sanatorium treatment.

Benefits in cash delivered by the Fund are:

- Sick-pay,
- Pregnancy and confinement benefit,
- Child care fee,
- Disability benefits,
- Accident benefits,
- Accident pension.

In Hungary the compulsory health insurance operates as an independent branch of the social security system, **based on the principle of solidarity**.

On the basis of Act LXXX of 1997 **the insured** are as follows:

- Employees, civil servants and clerks, employees of the administration of justice professional adoptive parents, members of the armed forces including law enforcement bodies as well as civil national security services, regardless of whether they are employed full-time or part-time;
- Members of co-operatives, excluding full-time student members of school co-operatives if they participate in the activity of the co-operative within the framework of economic enterprises;
- Students having their apprentice studies based on student contracts;
- Individuals receiving income supplementing benefits unemployment benefits, pre-pension unemployment benefits;
- Self employed persons whose activity is not to be qualified as supplementary.

Additionally the scope of Act LXXXIII of 1997 on mandatory health insurance extends to the following groups of individuals:

- The persons insured by virtue of Act LXXX of 1997 as well as individuals under a special health insurance contract;
- Persons and organizations paying social insurance contributions;
- The providers of health services on the basis of contract.

The tasks of National Health Insurance Fund are as follow:

- Purchasing health care services for the insured;
- Directing the regional and other administrative bodies;
- Operating the health insurance branch system;
- Getting involved in preparation of legislation;
- Preparing and implementing the interstate agreements regarding health insurance;
- Developing and operating the data base of the health insurance system;
- Collecting, processing and analyzing the statistical data of the health insurance system.

HEALTH EXPENDITURE, FINANCE IN THE HUNGARIAN HEALTH INSURANCE SYSTEM

If we analyse the social distributing systems guaranteeing social safety from financial points of view it is worth starting by analysing the changes of incomes, because this is the most significant factor from the aspect of the sustainability.

Fast ageing of the population itself puts considerable pressure on financing health care benefits. At the beginning of the 1990s it was probably obvious for analysts that increasing burdens imposed on health care would be taken by a narrowing grade of insurees while their commodity wages was decreasing. In case of either a basic budget or an itemized financing it would have resulted in bankruptcies for the health providers in sequence. The following two charts below indicate the rapid ageing of the Hungarian society and the continuous decrease in the number of insurees. (Fig. 1 and Fig. 2)

Fig. 1: Development of resident population and average number of insurees per thousand, 1990-2001

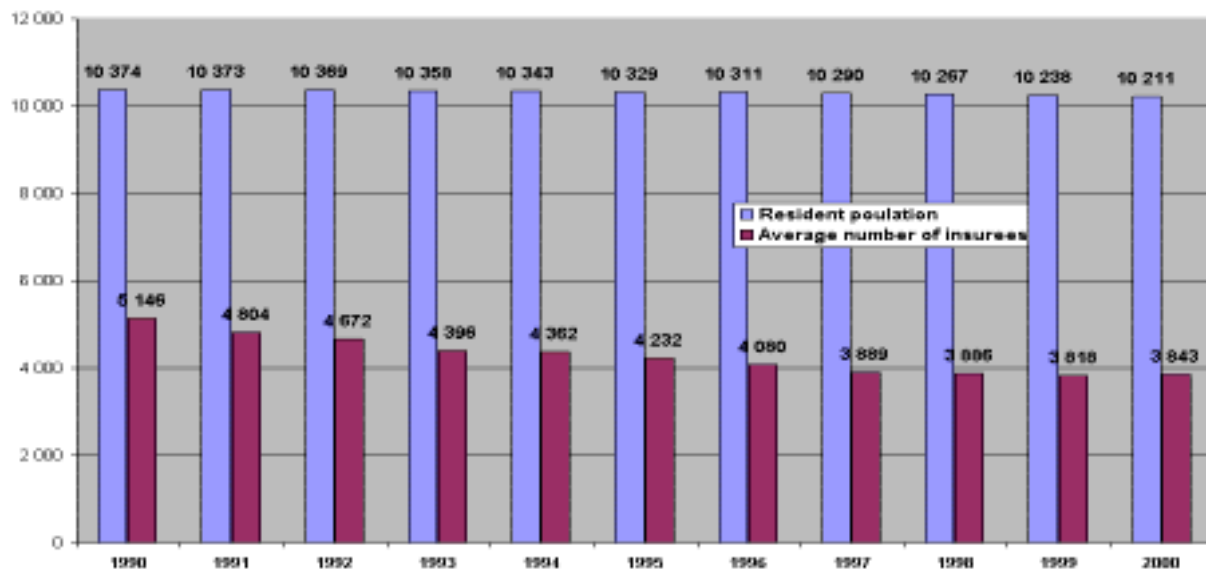
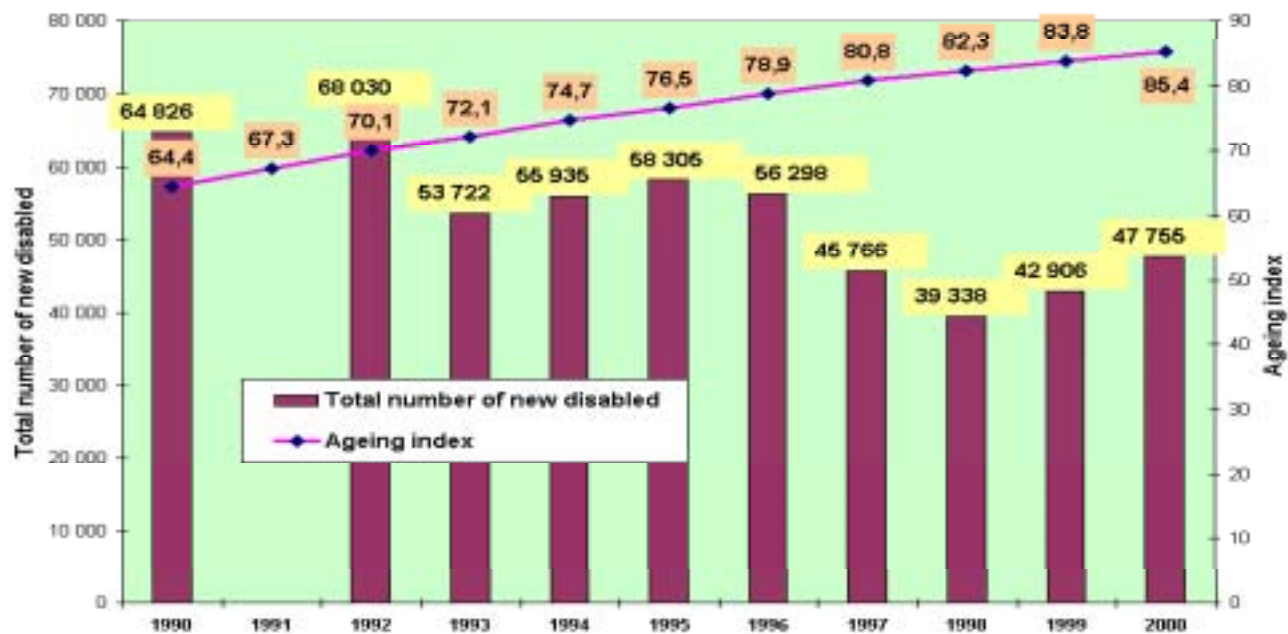


Fig. 2: The total number of new disabled and the ageing index %, 1991-2000¹



¹ OEP Statistical Yearbook, 2001; Hungarian Central Statistical Office Statistical Yearbook, 2001.

During the 1990s the number of contribution insurees has been decreased by 1.3 million people, while the number of users has not changed practically. At the same time the ageing index grew 20 per cent, and every year we declare over 40 thousand Hungarian citizens to be disabled, which is equal to the population of a middle-sized Hungarian town. The below shows the sources of the revenues of the health insurance fund in 2001 (Table 1).

Table 1: The revenues of the Health Insurance Fund², 2001,
(Million HUF and EUR)

	HUF	EUR
Employer's health insurance contribution	439 541	1 816
Insuree's health insurance contribution	105 592	436
Fix health contribution paid by the employee	194 664	804
Charge of overdue payments, fine	3 935	16
Other contributions	18 670	77
of which: health insurance contribution for unemployed provision	3 887	16
accident contribution	1 580	7
employer's contribution to sick-pay	14 625	60
health insurance contribution paid for persons on conscript service	634	3
contribution to the expenses of the preferential pension provision of armed corporations	1 084	4
Contribution total	762 402	3 150
Central budget contribution	103 928	429
<i>Funds transferred from central budget</i>	70 588	292
<i>Reimbursement of expenses of paying of child-care fee</i>	29 240	121
Central budget contribution total	103 928	429
Other revenues from the health insurance activity	15 680	65
Revenues from asset management	866	4
Revenues used for operation	1 811	7
Other revenues total	18 357	76
Revenues total	884 687	3 656

The National Health Insurance Fund is operating with guarantee of the state. The Fund's principal source of revenue are the health insurance contributions. Health insurance contribution constitutes 14 percent of the payroll expenses, 11 percent paid by the employer, 3 percent by the employee. Employers and self-employed persons pay in addition HUF 4,200/person/month flat rate health contribution. (HUF 4,500 in 2002)

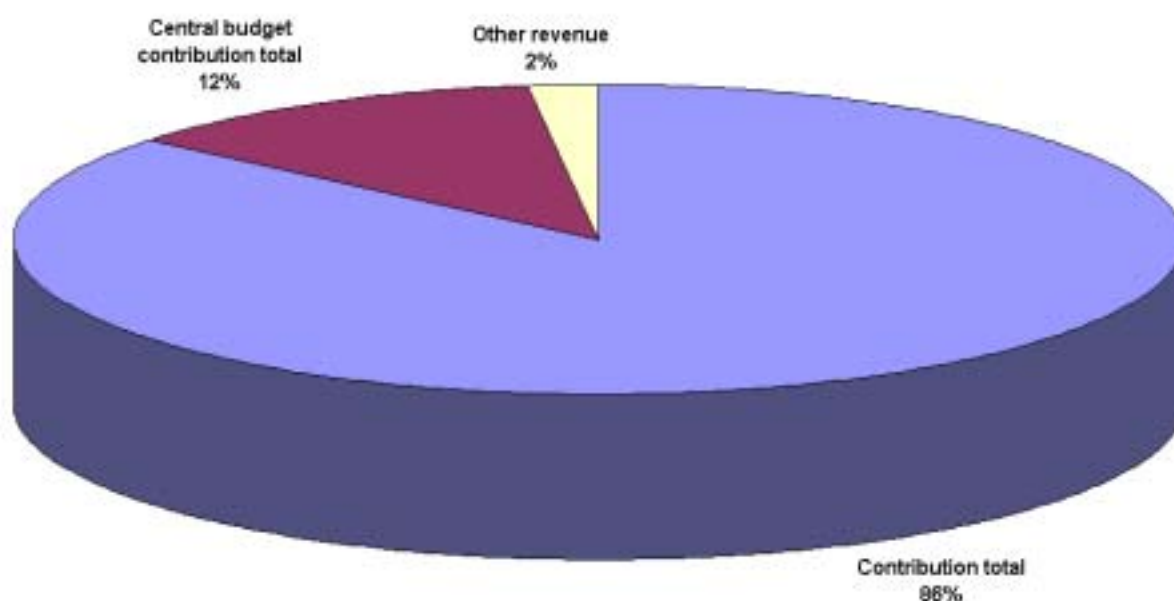
Estimating the overall amount and share of the various sources is difficult. The magnitude of gratuity is unknown. Government revenue is composed of central, local and general sources. The National Health Insurance Fund is the main source of health care financing. The fund defrays the recurring costs of services, while maintenance costs are funded from

² OEP 1.sz.tanúsítvány.

the central and local governments' budgets. Local governments have their share of responsibility due to ownership, while the country's government provides earmarked and target subsidies. Private health insurance doesn't exist in Hungary. However, there are a limited number of private providers.

The following chart indicates the distribution of revenues in the main groups. We can see that 64 per cent of the revenues come from contributions and 34 per cent of them come from either the central budget or taxes labelled (Fig. 3).

Fig. 3: The main sources of the revenues of the Health Insurance Fund, 2001



The next table includes the structure of the expenditures and the annual balance sheets. The balance shows a deficit of 3-4 percent from year to year (Table 2). The reasons will be detailed later yet.

Table 2: The expenditure of the Health Insurance Fund, 2001,
(Million HUF and EUR)

	HUF	EUR
Disability and accident pension provision	152 461	630
Pregnancy and confinement benefit	12 470	52
Sick pay	64 206	265
Other provisions in cash	41 635	172
Provisions in cash total	270 772	1 119
Medical services	410 304	1 695
of which: primary care	41 138	170
in-patient care	249 944	1 033
out-patient care	61 260	253
Spa treatments	3 952	16
Subsidization of medicaments	179 465	742
Subsidization of therapeutical equipments	25 002	103
Other benefits in kind	4 635	19
Benefits in kind total:	623 358	2 576
Expenses of asset management	565	2
Operational expenses	18 116	75
Other expenses	2 156	9
Total expenses	914 967	3 781
		-
Balance	- 30 280	- 125

Beside the Health Insurance Budget above, the State Budget plays an important role in the health care financing as well in the following ways:

- Maintains medical universities and professional institutions in the medical field;
- Provides the necessary funds for renovating health care facilities, replacement of equipment and new investment through earmarked subsidies;
- Funds and provides public health and emergency services;
- Covers the co-payment for certain medicines, medical aids and prothesis for the poor;
- Defrays the deficit of the National Health Insurance Fund;
- Subsidises and provides graduate and postgraduate medical education;
- Funds medical research and development projects.

Significant co-payment are required of patients for certain dental treatments, services rendered without referrals, services in addition to those ordered by specialists and extra hotel/accommodation costs. Co-payments are also paid for chronic care and treatment in sanatoriums. Medical services covered neither by the National Health Insurance Fund nor by the State are classified as out-of-pocket expenses. Some out-of-pocket payments are on medicines and medical aids. Finally, informal gratitude payments constitute another category of out-of-pocket expenditure. The latter can be estimated at some 1 to 3 percent of the total health care expenditure.

The National Health Insurance Fund finances the recurrent costs in the framework of contracts with health care providers. The investment and development costs of the health care institutions do not burden the budget of the Health Insurance Fund. Accordingly, their

costs are covered by the owners of the institutions or by the state. In Hungary approximately 98 percent of the health institutions are owned by the local governments.

The Ministry of Health has no longer direct responsibility concerning financing health care services, except high-cost diagnostic procedures, organ transplants and blood supplies. The Ministry of Finance bears responsibility for fiscal policy and budget planning as well as for the macro-economic implications of health care financing.

The total health care expenditure in Hungary is difficult to estimate since it consists of contributions from local governments, voluntary sector and directly from the patients. The total health expenditure as a percentage of the GDP in Hungary (6.5 percent) is lower than the European Union's average (8.5 percent). The National Health Insurance Fund has a 70 percent share, the largest part of the total health-care expenditure.

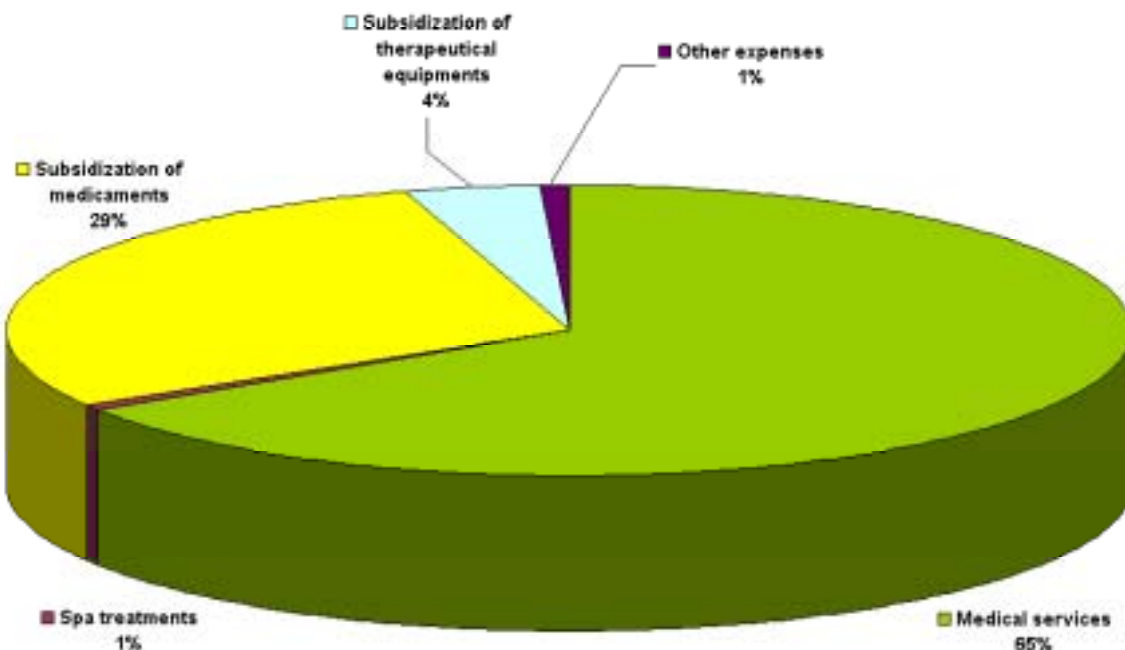
The following chart indicates the proportions of the health insurance fund's revenues spent on medical care and money supplies such as sickness benefit, disability pension, etc. (Fig. 4).

Fig. 4: Distribution of the expenses of the Health Insurance Fund, 2001



We can see in the figure above that 67 percent of costs were spent on medical cares and 30 percent money supply. It is also important to analyse the proportion of pharmaceuticals to medical treatments within the expenditures of medical cares. The following figure shows these figures (Fig. 5). It is obvious that the proportion of the pharmaceuticals is extremely high.

Fig. 5: Distribution of benefits in kind, 2001



ASSESSMENT OF THE HUNGARIAN HEALTH INSURANCE SYSTEM FROM THE POINT OF VIEW OF THREE CRITERIONS: SECURITY, EFFECTIVENESS AND EQUITY

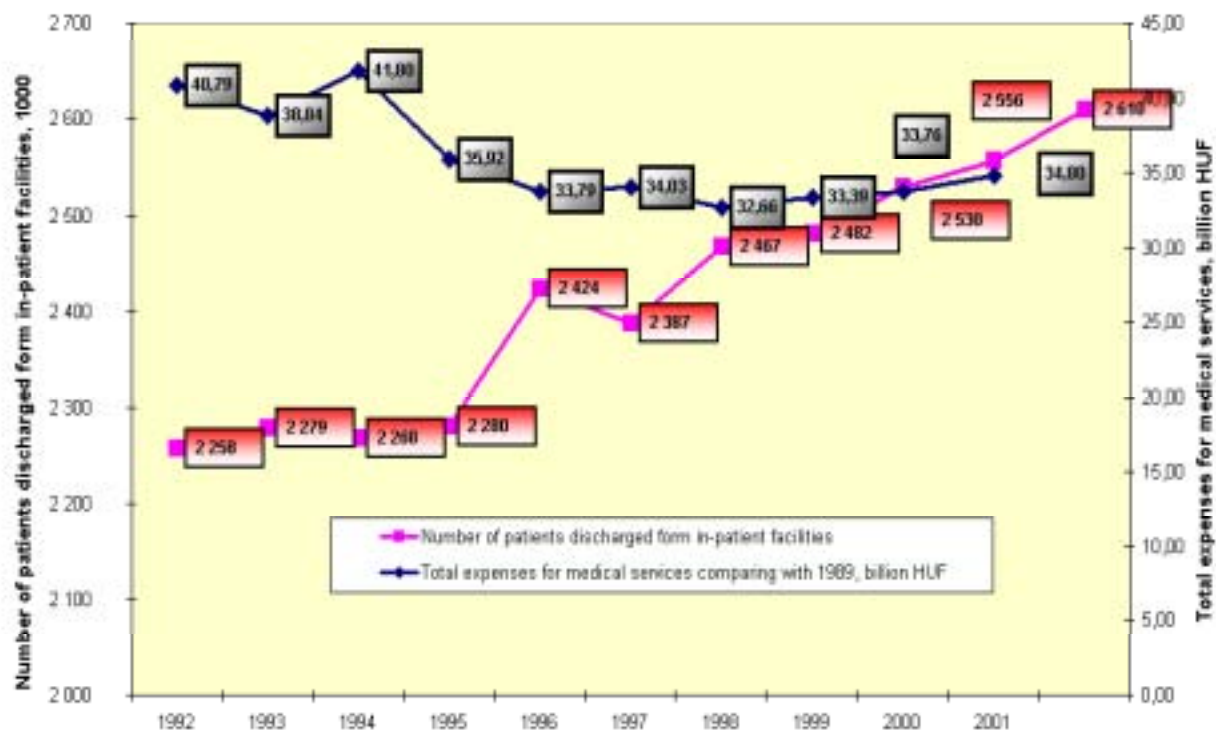
Regarding effectiveness we would like to start by saying that inputs can be measured relatively precisely on the basis of data available by natural indices and amounts of money, but at the moment it is possible to measure outputs and benefits only through natural indices in a rather inaccurate way. Following from this, we can calculate indicators for analysis of the cost-effectiveness only in some extent.

While medical inputs decreased 20 percent in equity between 1994 and 2000³, contradictory processes began in the field of the performance of the hospital supply system in the 1990s. It means that the system reacted to diminishing financing by significantly growing output. The number of patients discharged from in-patient medical facilities increased 12-13 percent up to 300 thousand between 1993 and 2000.⁴ The drastic decrease in inputs and the significant increase in performance have themselves induced a remarkable improvement in efficiency in the past decade. We can see these developments clearly in Fig. 6.

³ As deflator we used the health care price index.

⁴ OEP Statistical Yearbook, 1993-2001.

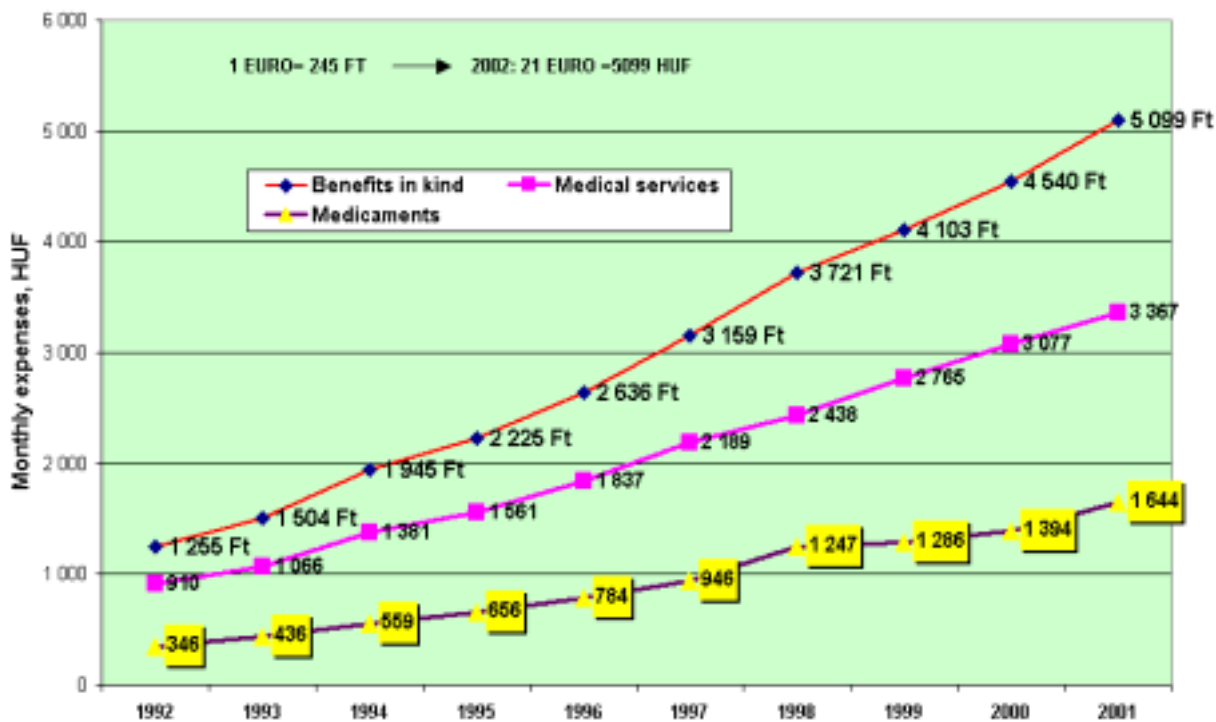
Fig. 6: The total expenses of the medical services in prices of 1989 and the number of patients discharged from in-patient facilities, 1992-2001



It is also worth examining the changes of nominal input per capita over the past decade. If we regard social security inputs as if the Hungarian state would have bought an overall medical insurance for everyone, in 2001 it had cost total HUF 5,099 (EUR 21)/month/capita including medical treatments and pharmaceuticals. (Fig. 7) This price level indicates rather good efficiency both inside the sector and in comparison with other sectors.

But it is important to remark that these prices do not even in theory include expenditures of amortisation and improvement of the medical facilities, since the central budget and local authorities cover these costs. The cost above makes the low remuneration for human resource possible that is a serious encouragement for the gratuity system to stay alive.

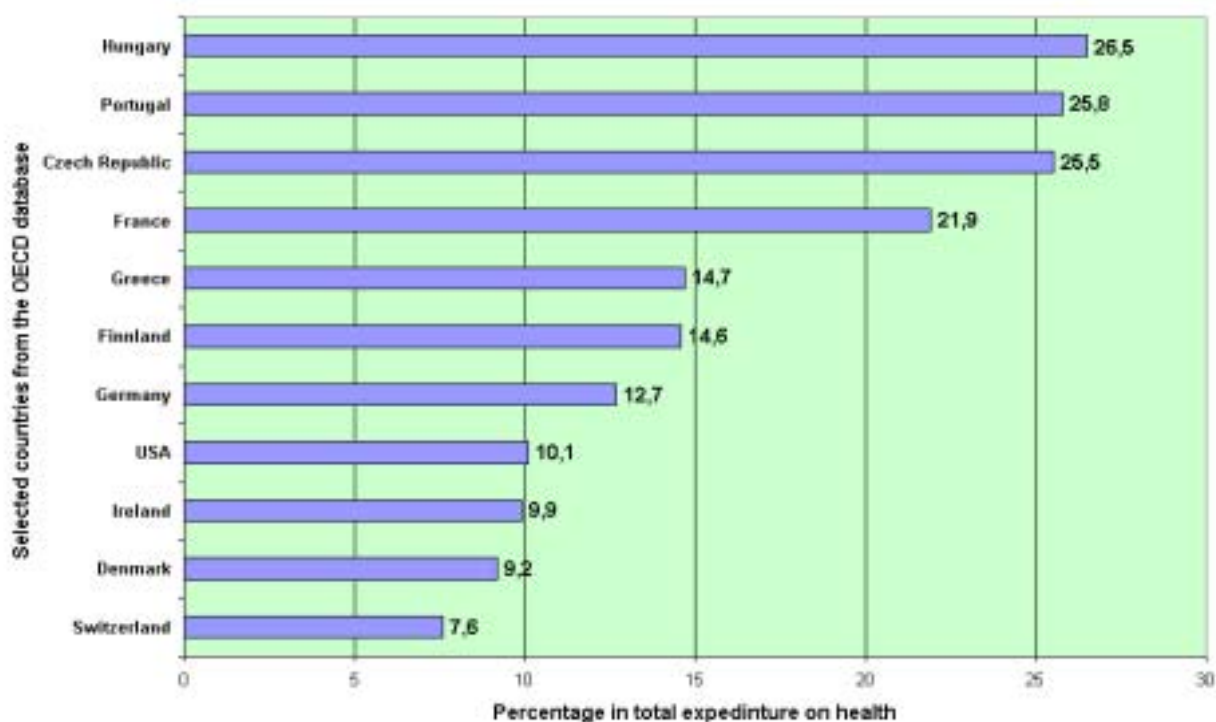
Fig. 7: Monthly expenses for benefits in kind medical services and medicaments per capita HUF, 1992-2001



We must observe the fact again that the proportion of expenditures spent on pharmaceuticals and medical aids is extremely high in the field of medical care of health insurance expenditures. It was 33 per cent in 2001. On the basis of data given by OECD since 1991, excluding two years, Hungary has spent the most on pharmaceuticals as compared to the total expenditures of health care between the member states of OECD.⁵ During the two years mentioned above Hungary took the second place due to an insignificant fallback. The Fig. 8 shows these data.

⁵ OECD Health Data 2001.

Fig. 8: Percentage of total expenditure on pharmaceuticals in relation to the total expenditure on health⁶

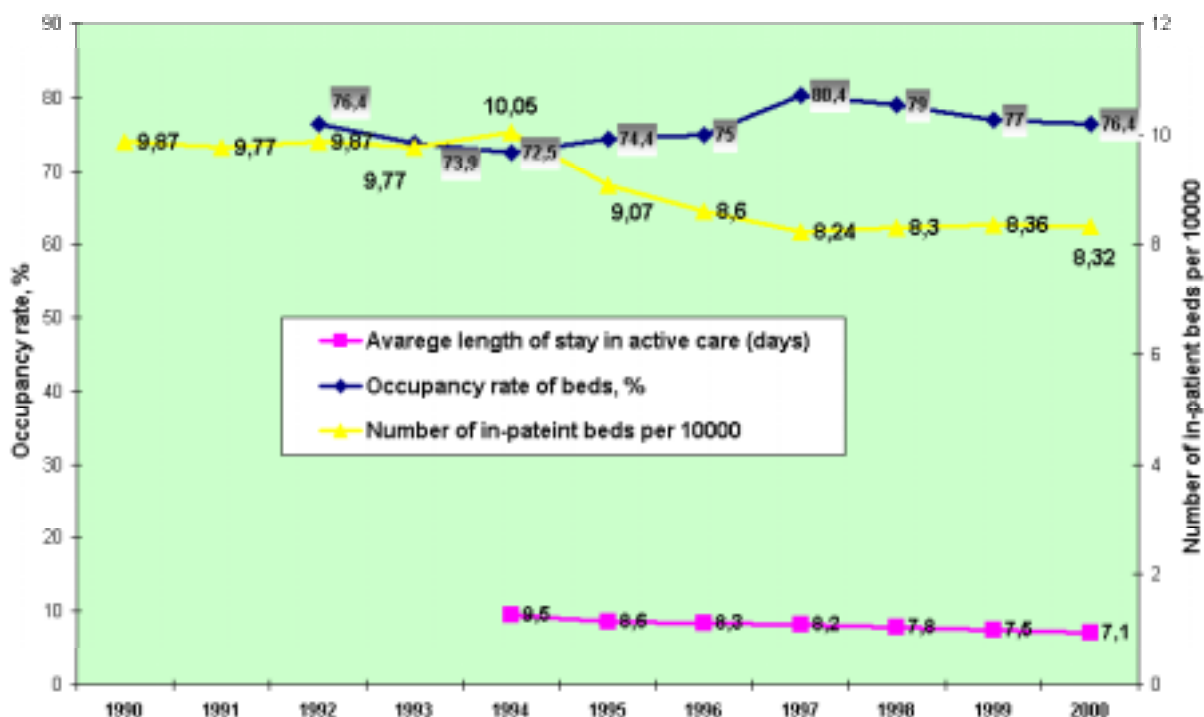


The loss of efficiency caused by purchase of pharmaceuticals is counterbalanced by the excess efficiency accumulated in the supply system. It is proved by the fact that the proportion of input by health care was 2.88⁷ in 1998 on the basis of PPS and the current official prices. This index is 22 percent higher than the GDP calculated on the basis of PPS and the expenditures calculated on the basis of official exchanging proportions, which shows a very favourable efficiency if we compare it to other Hungarian sectors. The significant improvement of efficiency is backed up by other indices, too. We can see in Fig. 9. that average length of stay in active hospital care has diminished from 9.5 to 7.1 days in the past seven years. Since 1994 the number of in-patient beds has largely been decreased by 17 percent, while the occupancy rate of beds has remained about 75 percent.

⁶ OECD Health Data 2001.

⁷ OEP working paper.

Fig. 9: Average length of stay, occupancy rate and number of in-patients bed per 10000



The research made by an improved method for the second time in 2000 shows a surprisingly high patient satisfaction index for hospital treatments. 79 percent of patients leaving hospitals are pleased and 30 percent of them are very pleased with hospital cares.⁸ It would be useful to compare this method to the methods and data used by the member states of OECD.

The significant improvement of efficiency is unquestionable, while neither the social security nor important hospitals went bankrupt. From the cost reduction's point of view the reforms for the financing system introduced in the 1990s did well in the examinations. The deficit of 8-10 percent shown by the social security's balance sheet from year to year is rooted in the different dynamism between the sides of revenues and expenditures. The deficits higher than expected can clearly be predicted during forward planning, but it is a typical characteristic feature for the national fiscal policy to shifted the deficit shown by the central budget to social security funds.

Considering expenditures over the past decade there has been an important equalization between the territorial and disease categories, which also refers to the decrease in the importance of roles played by political deals in the supply system. Despite positive developments still there are regional inequalities in the system that breaks the horizontal equity. Let us recognise that in this case also **allocation efficiency** is damaged. The most typical characteristic feature is concentrating in territories around Budapest and university centres. The Fig. 10 and Fig. 11 show examples for the regional inequalities.

⁸ Nagy Béla, Boncz Imre: The patient's satisfaction, Egészségügyi Menedzsment, 2001.

Fig. 10: Territorial distribution of oncology and oncology-ray therapy in-patient beds per 10000 in field of the counties⁹

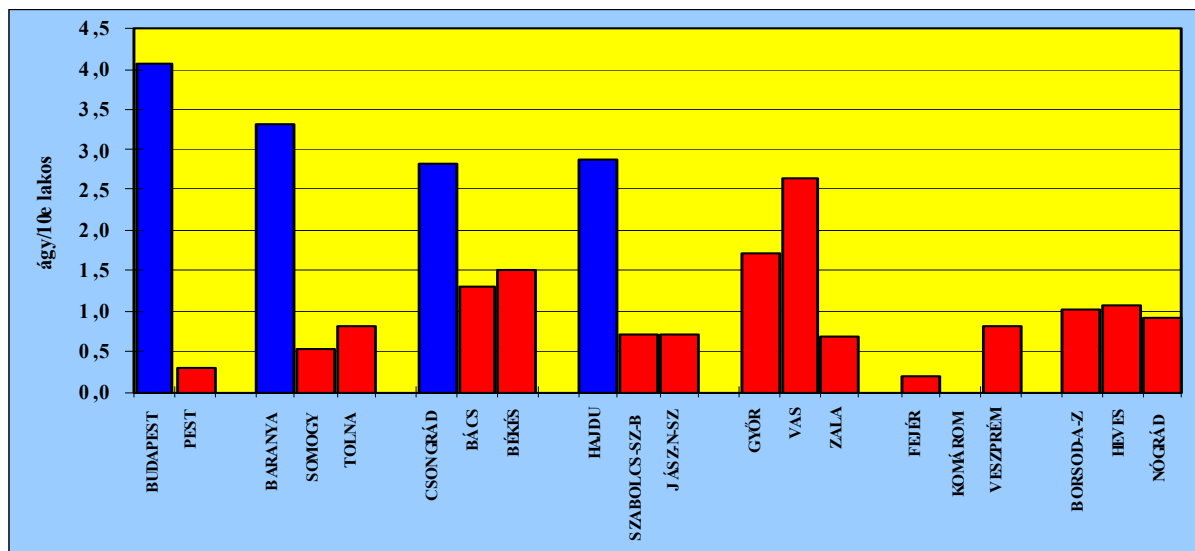
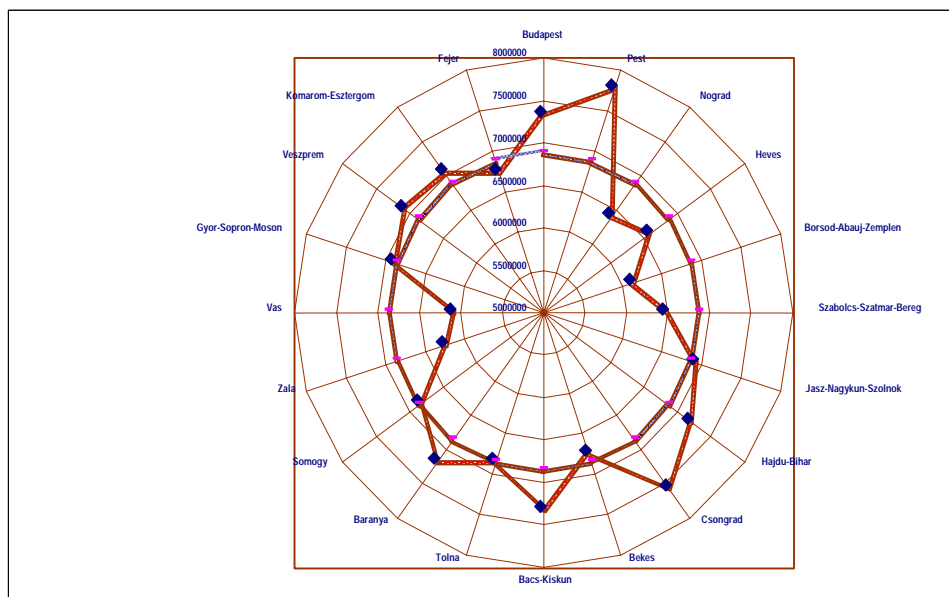


Fig. 11: The number of people appeared in the specialized care during one year period for all counties¹⁰



All of two figures above show that university centres attract medical capacities as well as inputs. The Fig. 10 and Fig. 11 indicate that the proportion of physicians, oncological and

⁹ OEP working paper, Bonczi Imre.

¹⁰ Standardised by the number of the person in Hungary in different age group by calculation the number of people treated in the specialised care in certain counties 1998 II./1999 I., OEP working paper, Nagy Júlia.

oncoradiological beds per 10 thousand people is the best in counties having university centres. The chart 8 shows the number of out-patients using specialised consultation in comparison to the standardised county average. The essence of the Fig. 11 is people living close to the specialised medical centres more frequently use this service than those live far away. Pest County rises high from the average.

Considering data and facts showed above we can come to the conclusion that the Hungarian health care supply system operates efficiently. But this is true only in some extent. Despite positive developments mentioned above a fair response can be the following. In Hungary persons insured and persons entitled can get a wide range of medical services at a reasonable price. But it could be sustained by a rather low level of wages for medical workers and decay of the infrastructure. In reality behind high performances there are provisions of over-servicing in more cases. Application of financing techniques based on performances in the field of specialised medical cares contributes to increase the supply induced demand, the high numbers of diagnostic treatments, operations, and hospital cares. In long term it is impossible to continue this process, because it means not proper allocation of the resources and contributes to decay of the infrastructure and the human resource's exhaustion.

The main reason for outburst of the expenditures is the promotion activities of pharmaceutical factories that encourage patients to consume expensive drugs groundless. The expenditures of pharmaceuticals upsets the budget every year, while the expenditures of the supply system is kept in check thanks to the reform of the financing system. The operation of the system is laced with the phenomenon of gratuity, which is a decaying factor from the efficiency's point of view, also due to the lack of reliable estimations. As a conclusion we can state that the **our health insurance system performed remarkably well from the view of the technical and production efficiency**, but the medical facilities has exhausted their reserves, and these days low level financial resources already endanger quality as well as efficiency.

However, from the point of view of allocation efficiency we have the opportunity to reach further extra efficiency. A good opportunity is provided by restricting regional inequalities, the supply induced demand, and through the systematic evaluation of therapies on the basis of cost-efficiency examination.

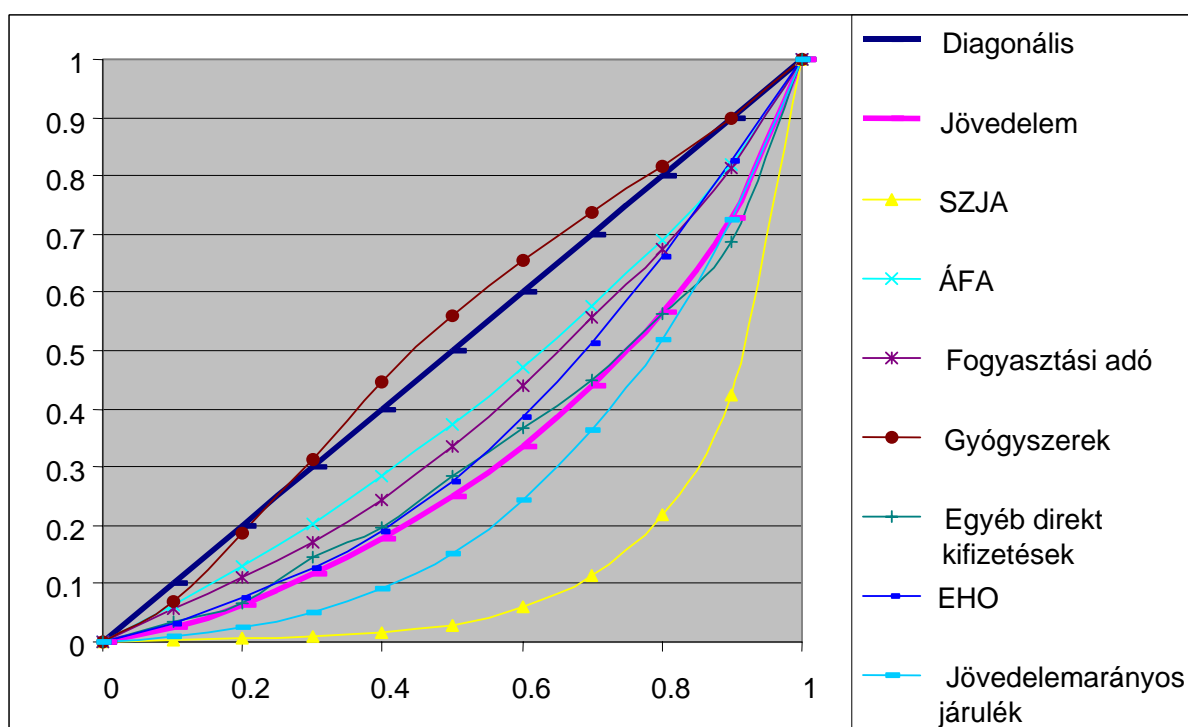
EQUITY IN THE HEALTH INSURANCE SYSTEM

In the development of the Hungarian health insurance system, a widespread consensus exists among the social groups concerning the governing equity principle, which says that distributions of health care benefits is fair if those take the financial burden who has the ability to pay and the utilization based on the needs of the insurees and the persons entitled. Access to health insurance benefits through social security in Hungary suits the above mentioned principle. It means that there is no factor to make difference between insured or entitled patients on the basis of their financial situations. It is worth keeping in mind that the Fig. 1 shows our insurance system is able to preserve this principle even after the number of contributors decreased 25 percent. This fact proves the stability of the financing system on one hand, but on the other hand it indicates weakening solidarity as well as safety in the sustainability of the system.

As it has already been mentioned above, regional inequalities also lead to breaking the principle of justice. I must say that the phenomenon of gratuity and the large increase in co-payment for pharmaceuticals works endangers the equity. The rate of patients' contribution to this phenomenon is estimated at 17.4 percent in 1996¹¹, 70 percent out of this percentage were spent on pharmaceuticals and 8 percent were spent on gratuity by patients.

In the Hungarian health insurance system the central budget contributes by 23.5 percent and the social insurance contribution is 67 percent, 9.5 percent of it are expenditures of pharmaceuticals, 4 percent are gratuity and 2 percent are other direct expenditures.¹² Examining the distribution of burdens on the system we can see that progressivity is felt in almost every financing source. The only exception is the population's expenditures of pharmaceuticals.

Fig. 12: Equity in health care financing in relation to the burden allocation



The Kakwan index applying to the whole financing system for health care was -0.0181 ¹³ that reflects **a little bit regressive** type. The chart above indicates progressivism of different types of financing. A little bit progressive (and it forms a large proportion of revenues) fixed

¹¹ Health Care System in Transition, Hungary 1999 p.30.

¹² Szívós-Szende-Janky: The allocation of the financial burden in the health care financing: experimental calculation, 2001.

¹³ Szívós-Szende-Janky: The allocation of the financial burden in the health care financing: experimental calculation, 2001.

component of the fixed health insurance contribution and the strongly progressive (but it forms a small proportion of revenues) personal income tax **have almost entirely equalised** the regressive effects produced by direct inputs in the health care, indirect taxes, and the component of contribution in proportion of wages to health care. The components with contrary signs refer to the fact that the present proportions can easily be ruined if the proportion of the financing system changes.

CONCLUSION

The structure and financing of the Hungarian health insurance system have significantly changed in the 1990s. As a result of the changes a considerable development can be observed in the field of efficiency from both the allocation's and the production's points of view. But the supply induced demand is among the factors in improving the production efficiency, which was not accompanied with the overall improvement of quality. The latter is largely blocked by reduced levels of resources and the lack of amortisation expenditures, while the proportion of out-of-pocket payments was increased and the system of gratuity was not vanished.

The merit of the changes to date is equity has been damaged neither horizontally nor vertically, in spite of a vast majority of insurees have been lost. The health insurance system keeps providing widespread safety for both insured persons and those who are entitled in another way, but the low level of inputs questions the sustainability of the system. Despite growing burdens imposed on the population, the expenditures of pharmaceuticals represent a disproportionately large part of expenditures spent on medical cares. It is impossible to maintain this proportion from the system's safety's point of view, because this is one of the most important recurring reasons for the yearly negative balance sheet.

We do the best to put out-patient cares in the foreground against in-patient cares. We want to strengthen the preventive and screening programmes so as to avoid acute and serious conditions. We would like to strengthen purchasing role of the health insurance system by improving our controlling system. Also from the Managed Care experimental models gives important experiences to us. The task to solve is to build quality aspects in the process.