Thesis of PhD dissertation

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Historical Roots of Health Care Systems' Present Efficiency

Budapest, 2004

I. Object of the research

The aim in writing this dissertation was to determine and compare seven different health care systems' present efficiency, and with the help of their history's presentation prove that it has basic impact on their present performance. First, I had to determine the variables that one should take in account when analyzing health care, the late can be regarded as a quasi common good. Indicators representing and making comparable the health condition of a population, and factors (variables) determining it most significantly, hade been identified. Than, the different health care systems' institutional history and historical path were investigated. One of my goals was to find the way for Hungarian health reform to be successful.

II. Research methods

Different methods hade been used in the two parts of the dissertation. While for investigating the efficiency I used and analyzed mainly statistical data and also both Hungarian and international publications, books and papers, in the second part, comparative historical analyses were made, the late for the purpose of exploring health care systems' historical path of different countries with the help of disposable historical works focusing primarily on the institutional history. When investigating (first part), regarding determinant factors all analyzed countries were given a score (on a 10 point scale, then an average) and also outcomes were given a score (on a same 1 to 10 point scale) for instance the life expectancy at birth men and women, main causes of death etc. With that method, different health care systems' efficiency were found, but only a detailed historical analyses (second part) could show how those countries could achieve efficiency. The used statistical data presented by international professional organizations (like WHO, OECD, WB, IARC, FAO etc.) can be found on the internet, and when handling them I intended to choose those, which represent the best the given phenomenon, and tried to create new indicators to make them comparable according to the rules of comparative economics.
One of the discipline's most principal works, the Handbook of Health Economics (Editors: A.J. Culyer and J.P. Newhouse, Elseviere

Science B.V. 2000) and journals in the field of epidemiology, medical sciences as Magyar Onkológia, British Medical Journal, International Journal of Cancer, The New England Journal of Medicine etc. were helping me. Finally, in my historical researches papers of Social Sciences, Egészségügyi Gazdasági Szemle and other journals and periodicals also results of historical research centers (for example Oxford University Press, University of Chicago, The London School of Economy) had been analyzed.

III. Summary of research's results

Most important hypothesis, statements and conclusions of the dissertation:

1) Healthy people wishes to live for a hundred years in health. The dissertation is making an attempt to determine the concept of health outcome, with the help of four indicators.

2) The four most important determinant factors of health conditions are: natural, social, political-economic and demographic. The first two are related to unhealthy substances of the body, the third is to the relieve of it and the fourth is increasing costs and reducing funds.

- Natural determinant: unhealthy substances' getting into the body due to geographic conditions (emission of CO_2, SO and other chemicals, air and water pollution);
- Social determinant: accumulating unhealthy substances by individual activity (drinking alcoholic beverages, smoking, unhealthy diet, lack of physical activity);
- political-economic determinant: political society can decide about full coverage and high statutory funding of health care or may many people be without insurance coverage and the public expenditure on health may be only a small proportion of the GDP, insurance company may be monopolist organization or oligopoly, competitive or fundholding, etc.;
- demographic determinant: aging of population, changing of active/inactive rate.

3) Hypothesis: in western civilization the better relative health condition can be expected,

- the more people live in mountains and near the sea coast (versus "pool-country"),
- the more unsaturated lipoids are eaten (for example fishes, vegetables, fruits etc.) and the more conflicts are reduced by family affection, religious faith and physical activity and not by unhealthy habits, like smoking, drinking alcoholic drinks,
- the more is the per capita public expenditure on health ,
- the more competition is between health insurance funds and health services' providers,
- the more the system is based on reciprocity and mutuality together with market elements.

The results of the dissertation in details:

Health/ health politics is such a subsystem of welfare state' institutional system, which has specific goals, where market failures occur, where financing is separated from using, health can not be measured by money and costs' increasing is a dominant phenomenon. My question was: which health care system works most efficiently, that means which produces the best health condition of his population compared with the inputted resources or the determinants? For measuring efficiency , first the aim variables (the health condition of population) than determinant factors had to be identified and scored.

1.) Measuring health condition

There is no consensual method for measuring the health condition of the population. The frequently used indicators are: life expectancy at birth, standardized death rate, infant mortality, healthy life expectation or premature death. Four indicators were chosen by me to measure the health condition of the population:

- life expectancy at birth
- healthy life expectancy (HALE)
- cancer mortality

- mortality due to cardiovascular diseases.

In industrial countries, cardiovascular diseases are the first cause of death while cancer mortality is the second. In the early 21st century about 10 millions new cancer incidences and 6 millions death of cancer can be expected, while the same two indicators in the 1980s were 6 and 4 millions only.

2.) Determinants of health condition

2.1 Natural factors

In this part of my dissertation I investigated the getting into the body of unhealthy substances. Among quantitative elements of natural factors, the environment pollution was analyzed and according to that, countries were given a score.
Indicators:

- air pollution (per capita NO_x and CO_x, greenhouse gases emission);
- water pollution (emission to the water of organic pollution);
- cleaning of environment (a "pool-country" differs from an island-country regarding the air cleansing, so I have taken in account the direction of wind, the longitude of seaside, altitude of mountains and the neighboring countries).

2.2 Social factors

The social determinants of health condition are very complex. According to WHO, the social determinant of health condition is mainly life style: diet, physical activity, smoking habits, alcohol, and drug consumption. WHO experts say, that those have a significant impact on the occurrence of cancer and also other diseases. Three basic dimensions are presented in my dissertation: life style, faith and smoking and alcohol drinking habits.

Lifestyle
Physical activity's score was calculated as an average of three elements. Diet has radically changed when mainly plant-based diet in the industrial countries turned to fatty, animal origin diet with more

sugar and saturated lipoids and less fibers, vegetables and fruits. According to the report made by WHO and FAO experts, chronicle diseases related to diet are: obesity, diabetes, cardiovascular diseases, cancer and osteoporosis.

Religious faith

The quantity of some hormones may be influenced by psycho-neuroimmunological impact of faith, by improving the activity of those area of the brain, which are responsible for the operation of nerves and so helping the production of immunfunctional hormones. The result of this process could be a more efficient immune system. Many experts have examined whether priest's help, prayers, spiritual support could help in recovering. Many articles say, that religious people are healthier and may expect longer life, even if age, weight, scholarship, income, marital status and smoking habits are included in the research. Some researches show more rapid recovering and less frequent suicide among religious people.

Smoking and alcohol drinking habits

Most frequent and serious diseases as consequences of smoking are lung cancer, COPD, coronary heart disease and oral carcinomas. Worldwide, the first cause of death is lung cancer, some experts say, the risk of smokers is 14 times more. The risk of dieing of coronary heart disease is two times more, the 85% of oral carcinomas death cases are due to smoking. Consequences of drinking alcoholic drinks are cancer (liver, pancreas, colorectal and oral); cardiovascular diseases, neurological and psychiatric problems.

2.3 Political-economic factors

I intended to measure with the help of three indicators how political decisions, democracy and financial sources influence the health condition of population: rate of public expenditures on health, opportunity of democratic political rights and per capita health expenditures on purchasing power parity. Some results show (not too strong) positive correlation of per capita health expenditures and health condition.

2.4 Demographic factor

Given the fact that aged people health care costs are higher and because of this economically inactive group's ratio in the population is increasing, a score was given for the ratio of 65 years and older's rate in the population.

Comparing goals and determinants I found the following table, showing the efficiency.

Goals	**CS**	**D**	**GB**	**IS**	**USA**	**NL**	**H**
1. Life expectancy at birth	3	8	6	10	5	9	1
2. Healthy life expectancy	6	10	9	9	7	9	1
3. Cancer mortality							
Men	2	6	7	10	7	5	1
Women	5	10	7	10	9	8	1
4. Cardiovascular diseases mortality	2	5	7	10	8	9	1
AVARAGE	**3,6**	**7,8**	**7,2**	**9,8**	**7,2**	**8**	**1**
DETERMINANTS							
1. Natural							
Geographical	3	5	9	6	8	6	2
Air pollution	4	7	6	6	1	5	10
Water pollution	8	10	2	2	4	1	1
2. Social							
Physical activity (lifestyle/1)	9	7	5	3	8	9	1
Diet (lifestyle/2)	4	6	5	8	6	5	3
Religious faith	1	2	5	10	9	5	5
Smoking and drinking habits	6	2	5	8	8	4	2
3. Political-economic							
Public expenditures on health	10	7	9	5	1	6	8
Political rights	1	6	9	8	10	10	3
Per capita health expenditures	2	7	4	4	10	6	1
4. Demographic							
Rate of 65 years and older	5	1	2	10	7	5	3
ÁVARAGE	**4,8**	**5,5**	**5,6**	**6,4**	**6,6**	**5,6**	**3,5**
Efficiency = GOALS/DETERMINANTS	**0,75**	**1,42**	**1,29**	**1,53**	**1,09**	**1,43**	**0,28**

Upon my researches I could establish the fact that Israel has the most efficient health care system, which is followed by the Dutch and German. United Kingdom and the United States are in the middle, and the end of the row, were found the Czech Republic and Hungary. We can say than, health care system efficiency is not due to expanded

market elements (USA), public financing and ownership (Czech Republic, Hungary). Regarding efficiency, probably a mixture of statutory and private health insurance system – containing market elements and operating with few, competing insurance funds – seems to be the best.
In the second part of may dissertation I made a historical examination of the seven countries which regarding their health care systems may be grouped as follows.

Czech Republic: paternalist, initiating socialist and statutory quasi public system, with artificially created funds which are operating in an irregular way.
Netherlands: universal, public coverage with strong private insurance (above a fixed income level it is obligatory to have private health insurance and not allowed to join the public social insurance system), complementary health insurance is rather expanded.
Israel: multi-funds, competing insurance system, with significant public share.
Germany: conservative, universal coverage, profession based segmentation, state directed, multi-funds insurance system.
USA: mainly private insurance based system, managed care form is dominant, very limited participation of government.

Israel

The basic principal is strong governmental participation mixed with voluntary health insurance funds, based on reciprocity and mutuality. From the beginning government had a major role in the establishment and financing of the health system. The first sick fund, the Clalit was established in 1911, meantime three other funds have started to operate. The foundation of health system was made by the Jewish community and the British Mandate Authorities in the early 20th century. When the State of Israel was established on May 14, 1948, a well developed medical infrastructure was already functioning,, however, only 53% of the population were insured.

The state extended its responsibility for health services, by taking over existing hospital facilities inherited from the British Mandate authorities, by building and operating new hospitals, by establishing

the Ministry of Health, regional health authorities, epidemiologic center and mother-and-child health care services. The 1970s are characterized by new public hospitals and increasing costs. By the end of the decade Israel faced similar problems to western states. During the 1980s, restrictions occurred and an attempt was made to increase the share of private sector. A privatization process has started in 1987, for-profit ambulant care was extended and in the case of some services differential financing was introduced. However by the early 1990s the situation was intolerable, the main problems were as follows: aging of population, increasing costs, not universal coverage, lack of the free choice among sick funds, differences in the membership of funds and huge deficit. Finally the reform was introduced in 1995. According to the new law: access to medical care is a basic right, all residents are covered by compulsory insurance, a fixed basic service basket is guaranteed to anyone, sick funds have to accept any candidate, insured can move free from a sick fund to any other, insurance premiums are collected by the state, age-adjusted capitation payment is introduced, when lack of financial sources government has to substitute. Competition was then introduced by the operation of not only one sick fund, the capitation payment system, the extension of supplementary health insurance schemes and the restructuring of the premium payments. Financial stability was attained however the pressure on health care system was not relieved, debates were continued about the content of basic service basket, financing, physicians' wage, social rights of immigrants. According to neo-liberal economic philosophy government participation is decreasing, the health budget is cut every year.

Netherlands

Three main characteristics of Dutch health insurance system are the mixture of public and private insurance, the dominantly private supply, and the typically Dutch neo-corporate approach of health politics. After 1814, during the New Kingdom of Netherlands, many types of health insurance were created, similarly to Germany mainly by professions, but trade unions, corporations also established funds and even indemnity insurance came into being.

Sick funds established by physicians had a strong impact on the system, as access to insurance was guaranteed only below a certain income level. Many people was then without coverage, and insurance

corporations recognized this opportunity, in 1906, the first medical cost insurance was established. The legal basis of establishment of German-type, state controlled health insurance was created by the German occupation forces in 1941.
With the Health Insurance Decree (ZFW) of 1941 started up the participation of the state. According to this law, the majority of Dutch people – below a certain income level – became insured against the consequences of diseases, premium was determined as percentage of income and collected by the state. Meantime, private insurers concentrated on those, whose income stayed above the fixed level. This dual system operated till the middle of 1960s. The Health Insurance Decree (ZFW) of 1964 expanded the former social security rights, below a certain income level, employees paid a given share of their income as premium, partly to the state and partly to their insurance fund. Those who disposed of an income above the level, stayed without insurance or bought private insurance. By the enactment of the Exceptional Medical Costs Insurance (AWZB) Law on January 1, 1968, the Dutch health insurance system became three tiered. AWZB was public and compulsory, covered almost the whole population and insured against long lasting, serious diseases. Premium to pay depended only on income and was collected as part of income tax. Supplementary insurances may had been covering risks that were not covered by the statutory insurance. The Access to Health Insurance Law (WTZ) was enacted as a not compulsory, but public form for people aged 65 years and older or to not ZFW member large health risky people. The premium and the services covered were the same for every member and were determined by the central government which also financed it. Insurance funds had to accept all candidates. About 70% of the expenditures on health was covered by the social security, the share of private insurance remained about 14-15%. Hospital care services from 1983 were financed upon the demand of regional councils (taking in account the anticipated activity, wages and also the required investment).
Still three tiered system is operating in the Netherlands. The first level is AWBZ, where for all residents in Netherlands long lasting care is guaranteed by the state (service providing and financing are regulated by the state).
Second tier is primary care for everyone. This tier is composed of three elements. First is ZFW insurance (63% of the population)

where insurance covers services provided by family doctors and specialist, hospital care, medicines, physiotherapy and infant dentistry. A significant proportion of premium is income related, a smaller proportion is a nominal amount fixed by the insurance funds. Second element is private insurance, where standard service package is guaranteed for those who can not participate at the statutory insurance, their income being above the fixed level. The service package components are similar to the one guaranteed by the statutory, compulsory health insurance. The nominal premium to pay is determined individually by insurance funds, in addition a solidarity contribution must be paid. Third element is the health insurance of public officials.
Third pillar is supplementary health insurance which is voluntary. The scope and assumption of risk of supplementary insurance differs.

United Kingdom

In the country of public health the role of government in social and health care has a long history. According to the Poor Law enacted in 1601, the medical treatment costs of those who have not enough income or are dangerous for the community has to be financed by the state. Those times social and health affairs were administrated by local governments. From the middle of the 19th century the country was divided to districts and official administration had to be established and operated. The so called Local Health Districts nominated the municipal health officer and financed health care by collecting local taxes. Local medical, health authorities provided public health services. From the second half of the century in-patient (secondary) care appeared, previously general practitioner provided primary care on a market base and local governments were responsible for prevention and medical advices. Four types of hospitals were operating, among them public hospitals, which grew to mass hospitals and by the beginning of the world war II., about 2/3 of hospitals were controlled by local governments. In 1911 a contribution based social security system was introduced, but originally the coverage was not extended to family members. National Health Service was found in 1948. According to the law, organizing and operating health care became the responsibility of the state, equality in access, and free access were guaranteed. Hospitals became state owned, specialists turned to be state employees and general practitioners – who worked

as self employed in contract with NHS and received capitation payment – were controlled by local authorities. Local governments' responsibility has been limited to obligatory immunization, operation of nursing network and care of handicapped. The increased demand due to the extension of insurance coverage put a great pressure on hospitals in the 1950s. Waiting lists and the gatekeeper role of the general practitioners appeared, financing remained unsolved. In 1962 by Hospital Plan launching, the resolution of problems was searched in reinforcing planning. In 1971 an income certificate based social security system and in 1973 a new, hierarchical administration and control system was introduced. The former base oriented way of allocation had been replaced by weighted capitation payment, and in 1982, 192 District Health Authorities were created. By the end of 1980s, expenditure on health as a percentage of GDP has grown to 6-6,5%, waiting lists remained long and till government had the triple role of service providing, financing and controlling. The principal of the NHS and Public Cure Law (enacted April 1, 1991) was the introduction of quasi market institution. Market was stimulated in basically public system by separating providers of services from the users. The GP fundholders became buyers in place of the former health authorities and were financed by the Regional Health Authorities in the form of capitation payment, also they decided with which service providers they wish to be in contract.

Mainly state or local government owned providers competed at the market, GP fundholders appeared as users and fees were determined by bargaining mechanism. Hospitals became trusts. Labor Party's new government in 1997 was continuing the Thatcherian way of privatization. All forms of GP fundholdings were abolished and Primary Care Groups were formed instead. Those groups of family doctors were larger then GP fundholders, took contract with physicians living in the region, and better cooperation was awaited with local authorities. In 2000, the Blair government launched a 10 years reform program, the main points being: eight large private insurance companies were allowed to buy public hospitals, yearly 150 thousands operations in private hospitals were financed by the public, opportunity of operate commonly NHS owned hospitals, new demand reducing rules were introduced, content of NHS care was redefined, finally new regulating boards were established for enhancing privatization.

United States of America

Health cost insurance originated in the 19th century, when coverage was reduced to some risks only (for example train or boat accidents), later some diseases (like typhoid, scarlet, diabetes) became covered too. Capitation payment and market based health care existed even before the 20th century. At the early 1900s, indemnity health care was wide spread in the USA. Originally this form of health care meant operation of doctors' group, which provided a wide range of services for a fixed, monthly fee. Fees were determined independently from the health condition, and were the same for everyone.

Development of organized health care was blocked by the strong physician's lobby interested in the maintenance of business based medical care, as no intermediate could be found between doctor and patient, and no one controlled the doctor's activity. During the 1920s and some decades after such an – from the point of view of participants – ideal system was operated in which the patient paid directly to the doctor for the care, decisions were made commonly by patient and his physician. The first problems appeared at the time of great economic crisis (and reinforced by the world war II.) when many patients could not afford health care any more, and hospitals and other providers went to bankruptcy. Under the great financial pressure hospitals started to lobby at the legislators for legalizing insurance companies. After the war, trade unions demanded that employers buy health insurance for their employees as benefit, and government supported it by a taxation law, which made preferable this form of benefits for employers. This taxation policy made government part of financing. Within some years the majority of employees had health insurance bought by their employer and supported by the federal government too. From 1930 to 1980 traditional indemnity insurance ruled the insurance market, from the 1960s, federal government also took part of financing, by establishing and operating Medicare and Medicaid. The public share of expenditures on health raised from 24% in 1960, to 40% in 1990. The system that operated in the second half of the 20th century seemed almost perfect to physicians and patients also. While patients were free to choose among physicians and hospitals and no one intervened to the physician – patient relationship, someone paid the bill, financing, providing and using were separated.

At the 1960s and 1970s employers and government both recognized the problem. Nixon first suggested a reform but – just like that of

Clinton twenty years later – failed, primarily because of the opposite interested groups (hospitals, physicians, pharmaceutical and insurance companies). Never existed compulsory health insurance in the USA, the majority of Americans, are involved in some form of managed care. For a long time, managed care form was not preferred by the regulation environment. In 1973, the HMO Law enactment helped the expansion of those forms. Even today, the employers and private insurers play a major role in health insurance, a great share of premium is paid by employers, but because of the strongly increasing costs, this share is reduced gradually. 2/3 of Americans are insured by their employers, and 14% are not covered at all.

Czech Republic

By the end of world war I., in 1918 after the establishment of first Czech Republic appears the Czech health system, which originated in the Czech regions of Austro-Hungarian Monarchy, in the form of German-type, Bismarckien social security system. The first social security system was established in 1924 and covered near 1/3 of the population against diseases. This system was functioning with small changes only till 1951. Following world war II., the situation was similar to that of other socialist countries': the health insurance system became state-owned, the institutional system was centralized. A short time after world war II., in 1948, important political events occurred in the Czech Republic. The health and social security schemes had been united and became compulsory. In these four years lasting model the contribution was paid by employers (6,8% of the wage). In 1952, the social security system was entirely centralized and public financed by taxes. For the population health care was free. Providers became state-owned also, embedded to public health institutions. Small and medium size hospitals, clinics, emergency centers, pharmacies, workplace medical centers, ambulance and first aid stations, medical schools belonged to regional institutions. During the 1950s this system seemed to be efficient in solving the postwar times' problems. Infant mortality, tuberculosis, other serious contagious diseases, and problems of underfeed decreased significantly. In the 1970s and 80s, the poor technical level, high number of physicians, hospital-centered structure, low wages and para solvency were determinant. The public health care was financed of taxes at the principal of capacity

financing. In December 1990, the Czech government approved the plan of a new health care system of which main elements were similar to those of the neighbor western European countries, especially Germany. The system is based on compulsory insurance, which provide health care for all inhabitants. Nine independent insurance funds were created to treat health contribution. Physicians urged the restructuring of service provider side by supporting a rapid privatization. The former health care system's decentralization and legislation about private operation started in 1991, in 1992 a plan was formed on privatization of all level of health care. In the case of primary care (family doctors, paediatrists, and dentists) it meant the opportunity to buy surgery.

Hungary

Hungarian health insurance was bismarckien type, centralized and initiated by the state. According to the law of 1876, the operation of public health is a task of the state, public health and epidemiological affairs are the responsibility of chief constable, on county level that of county surgeon, and on the district level that of district surgeon. Organizing the family doctors' operation was the task of urban and village authorities. Public hospitals made the in-patient care, the Minister of Home Affairs approved the establishment of new hospitals. The 1876 law, had been completed several times, protection against trachoma in 1886, pox vaccination in 1887, modification of village medical services in 1936 (public health was brought under state control). Health care was financed by social security according to the law of 1927. Social security system covered only 30% of the population agricultural workers had no access at all, only those of a very thin income stripe were insured. After 1945 a new insurance system had been established, prior to war insurance companies had been centralized, together with their capital resources. By 1949 social security became government controlled, and part of the central budget. From the 1950s, the number of free of charge health insurance covered people, increased steadily; finally almost every employee had access to compulsory insurance. Health insurance was restructured in 1955. The law of 1876 had been replaced by a new law in 1972, according to which access to health care became civil right. The problem was that extending access was not accompanied by establishment of providers' institutional base. By

the wake of 1970s a hospital reconstruction program was launched, but soon after, it has failed; only some hospitals were affected, and no new hospital was built. By the end of 1980s, the well-known reform of health services providers' financing system started up. From 1989 to 1993 health system characteristics changed basically and the main characteristics of present structure were formed. The latest are legal equality of different ownership forms, system of family doctors, social security financing based on activity. Currently 70-80% of expenditures are financed by the public, compulsory insurance coverage is almost universal, a mixed ownership system is operating, voluntary supplementary health insurance appeared, financing and providing are separated, new contract based relations appeared and finally the financing methods are similar to western European ones.

Germany

The legal base of modern health insurance system of Germany was established in 1883 by chancellor Otto von Bismarck. In that year had been introduced the law, regulating nationwide compulsory health insurance, followed one year later by accident insurance which were both path breakers those times. The number of insured doubled in three years after 1880, and was at near 10% of the population, later extending and providing access to more people. The law of 1883 was based on existing local and professional insurance funds. In some branches where employees worked for hourly wage, insurance was compulsory till a legally fixed income seal (so called census). 33% of the contribution was paid by the employers, the rest by employees. Members were entitled for example to 50% of their wage in case of illness for 13 weeks, to maternity aid or to compensation in case of death. Those funds operated on non-profit base, and at the beginning were free in choosing doctors and other health personals, also in decision making on the form of contract. During the Nazi regime no basic change was made in the health system, neither in financing nor providers. The postwar times' first task in the GFR was the restoration of health system. The decade of 1955-65 can be characterized by many attempt to reduce costs, the majority of them encountered resistance. During the next decade, 1965-75, fighting continued. Demographic changes, use of expensive technologies, increasing of wages urged a new legislation, which focuses on the cost reduction.

This law was enacted in 1977 and pointed out, that contribution rates be stable. The 1990s are characterized by a range of reforms. Stable general contribution rates were required by the law enacted in 1993, and a very new structure in health insurance was formed. The about 100 years long by profession segregation of insurance fund members (workers belonged to workers' funds, clerks belonged to clerks' funds, employees to employees' funds) created an unequal financial situation and distribution, also resulted in highly different risk levels. From 1996, employees are free in choosing among insurance funds, so the opportunity of institutionalization of funds' competition was inaugurated.

IV. Publications on the subject

1. Biztos, ami biztosító. Versengő egészségpénztárak (Csillik Péterrel) HVG 1999. március 27.

2. Egészségügyi rendszerek hatékonysága az Európai Unióban és az Unión kívül (Vallyon Andreával) EU Working Papers 2003/2. A Budapesti Gazdasági Főiskola szakmai folyóirata VI. évfolyam, 2. szám

3. Egészségügyi rendszerek története, reformjai és jelenlegi problémái (Vallyon Andreával) EU Working Papers 2003/3. A Budapesti Gazdasági Főiskola szakmai folyóirata VI. évfolyam, 3. szám

4. Hatékonyság és/vagy szolidaritás? (Vallyon Andreával) Recept XV. Évfolyam, 4-5. szám 2004

5. Az Egyesült Királyság egészségügyi rendszerének rövid története Recept XV. Évfolyam, 6-7. szám 2004

6. Beteg egészségügy – beteg lakosság (Vallyon Andreával) Heller Farkas Füzetek Közgazdaság- és Társadalomtudományi Folyóirat II. évfolyam 2004/2.

7. Hol jobb betegnek lenni? I. Az amerikai biztosítási rendszer Informatika és Menedzsment az Egészségügyben (megjelenés alatt)

8. Hol jobb betegnek lenni? II. A német biztosítási rendszer (Vallyon Andreával) Informatika és Menedzsment az Egészségügyben (megjelenés alatt)