Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics

Diploma Thesis

Health Care Financing in the Czech Republic: Comparison with the Dutch Health Care System

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Jan Pístecký

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2. Objectives of thesis and methodology
3. Typology of health care systems and reimbrusment methods
4. Specification of healthcare system in the Czech Republic
5. Specification of the Dutch health care system
6. Comparison of systems
7. Evaluation of possible improvments for the Czech system
8. Conclusions
9. Bibliography
10. Supplements

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Bryndová L., Pavloková K.; Gaskins M., Roubal T.; Heatlh Systems in Transition: Czech Republic Health system review; European Observatory; 2009; 176pages;ISSN1817-6127;[on-line];[cit.2010-9-2]; http://www.euro.who.int/__data/assets/pdf_file/0010/97633/E92968.pdf>

Bjorngerg A., Garrofe B.C., Lindbalad S.; Euro Health Consumer Index 2009; Health Consumer Powerhouse; 2009; 66 pages; ISBN 978-91-977879-1-8.

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The Diploma Thesis Supervisor: **Ing. Zuzana Křístková, Ph.D.**

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Dean

In Prague: 4th February 2011

Declaration

I declare that I have worked on my diploma thesis titled “Health Care Financing in the Czech Republic: Comparison with the Dutch Health Care System” by myself and I have used only the sources mentioned at the end of this thesis.

In Prague on 4.4.2011 _____

Jan Pístecký

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„ HEALTH CARE FINANCING IN THE CZECH REPUBLIC: COMPARISON WITH THE DUTCH HEALTH CARE SYSTEM“

„ FINANCOVÁNÍ ZDRAVOTNICTVÍ V ČESKÉ REPUBLICE: POROVNÁNÍ S NIZOZEMSKÝM SYSTÉMEM“

SUMMARY

Diploma thesis presents insight into the problems of financing the largest, and at the same time, the most sensitive segment in public services, Health Care. This field is facing problems, which include technical development, enormous investments into new pharmaceutical and medical products, as well as aging of the population, which further increases demand on financial resources.

This thesis addresses the health care system in the Czech Republic, the improvements that could be made to it, and it takes an inspiration from one of the best health care systems in the world, the Dutch health care system.

The health status of the population and the health care bases are both on high level in both countries. However, there is still a large gap between both systems in several spheres that are being analyzed in this work.

Some key objections in this thesis that could be implemented to improve the system in the Czech Republic are: increase the competition of health insurance companies to eliminate the leading role of General Health Insurance Company; implement General Practitioners as gate-keepers for the further treatment by specialists; introduce voluntary health insurance as new source of financing; establish new institution for financial flow control and administration; and reduce the number of beds in hospitals that are not fully utilized.

Key words:

Health Care, Financing, Insurance, Health Care Policy, Comparison of Health Care Systems, Resources, Expenditures, Czech Republic, Netherlands.

SOUHRN

Diplomová práce se zabývá financování největší a nejcitilivější oblasti veřejných služeb, zdravotnictví. Zdravotnictví čelí hlavním problémům týkající se rostoucích nákladů na technický vývoj zdravotnických a farmaceutických prostředů a zároven stárnutí populace, které stále více kladou finanční nároky na fungování tohoto systému.

Práce je zaměřena na system zdravotnictví České Republiky a jeho možné zlepšení. Inspirace je brána z výsledků zjištěných na základě porovnání s Nizozmským zdravotnickým systémem, jedním z nejlépe organizovaných systému zdravotnictví na světě.

Zdravotnictví a zdraví obytvatelstva je v obou zemích na velmi vysoké úrovni. Ačkoli, je zde velký rozdíl v několika oblastech, které jsou analyzovány v této práci.

Mezi základní výstupy této práce, které mohou být implementovány v České republice pro zlepšení systému, lze řadit: zvýšení konkurence na trhu zdravotních pojištoven po snížení výhradního postavení Všeobecné Zdravotní Pojištovny, zavedení funkce praktický lékařů jako vstupních článků pro směřování pacientů k dalším specialistům; snížení počtu nevyužívaných lůžek v nemocnicích a další.

Klíčová slova:

Zdravotnictví, financování, pojištění, zdravotní politika, porovnání zdravotnických systémů, finanční zdroje, náklady, Česká Republika, Nizozemsko.

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1. INTRODUCTION

In the Czech Republic the system of health care financing has been under development since the system of centralized planning was abolished. Unfortunately, due to compromises that have been done in the process of decisions, principles that define the system are still nontransparent, ineffective and uncompetitive.

However, inspiration could be taken from the example of a well-organized health care system in the Netherlands. The Dutch have developed a competitive health care market with the government standing in the role of supervisor and regulator. A patient has the opportunity to decide liberally for the most suitable treatment for appropriate prices thanks to competition among insurance companies and with several other advantages that makes the system competitive and effective.

The first chapter of this diploma thesis is dedicated to the theoretical part that covers international systems of health care financing, definition of health and specification of reimbursement methods.

The second chapter contains a description of the Czech health care system, its development over time, its structure, subjects that influence the market and the financial flows in the system like incomes and expenses.

In the third chapter the Dutch system is analyzed analogically from the previous chapters to have the opportunity to compare and contrast both systems in the following chapter. Both systems are compared in this analysis based on performance in economic and quality indicators.

Finally, conclusions are summarized in the SWOT analysis. At the end, appropriate changes for sustainable development with effective financial mechanisms for the Czech system are suggested.

2. OBJECTIVES AND METHODOLOGY

The main objective of this diploma thesis is to identify weaknesses in the health care system of the Czech Republic and suggest particular improvements that could be implemented to increase its effectiveness, based on the comparative analysis with the Dutch health care system.

There are no expectations that the whole system, as it is set up in the Netherlands, could be transferred to the Czech Republic, without particular changes to fit culture, traditions and the current system of financing. However, there are still opportunities to improve the Czech system.

The method of comparative analysis was selected, based on the most appropriate functions that are required to discover the weaknesses of one system based on contrasts and comparisons with the other system. It is necessary that systems are being confronted to find out their distinctions.

The data sources are especially statistics and economic indicators provided by World Health Organization for Europe, OECD and the country's statistical offices, such as the Czech Statistical Office, and the Institute of Health Information and Statistics of both the Czech Republic and Netherlands.

The indicators of health systems performance are: expenditures in health care as part of government budget, as PPP per capita, as percentage of GDP; the number of admissions of patients in the system; density of illnesses in the population, and others. Part of the data is from the year 1989 till the year 2009, although some are only for the year 2008.

The thesis concludes with the SWOT analysis, which is a tool to evaluate and summarize the findings, divided into appropriate sections: opportunities, threats, weaknesses and strengths.

3. TYPOLOGY OF HEALTH CARE SYSTEMS AND REIMBRUSMENT METHODS

3.1. Defining Health and Public Health

First of all the definition of health should be provided. *"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."*(WHO, 2003)

The definition clearly specifies the term health that is the object of further discussion. However, the health can be considered as public service, in more details is described the term public health.

There are numbers of principles, mentioned below, defining the public health. The main principles of public health are illness prevention and a quality of life promotion.

Public Health includes organized efforts to improve the health of particular community. Public health does not rely on specific knowledge and expertise but rather relies on intersection of science and other social approaches. The operative components of this definition are that public health efforts are organized and directed to communities rather than to individuals. The definition of public health reflects its main goal to reduce disease and improve the health in a community. (NOVIC, 2008)

American Institute of Medicine defines the public health as what society does to assure the conditions for people to be healthy and also suggest that there have to be continuing and emerging threats to the health of the public. (FLEMING, 2009)

The definition of public health by J.M.Last includes necessary collective actions that need to be taken for maintaining and improvement of the public health. He suggest that it is the effort organized by society to protect and restore people´s health and include the importance of science and other social skills. (LAST, 1991)

Nevertheless all these definition are based on the statement since 1920 by Edward A. Wislow a leader of American public health who defines the public health as *"The science and the art of preventing disease, prolonging life, and promoting physical health and efficiency through organized community efforts for the sanitation of the environment, the control of community infections the education of the individual in principles of*

personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will ensure to every individual in the community a standard of living adequate for the maintenance of health" (SCHNEIDER,2011)

Wilsow´s definition is still valid today due to its consideration of reducing treat of illnesses and increasing of lifespan.

3.2. Types of Healthcare Reimbursement Methodologies

3.2.1. Fee-for-Service Reimbursement

A payment method in which providers receive amount of money, for each service, that has been provided. Commonly, the physician, healthcare organization, or other provider bills for each service provided on a claim that lists the fees or charges for each service. It is a traditional method of calculating reimbursement in developed countries. A fee is a set amount or a set price. The provider of the healthcare service charges a fee for each type of service, and the health insurance company pays each fee for a covered service. The claim is sent to the third party payer (health insurance company) - submitting a claim. Patients in countries where health insurance is reimbursed on the basis of fee-for-service, have the advantage of great independence. Their health insurance plans allow them to make almost all decisions about which physician to visit and about which conditions to have treated. For the patient, the disadvantage of the fee-for-service is that the fee-for-service plans often have higher deductibles or copayments than other types of health insurance, such as managed care plans. For health insurance plans, fee-for-service has the disadvantage of uncertainty. The costs of reimbursing the providers are unknown because the services that patients will receive are unknown. Moreover, costs will increase if the providers increase the fees for each service, if patients receive more services than expected, and if more expensive services are substituted for less expensive services. Examples of fee-for-service reimbursement are: **self-pay and retrospective payment**. (CASTO, 2006)

Self-Pay

Self-pay is a basic type of fee-for-service based on which the health care system began. Because the patients pay a specific amount for each service received. It includes only the patients that make such payments themselves directly to the providers, for medical care provided. For individuals without health insurance it results in self-pay solution in which patients pay for all the costs of their healthcare themselves. Some may seek recompense from a third party payer and others may bear the burden of the costs of their healthcare themselves. Advantages of this concept are: reduction of overhead expenses due to direct payments for objective services provided, elimination of bills that are not paid to the provider, third party cost does not have to be included in prices. Yet ethical and legal issues should be considered. A negative side of this concept is that individuals with insurance might not be able to visit some doctor because of their complicated system of financial balancing. (AAFP, 2006)

Traditional Retrospective Payment

The system financed through retrospective payment method of reimbursement pays providers after the services have been done. The system might be called cost-plus pricing system because there is no incentive for providers to behave more effectively and patients do not have any motivation to search for better prices. Third party payers reimburse providers for costs or charges previously provided. In cost-plus system, providers are evaluated by quantity of services provided additional cost are passed to the third-party payers in this case insurance companies. This method has historically been the traditional method for reimbursement. Henderson states that health insurance complicate the decision-making process by making the health care services cheap, however the health care is not cheap in any matter. That forces the state to increase spending, regulations and subsidization. (HENDERSON, 2009)

3.2.2. Episode-of-Care Reimbursement

Episode-of-care reimbursement is a healthcare payment method in which providers receive one amount for all the services they provide related to a condition or disease. In the episode-of-care payment method, the unit of payment is the episode, not each individual health service. Therefore, the episode-of-care payment method eliminates individual fees

or charges. The episode-of-care payment method is an attempt to correct perceived faults in the fee-for-service reimbursement method. Thus, the episode-of-care reimbursement method controls costs on systematic scale. An episode of care is the health services that a patient receives for a specific health condition or illness or during a period of continuous care from a provider In the episode of care, one amount is set for all the care associated with the condition or illness. Forms of episode-of-care reimbursement are **capitation, global payment**, and **prospective payment**. Occasionally, an episode of care is defined as a specific number of days. (CAST, 2006)

Capitated Payment Method

Capitation is a method of payment for health services in which the third party payer reimburses providers a fixed, per capita amount for a period. "Per capita" means "per head" or "per person." Capitation is characteristic of health maintenance organizations. In capitation, the actual volume or intensity of services provided to each patient has no effect on the payment. More services do not increase the payment and also fewer services do not decrease the payment. If the provider contracts with a third party payer to provide services to a group of workers for a capitated rate, the provider receives the payments for each member of the group regardless of whether all the members receive the provider's services. There are no adjustments for the complexity or extent of the health services. The advantages of capitated payment are that (1) the third party payer has no uncertainty and (2) the provider has a guaranteed customer base. The third party payer knows exactly what the costs of healthcare for the group will be and the providers know that they will have a exact group of patients. However, for the provider, there is also great uncertainty because the patients' usage of provider services is unknown and the complexity and cost of the services are unknowns. (CASTO, 2006)

Prospective Payment Methods

In the prospective payment method, payment rates for healthcare services are established in advance for a specific time period. The pre-set rates are based on average levels of resource use for certain types of healthcare. It is important to note that prospective payment methods are based upon averages. On individual patients, providers can lose money or make money, but, over time, providers should come out even. Payment is determined by the resource needs of the average patient for a (a) set period of time or (b) given set of conditions or diseases. Prospective payment methods representing these two situations are per-diem payment and case-based payment, respectively. Providers are paid the pre-established rates regardless of the costs they actually incur. Therefore, prospective payment is another method in which the actual number or intensity of the services does not affect a pre-established compensation. The intent of prospective payment methods is to reduce the possibility of increase in unexpected costs due to limits on payments are pre-set for the future time period. (CASTO, 2006)

Two types of prospective payment method are used:

1) Per-Diem approach - Per diem or per day (daily rate) is a limited type of prospective payment method. The average per diem rate is easy and quick to calculate and implement, it is based on historical data, and numbers are divided by the total number of beds, all that is calculated by third party. The third party payer reimburses the provider a fixed rate for each day patient is hospitalized. Usually, the per diem payment method is used to reimburse providers for inpatient hospital services. In the absence of historical data, third party payers and providers must consider several factors to establish per-diem rates. These factors include costs, lengths of stay, volumes of service, and patients' severity of illness. Problems of the per-diem payment method contend that the method encourages providers to increase the number of inpatient admissions, to extend the lengths of stay. (LANGENBRUNNER, 2009)
2) Case-Based Payment (DRG) – Diagnostic Related Groups correct the flaws perceived in the per-diem payment method. A classified system has been developed at Yale University in 1960s. It is based on predefined case values

> for hospitals. If the hospital provides care for less it can keep the difference. That motives for effectiveness and cost savings. Basically DRGs were intended to contain patients with roughly same kind of patients. These patients were than divided in to other groups depending on how the procedure is complicated (complications increase costs). The DRGs were developed as payment method, although they are used also as hospital comparisons, evaluation of efficiency, mortality etc. (SLEE, 2008)

The impact of the case-based payment method is that it rewards effective and efficient delivery of health services and penalizes ineffective and inefficient delivery. The case-based payment rates are based on averages of costs for patients within the group. Generally, costs for providers that treat patients efficiently and effectively are beneath the average costs. The providers make money in this situation. On the other hand, providers that typically exceed average costs lose money. Inefficiencies include duplicate laboratory work and scheduling delays. Many healthcare organizations have implemented procedures to streamline the delivery of health services to offset inefficiencies. Poor clinical diagnostic skills are an example of ineffectiveness. Hence, the more efficiently and effectively a provider delivers care, the greater its operating margin will be. The episode-case payment method creates incentives to substitute less expensive diagnostic and therapeutic procedures and laboratory and radiologic tests and to delay or deny procedures and treatments. Healthcare analysts, on the other hand, point out the savings associated with eliminating wasteful or unnecessary procedures and tests and that volume and expense do not necessarily define quality. (CASTO, 2006)

3.3. Models of health care systems

In most European Countries, the State is in major position in organizing and ensuring health care. All healthcare systems share a problem how to acquire enough resources, typically 7 – 10 % of national income, that are needed to run the public healthcare services.

For the Europe two models of health care systems are typical. Beveridge system, where financing and provision are handled within one organizational system, typical for Italy, New Zealand, Spain, Sweden or UK and the second one Bismarck system which is typical for the rest of the Europe, is the system based on social insurance, where is a multitude of insurance organizations, which are organizationally independent of healthcare providers. Both systems might be combined with the third model, the Out-of-pocket model of financing, which is based on direct payments for treatments provided. Since 2008 it has been implemented in the Czech Republic. (EHCP, 2009)

In countries might be implemented other variations of these models, depending on local norms, habits and government structure. But these four are the basic:

The Beveridge Model

This model was established by William Beveridge, a social reformer, who builds up Great Britain's National Health Service. The system is financed by government through tax payments, similarly as for example security forces are financed. This dependence on tax revenues separates the system from others. This system is used in countries such a Great Britain, Norway, Sweden, Cuba, and Spain where most, not all, hospitals and clinics are owned by state. (SHARMA, 2010)

The Bismarck Model

The Bismarck model is also called social insurance model, named after Otto von Bismarck, Prussian Chancellor, who introduces the system during unification of Germany in 19th century. Bismarck model connect public and private sector in health care financing. Its uses insurance system – the insurance companies are called "sickness funds"- usually financed by both employees and employers. Sickness funds have to provide insurance for everyone and are not expected to make profit. This Prussian model is implemented in

countries such Germany, Netherlands, Switzerland, Austria, and Japan. The Disadvantage of this model is lack of financial sources for long-term care. (SHARMA, 2010)

National Health Insurance Model

Both Bismarck and Beveridge model are combined in this model. Payments come from government insurance programs that are financed by every citizen. This system is implemented in Taiwan, Canada. There is no need for marketing or profits. Government negotiates lower prices and cost for health care declines. National insurance plans also control costs by selecting the services for which they will pay and for which have to by paid by user. Negative of this model might be long waiting times. (SHARMA, 2010)

The Out of Pocket Model

It is privilege of developed countries to have mass medical systems. Only 40 countries from 200 have formal health care system. Developing countries as China, India and Africa with lack of sources are using out-of-pocket system that is simple and does not have to be well organized. Each patients pays at time when receive treatment. (SHARMA, 2010)

In next chapters are applied these theoretical basis two countries Czech Republic and Netherlands. Which both use Bismarck model but in dissimilar variations.

4. SPECIFICATION OF HEALTH CARE SYSTEM IN THE CZECH REPUBLIC

In the year 1989 the health care in the Czech Republic went through the dramatic transformation from the state controlled mechanism to the system based on democratic decisions financed by public health premiums where health insurance providers are responsible for financing and administration of the system.

According to (DURDISOVÁ, 2005) the health care system has not fully accomplished the level of more developed countries in the west of the Europe, the system has been focusing mainly on creation of plurality.

Until the year 1990, the system in the Czech Republic was under control of the Communist party, all providers were state controlled and whole system was financed from the state budget. Direct out-of-pocket payments were not used. The process of power decentralization was allowed in some areas and regional offices could decide about allocation of resources. After the changes in 1989, the Ministry of health started to work on new system that is based on (CMC, 2011):

- Guarantees of adequate health care services for all citizens; health care supplying in competitive environment.
- Rights for all citizens to freely select their physician or medical provider; elimination of monopolistic type of health care providing; health care financed from several sources (state budget, premiums, financial sources of cities, companies, citizens).
- An integral part of the system will be obligatory health insurance.
- At the end of 1990, district national offices were transformed under the ministry of health.

4.1. Structure of the system

The centralized way of planning and managing health was abolished after the revolution in 1989. After that the Bismarck system of health care was introduced, the system that is mainly based on social health insurance (SHI) thus on taxes paid by citizens. According to the law 20/1966 all citizens have their right to choose their doctor and health care provider (institution). They have also right to receive care without direct payments based on public health insurance.

However, after the year 2008 the statement of direct payments above is not fully valid. The biggest reform of health care after revolution was realized by the minister MUDr.Tomáš Julínek and his team in the year 2008. This reform was mainly focusing on elimination of differences between quality and financial expenditures within the system and implemented with connection to the Bismarck system also Out-of-pocket payments so called "regulatory fees" that are not fully corresponding with the statement about care without direct payments, mentioned in the Health of People Act 20/1966 coll.. Other reform steps included (HROBON, 2005):

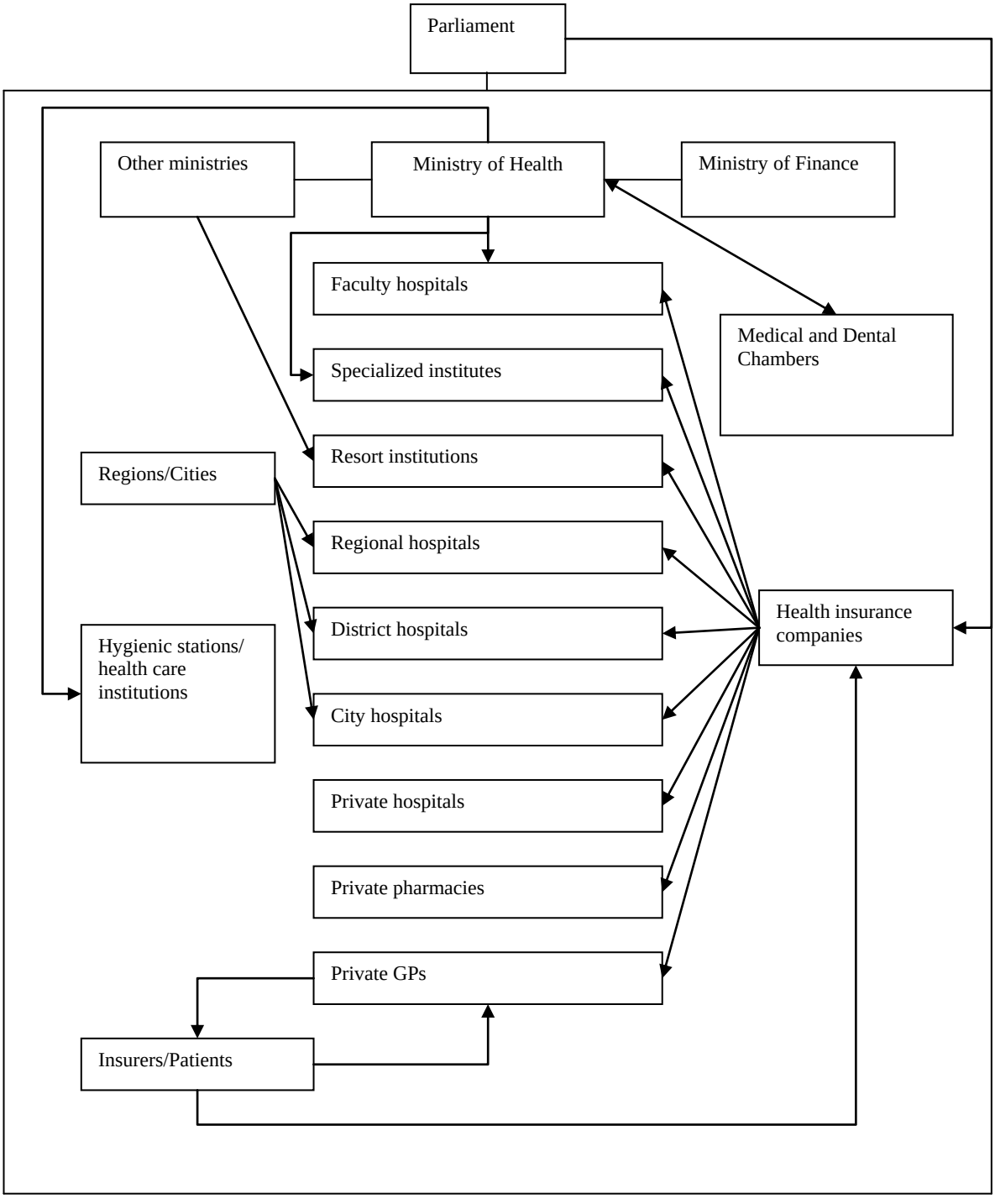
1. State interventions expanded for regulation and control upon cost and quality of services provided and contracted with insurance company. Because health care providers are not motivated to increase their quality of services and lower the costs.
2. Inefficient roles of players influencing the market, especially insurance companies that should be more responsible for their activities. The state is supposed to ensure availability of health care services, protect and control the public health.
3. An elevation of patient participation within the system by increases of its decision possibilities and financial participation through regulatory fees. All the patients will be motivated to effectively leverage health care services.

The whole reform was one of the most important and biggest changes in the health care of the Czech Republic, however it was still a compromise due to complicated and instable political background in the whole country. The reform was quite successful in diversification of income flows in to the system through "regulatory fees".

Current Health Care system is organized as shown Scheme 1. “The Health Care Subjects in the Czech Republic” The most important players from the figure are specified furthermore.

The parliament is authorizing all acts, notices and other important directives regarding health care. The Ministry of Health is responsible for setting the health care policy agenda and supervising the health system. Sick pay and other cash benefits that are not covered by SHI, but are part of the social security system is administered by the Ministry of Labor and Social Affairs and financed through separate social security contributions. The regional authorities and the health insurance funds play an important role in ensuring the accessibility of health care, by registering health care providers and by contracting them. The health care providers are divided by the type of ownerships and services they are providing. Finally patients and patient’s organizations are the recipients of care provided.

Scheme 1.“The Health Care Subjects in the Czech Republic”



Source: Gladkij Ivan (2005); Own elaboration

4.1.1. Government

The role of the state in the Czech Republic is as legislator and regulator that influences the whole system by laws and regulations, the financial contributor as it finances part of expenses in the system and owner as it owns some facilities. The Ministry of Health is the central authority of state financing the scientific research, ensuring the public health, licensing the professionals, administrating the health care, supervising the system and funds. Ministry of finance collect taxes and pays Social Health Insurance for economically inactive people in to insurance funds. (BRYNDOVA, 2009)

Ministry of Health Care

In the Act 20/1966 Coll. §69 are activities of Ministry of Health Care specified as political, conceptual directions of future development and transfers findings from scientific filed to practical usage

The ministry has under its control these institutions (MZCR, 2011):

1. State institutes – SUKL, Státní zdravotní ústav
2. Health Care Institutes – Masarykův onkologický ústav, Ústav pro péči o matku a dítě and others
3. Centers – Psychitrické centrum Praha, Koordinační středisko transplantací and others
4. Faculty hospitals – FN Plzen, FN Motol and others
5. Regional Hygienic stations

The most important laws in Health care in Czech Republic are:

- 1/1993 Coll. - Constitution of Czech Republic
- 20/1966 Coll. – Health of People act, amended in Act 548/1991 Sb.
- 551/1991 Coll. – Act of General health insurance company Czech Republic, amended
- 280/1992 Coll. – Act of resort, union and company health insurance companies, amended
- 160/1992 Coll. – Act of health care in public and not public health providers, amended.
- 396/2010 Coll. – Notice of item value determination, amount of payments for health care service paid from public health insurance for year 2011
- 471/2009 Coll. – Notice of item value determination, amount of payments for health care service paid from public health insurance for year 2010

- 242/1991 Coll. – Notice of health care providers system constituted by regional offices and municipalities
- 394/1991 Coll. – Notice of status, organization and proceeding of faculty hospitals and other hospitals, selected professional institutions and regional hygienic stations under the control of Ministry of health care.
- 592/1992 Coll. – Act of insurance for public health insurance, amended
- 48/1997 Coll. – Act of public health insurance, amended
- 79/1997 Coll. – Act of pharmaceuticals, amended
- 363/1999 Coll. – Act of insurance, amended
- 258/2000 Coll. – Act of public health protection, amended
- 564/2006 Coll. – Government directive about wages for state employees.

The Notices of Item Value Determination are updated every year and as discussed in chapter: Financing of the System, this instability complicates the system and increases the administration expenses connected with preparation and loading of changes.

4.1.2. Patients

Regarding the data from the statistical office, 10 498 800 citizens were registered in the Czech Republic for the year 2009. (CZSO, 2009) From that 58.7% were economically active citizens in age over 15. (CZSO, 2009a) The reasons for economic inactivity are mainly: normal retirement (53%); retirement due to disability (6.9%); studies at secondary school (13.7%); studies at university (8.5%); family or personal reasons (9.5%). (CZSO, 2009b) For whole group of economically inactive population is social health insurance paid by state.

Regarding the Act 48/1997 Coll. §11 all patients have the right to freely choose their health insurance fund, which is possible to be changed once a year. Also the selection of the physician or other expert is up to the policyholder but these physicians have to own contracts with insurance company of the policyholder. The doctor can refuse the patient only if that would be over his working capabilities.

There are two types of patients in the system:

1. Economically active

According to the Act 48/1997 Coll. payers of premiums are citizens with permanent residence in the Czech Republic and citizens without permanent residence but still working for the employer that has headquarter in the country. More specifically these are employees, expect of employees working under the employment execution agreements and volunteers, further payers are entrepreneurs and citizens with residence in area of the Czech Republic. Premiums are paid to the insurance company under which is payer insured. This applies since the first working day. Premium is paid from one third by employee and two thirds by employer.

The Act 592/1992 Coll. Determine the premium rate for employees at 13,5% of income starting at the minimum income. For the entrepreneurs is the same rate applied for 45% from incomes. The minimum income is setup for since 2007 at the amount of 8.000 CZK.

2. Economically inactive

State is payer for economically inactive population via state budget for these policyholders: seniors, orphans, mothers on maternity care, job applicants which accepted short term job, disabled persons and foreigners that receive residence permit. The state pays 13,5% from the amount that is define in the Act 592/1992 at 5.355 CZK per month. Social health insurance is paid by ministry of finance to the specific account that is opened as specified in §20 of this act.

Patients Organizations

All of patient organizations are evidence by the SÚKL organization and there is 65 of them in the Czech Republic. One of the biggest patient's organizations is Czech Association of Patients which is a member of alliance of patient's organizations IAPO in London. Their main role is in empowerment of patient's rights and transferring their needs to the providers and regulators. (SUKL, 2011)

4.1.3. Health Insurance Funds

According to the information from the Ministry of Health, there are currently 9 insurance providers in the system. However, as shown in Table 1, their number is diminishing since the early nineties. After the split of Czech Republic and Slovakia in 1993 the market had potential for new health insurance providers; although the potential was not sustainable due to the position of General Insurance Company with majority of patients. For the rest of insurance providers was necessary to merge in to larger units to be competitive. The biggest numbers of mergers were done between the years 1996 and 1997.

Table 1."List of Health Insurance Companies in the Czech Republic"

Year	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000-2011**
No. of funds	15	19	26	27	24	14	11	11	9

Source: VEPŘEK, 2002, Own compilation

Regarding the data from the Ministry of Health and Annual reports of insurance companies, the population is insured as shown in Table 2.

Table 2. "Insurance companies with number of customers"

Insurance Fund	**Registration No.**	**Year 2007**	**Year 2008**	**Year 2009**
General Health Insurance Company	111	6,538,722	6,374,640	6,261,809
Health Insurance Company of Interior Ministry	211	1,074,163	1,104,986	1,125,885
Czech Industry Health Insurance Company	205	0	0	709,290
Occupational Health Insurance Company (OZP)	207	663,869	673,841	684,428
Military Health Insurance Company	201	561 649	552 110	592 443
Coalfield Brotherhood Cash Office, a health insurance company	213	367,447	400,445	415,759

Health Insurance Company METAL-ALIANCE	217	357,104	392,816	400,518
Employees Health Insurance Company Skoda	209	131,787	133,282	133,364
Health Insurance Company MEDIA	228	0	0	38,601

Source: Ministry of Health of the Czech Republic and Annual reports of health insurance funds, Own creation

Health insurance funds enter into contracts with health care providers according to the act 48/1997. There are no exceptions that insurance company does not enter the contract if the health care provider belongs into the network of health care providers that is created by Ministry of health.

A list of outputs provided and their values is setup by Ministry of health for every year.

4.1.4. Health Care Providers

According to the Act 20/1966 Coll. health care duties are ensured by health care providers owned by state, regional authorities or private owners. Types of health care providers are:

1. Providers of hygiene services
2. Providers of preventive therapeutic care
3. Providers of ambulatory care and hospitals – including:
    a. General practitioners (GP)
    b. Ambulatory (outpatient) providers - that are therapeutic providers placed outside of hospitals. These providers are not connected with hospitals in any matter.
    c. Hospitals - that are providing ambulatory and bed care, primary and specialized diagnostic and threat care. Types of care provided According to the Act 48/1997 Coll.:
4. Ambulatory (outpatient) care include:
        a. Primary care – provided by GP or treating doctor.

b. Specialized ambulatory health care – is recommended to the patient by GP. The recommendation includes reason of such a decision and previous treatment provided.
c. Special ambulatory care – is determined for chronically ill patients in homes for the elderly or at home, in rehabilitation centers and institutions for social services.

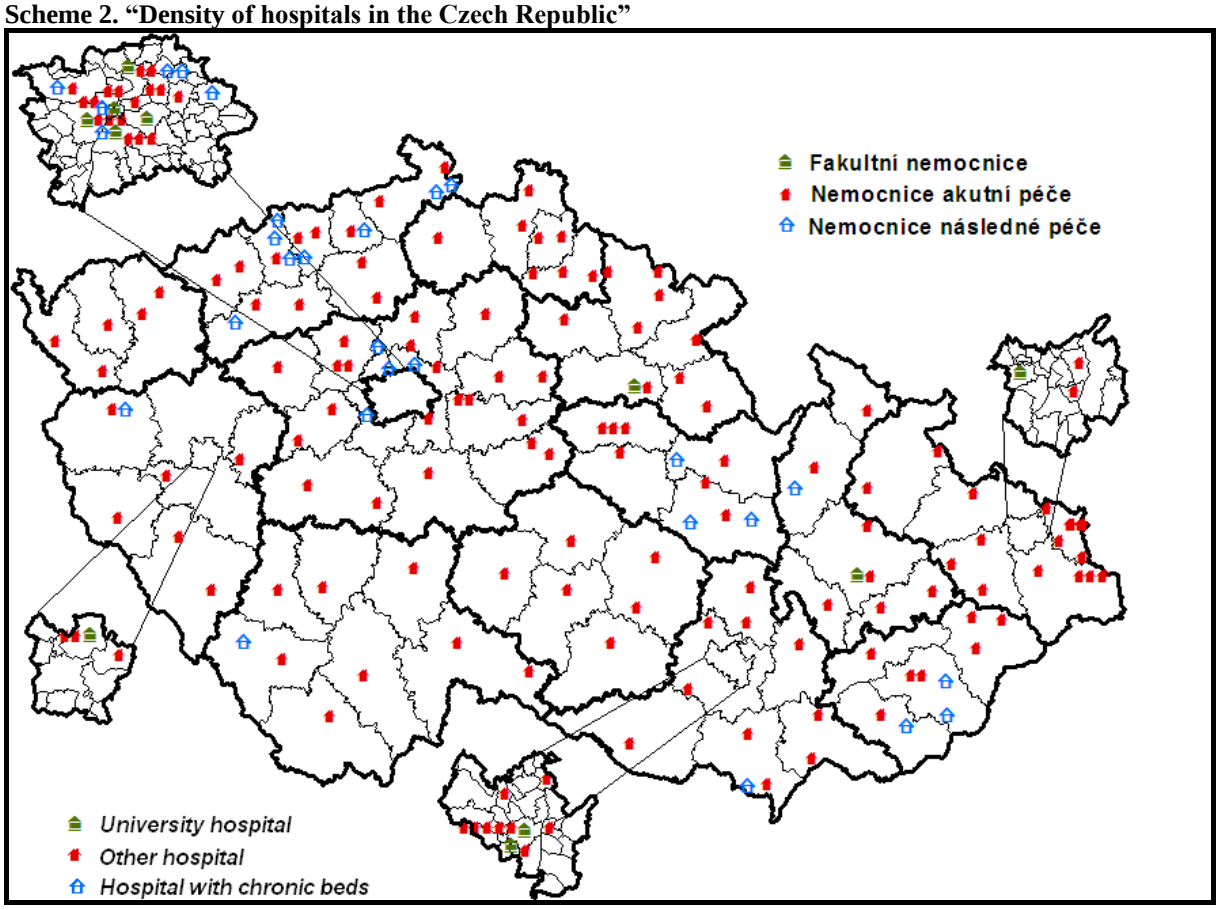
5. Bed establishment care
6. Specialized medical institutions – including spa treatment and preventive care.
7. Pharmacies
8. Specialized children's centers

All health care providers founded by the state or regional authorities have to provide services in catchment areas that are specified by a ministerial notice 394/1991 Coll. and 242/1991 Coll..

Some of health care providers might participate in educational activities with medical and pharmaceutical faculties for further education of students and future workers. These workplaces are called Clinics. Ministry of Health participates in these activities with Ministry of education, youth and sport.

By the end of 2009, there were 27,959 health providers registered in the CR, of that 19,824 independent physician's offices. There were 261 state providers (founded by Ministry of Health) and 27,698 nonstate establishments (163 founded by regions, 170 by city or municipality and 27,365 by physical person or other legal body). (UZIS, 2009)

Scheme 2. "Density of hospitals in the Czech Republic"



Source: UZIS; Zdravotnická ročenka 2009

Scheme 2 shows the density of university, hospitals with chronic beds and other hospitals as located in the Czech Republic. As might be recognized most of the hospitals are organized by districts and the biggest cities as Prague, Brno, Ostrava, Plzen are occupied by larger number of them.

4.1.5. Health Care Professionals

The total number of employees in whole health care sector was 246,662, surprisingly 4/5 from that number are females. One fourth of all employees were working for state health care providers and the rest of three fourths were working for providers under regional governments, churches, physical persons or other legal bodies. For bed providers (in-patient) were working 61% of all workers in health care sector and 21% of employees were working for ambulatory (out-patient) providers. (UZIS, 2009)

There were 6,577 Contract workers at the end of the year 2009. They are not on payroll of employees nor to employers. The contract workers might work based on agreement done

without employees contract or work based on educational stay, more than 2/5 were physicians and 1/5 were nurses. The health emergency contract is from 40% constituted by contract workers. Professionals in health care are working based on the act 96/2004 and act 95/2004 that specify the groups of workers suitable for given field of professes. Average year of physicians was 47 years in both genders. The share of doctors over 60 years was 17% and this percentage increases every year. Nevertheless new potential physicians are coming on the labor market; the seven medical faculties had a total of 13,069 students. Women represented as usual 2/3 of all students. Most of these students are studying general medicine. Number of graduates in 2009 was 1,037 in general medicine and 349 in stomatology. (UZIS, 2009)

Table 3. "Employees on payroll by founder of establishment"

Employees on payroll by founder of establishment			
Category	**City/Municipality**	**Private**	**Other organs**
Physicians	1,151	23,381	791
Dentists	7	6,489	63
Pharmacists	45	5,330	22
General nurses	3,828	43,911	1,807
Total Professional Health care personnel (including others)	7,827	117,625	3,730

Source: UZIS; Zdravotnická ročenka; 2009; own elaboration

Table 3. specifies the share of professionals by the founder of establishment. As mentioned at the beginning of this chapter there were 246,662 employees on payroll but only 129,182 of them are health care professionals. It is quite extensive number of other administrative, managing, and other personal that is employed by this sector as well. Some savings might be found in this part of health care sector. Most of the employees are employed by private founders.

4.1.6. Advisory Institutions

Institute of Health Information and Statistics of the Czech Republic

The Act 20/1966, §67, also regulates activities of National Health Care Information System (in Czech "NHIS") that is processing medical data and information for National registers. These registers are determined by attachments in the Act 20/1966. Coordination and fulfillment of NHIS duties is ensure by Institution of health information and statistics of the Czech Republic. A foundation act of this institution 89/1995 Coll. is adding the institution between other statistical services, its duties are mainly: methodological and technical data collection and their processing and analysis.

The NHIS was established in 1960. It is a state organization founded by Ministry of Health. The main task and object of activity of the Institute is management and co-ordination of the National Health Information System (NHIS). The functions of NHIS include collection and processing of information concerning health and health care, management of national health registries, provision of information in the extent determined by law and other regulations respecting protection of personal data, and exploitation of this information in health research. The Institute is a component of State Statistical Service (on the basis of the Competence Act) and performs this service according to Act no. 89/1995 Sb. on State Statistical Service, in wording of later amendments. The Institute co-operates with the Czech Statistical Office and other organizations as the Association of Hospitals, associations of physicians, professional medical associations, health insurance corporations and other organizations, particularly in improving and exploitation of the processed data. (UZIS, 2011)

4.1.7. Supervisory Institutions

Health Care Professional Institutions and Civic Associations

According to the Act 20/1966 Coll. Professional institutions in the system should be part of the control mechanism in the system, take part in creation of legal directives and authorization of not public health providers all that based on agreements with Ministry of Health.

Czech Medical Chamber (CMC)

It is a non-profit, independent, non-political autonomous professional organization with main tasks included supervision of medical ethics and the quality of health care. All physicians engaged in private practice are members of the Chamber. Through its power to award licenses to doctors, the Chamber determines the conditions under which its members engage in private practice and act as expert representatives and head physicians in non-governmental health care facilities. Furthermore, CMC lays down the professional requirements for the performance of diagnostics and therapeutic methods and supervises Continuing Medical Education (CME). After the major socio-political changes accomplished in our country in 1989 the Medical Chamber was re-established in 1991 on the basis of Act No. 220/1991 Coll. concerning the Czech Medical Chamber, the Czech Chamber of Dentists and the Czech Chamber of Pharmacists. (CMC, 2011)

State Institute of Drug Control

The Institute has ensuring high standards in human pharmaceuticals; its proactively harmonizes differing regulations in the country; it ensures the administration of data for health care protecting; it evaluates the regulatory system by reviews of activities and customer satisfaction; it provides information support for state administration and for the public for drug policy awareness; the institute cooperates on international fields to improve and sustain the quality and information within the system. (SUKL, 2011)

4.2. Financing of the system

The Czech Republic has a system of social health insurance (SHI) based on compulsory membership in a health insurance fund. The funds, of which there were 9 in the year 2009, are quasi-public self-governing bodies that act as payers and purchasers of health care. The system is financed primarily through mandatory, wage-based SHI contributions administered by the health insurance funds. Since 2008 part of the financing mechanism is also out-of-pocket payment so called "regulatory fees". The whole system is based on Bismarck model. Sick pay and other cash benefits are not covered by SHI, but are part of the social security system, which is administered by the Ministry of Labour and Social Affairs and financed through separate social security contributions. (BRYNDOVA, 2009)

4.2.3. Expenditures in Health Care

The Czech system is specific in inconsistence in financing; almost every field (pharmacies, surgery, stomatology, GPs etc.) of health care has its own specifics. That makes the system complicated. General Practitioners sign contract with insurance companies and report monthly their expenses that should be paid by insurance fund. There is used such called combined capacity –performance payment.

Importantly, for the year 2011 the new notice about reimbursement does not calculate with DRG system that has been introduced several years ago. That complicates again the system and decline the motivation of health care professionals to decrease cost of procedures.

According to the OCED (2003), total expenditures on health care are the final consumption of health care products and services plus capital investment in health infrastructure. These expenditures will be described below in details.

Total expenditures of the system were 218,630 million Czech Crowns (CZK). At the end of 2009 public health insurers registered no overdue obligations to health care providers, their claims on insurance payers were ca. 38.7k million CZK. The State paid the insurance for economically inactive clients (pensioners, children, unemployed and some

other population groups) in the amount of ca. 48.7k million CZK. The average expenditure of the public health insurance system per 1 client was 21,071 CZK. (UZIS 2009a)

Hospitals, as providers have more important position among health care providers. Their total costs in 2009 amounted to 123.2k million CZK and thus increased by 10 % from 2008. The most costly items were personal costs, their share was 41.3 %. Total revenues of hospitals are counting for 123.8k million CZK represented the same annual increase as in the costs, by 10 %. (UZIS 2009a)

Expenditure on medicaments is a significant part of the total expenditure. Data on consumption of medicaments are obtained from State Institute for Drug Control. The total financial value of medical preparations distributed in 2009, in manufacturer's prices, i.e. without wholesale and retail margins, was 58.23 billion CZK. On the assumption that all distributed preparations were used by patients in the CR, the average consumption of medical preparations per one Czech citizen in 2009 would be 29.80 packages with 503.78 DDD and value of 7,618 CZK. The average value of expenditure on medical preparations per one CR citizen thus increased from 2008 by 8.72 %. Pharmaceutical care in the CR, according to Register of Health Establishments, was secured by 2,592 pharmacies and 220 dispensaries of medical device. According to the returned reports on activity of pharmacies and dispensaries they accepted 72.9 million prescriptions and 3.2 million medical device vouchers. After the decrease of the number of prescriptions in 2008 by 24 % from 2007 due to regulation fees the number increased in 2009 by 6 %. But the number of prescriptions in 2009 is only 81 % of the number accepted in 2007. Per 1 inhabitant there were 6.95 prescriptions, the average cash surcharge per 1 prescription including the regulation fee was 116 CZK. Revenues from patients in free sales of drugs and medical devices including surcharges were 16,332 million CZK, i.e., 23 % of total revenues of pharmacies for medicaments and medical devices that amounted to 71,698 million CZK. (UZIS 2009a)

Employees in health services in the CR are paid in two ways – according to valid regulations of salary and according to valid regulations of wages. Employees of subsidized organizations and organizational state components (founded by MH, region, municipality or city, other central organ) are paid according to valid salary regulations. In 2009, 39 % of all health care workers were paid in this way, this share slightly decreases every year. The average monthly salary in 2009 was 26,750 CZK (annual increase 7.6 %). The average

total monthly salary of physicians and dentists was 48,723 CZK, of that tariff salary constituted 48.1 %. The share of tariff salary had slowly increased till 2007, but in the past two years it gradually decreased. Other significant components of the salaries of physicians and dentists were performance premiums 12.3 %, personal bonus 11.1 % and overtime work including bonus 9.9 %. Of all 12,216 physicians and dentists (average whole tine equivalent on payroll) remunerated according to salary regulations, over 56 % were in the 14th tariff class with a mean monthly salary 56,459 CZK (tariff salary 25,880 CZK). Almost 15 % physicians and dentists were in the 13th class with mean monthly salary 40,805 CZK (tariff salary 22,329 CZK) and over 22 % were in the 12th class with mean monthly salary 32,584 CZK (tariff salary 17,885 CZK). The average monthly salary of general nurses and midwives represented around one half of the average monthly salary of physicians and dentists. (UZIS 2009a)

The total average monthly salary of all health care professionals in 2009 was 26,261 CZK, of which the tariff salary was over 62 %. In 2009 an adjustment of the classification of general nurses and midwives into tariff classes was performed. General Nurses and midwives are prevalently in the 8th to 11th tariff classes. Of them, about ¾ are in the 9th and 10th classes. 38 % general nurses and midwives were in the 9th tariff class with an average monthly salary 23,809 CZK (tariff 15,681 CZK), 36 % in the 10th tariff class with an average salary 27,889 CZK (tariff 17,032 CZK). Remuneration according to valid regulations on wages applies to employees of private health establishments founded by a physical person, other legal body or church, and employees of all organizations. The average monthly wage of these employees was 22,840 CZK. The increase from 2008 was less than 7 %. For comparison, the average monthly wage in the CR was 23,488 CZK. (UZIS 2009a)

4.2.4. Incomes

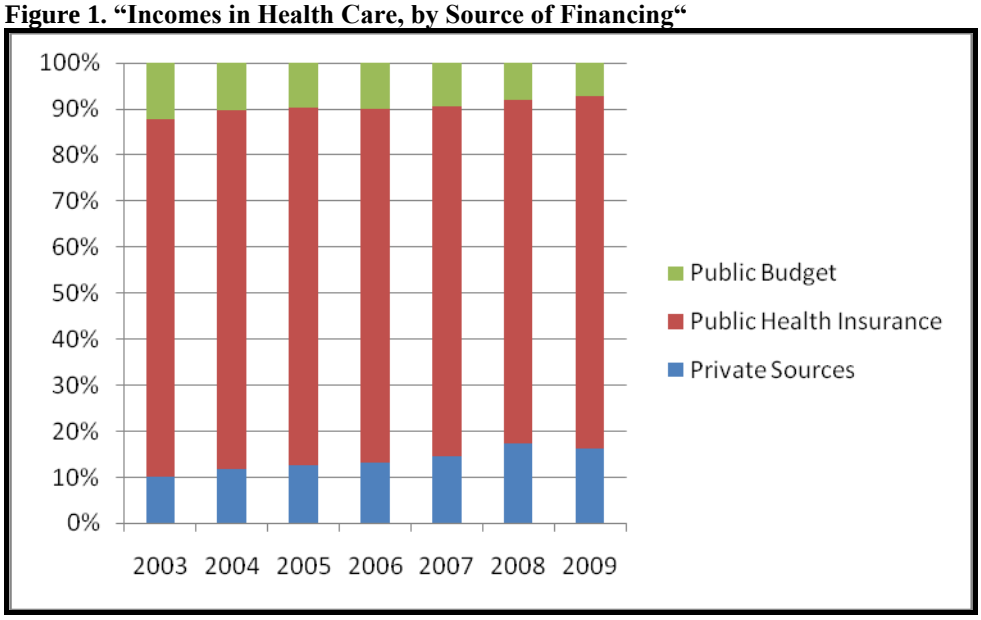
Two types of incomes are used in the Czech Health Care system

1. **Direct -** Government budget, obligatory premiums, voluntary premiums, grants and other. The biggest proportion of incomes comes from obligatory social health insurance.
2. **Indirect -** Out-of pocket payments

In 2009, the predominant part of health expenditure was financed by the public health insurance system covering 76.4% of the total. The State and territorial budgets covered 7.3% and private expenditure covered 16.3%. The time line of incomes development is shown in figure 1. The shares of these components were roughly conserved in past years. In long terms, private expenditure, consisting mainly of expenses of households, increased faster than the other sources. The share of private expenditure in the total even exceeded 17% in 2008, which reflected implementation of regulation fees in health services. In spite of the growth of the absolute amount of private expenditure in 2009, it is share in the total was lower (16.3%), due to the increase of the total expenditure and of the expenditure from public health insurance. Total revenues of the public health insurance system according to preliminary data were ca. 211,360 million CZK. The main source of hospital revenues was again remuneration from health insurance, in 2009 it constituted 81% of the total revenues of hospitals. Revenues from health insurance companies increased from 2008 by 9%. By the end of 2009 hospitals registered claims from trade after maturity date of the amount 1.2k million CZK, during the year they dropped by 11%. Obligations of hospitals from trade after maturity reached the amount 2.8k million CZK and decreased from 2008 by 23%. (UZIS,2009)

According to Act 48/1997 Coll. payers of social health insurance (SHI) are citizens, employers and state. The premium rate is 13,5% from incomes as have been specified in the chapter 4.1.2.

Figure 1. "Incomes in Health Care, by Source of Financing"



Source: UZIS, Economic information on health care; 2009; own elaboration

Another source of incomes are Regulatory fees that became part of the Act 48/1997 Coll. since the year of 2008 after the reform of Czech health care system. More specifically the §16 of this Act introduces the obligation of each policyholder or its delegate to pay out-of-pocket fees to the health provider for treatment provided.

These fees are used:

- 30 CZK
  - for visits during that are provided clinical examinations or ambulatory care
  - for prescription of medicine or nutrition in pharmacies
- 60 CZK
  - For spa, bed seat treatment or treatment in children's homes, first and last day of treatment is counted as one day.
- 90 CZK
  - For emergency services including first aid and stomatology treatment
  - Bed seat treatment during Saturdays, Sundays or public holidays and during working days between 17:00-7:00 hour.

Regulatory fees are not requested to be paid if the patient goes for the preventive inspection, laboratory or diagnostic examination, bed seat care for born children and several other exceptions. The limits set up for one year are 5,000 CZK and 2,500 CZK for seniors over 65. If the policyholder pays more on regulatory fees than these limits, insurance company has to pay the amount above the limit back to the policyholder. If the policyholders change the insurance company during the year for new one, these companies have to provide information about paid regulatory fees to each other. Regulatory fees are incomes of health care providers that have collected theses fees. They have to report these incomes to the insurance company.

From the personal experience of the author, when visiting the doctor each patient pays appropriate amount directly to the doctor or in larger hospitals in an automatic cash machines placed inside of the hospital. The doctor is than collecting bills for the financial department of the provider.

5. SPECIFICATION OF THE DUTCH HEALTH CARE SYSTEM

The Dutch health care system has consistently been among the top three countries in the ranking of European Index published by Health Consumer Powerhouse. Countries in this index receive points for indicators such as patient rights and information, waiting time for treatment, R&D and others.

The Netherland scored 863 points from 1,000 possible the best result ever reached. According the Health Consumer Powerhouse *"The Dutch healthcare system does not seem to have any really weak spots, except possibly some scope for improvement regarding the waiting times situation, where some central European countries excel. The NL is characterized by a multitude of health insurance providers acting in competition, and being separate from caregivers/hospitals. The Netherlands probably has the best and most structured arrangement for patient organization participation in healthcare decision and policymaking in Europe***.. *Financing agencies and healthcare amateurs such as politicians and bureaucrats seem farther removed from operative healthcare decisions in the NL than in almost any other European country."*** (EHCP, 2009)

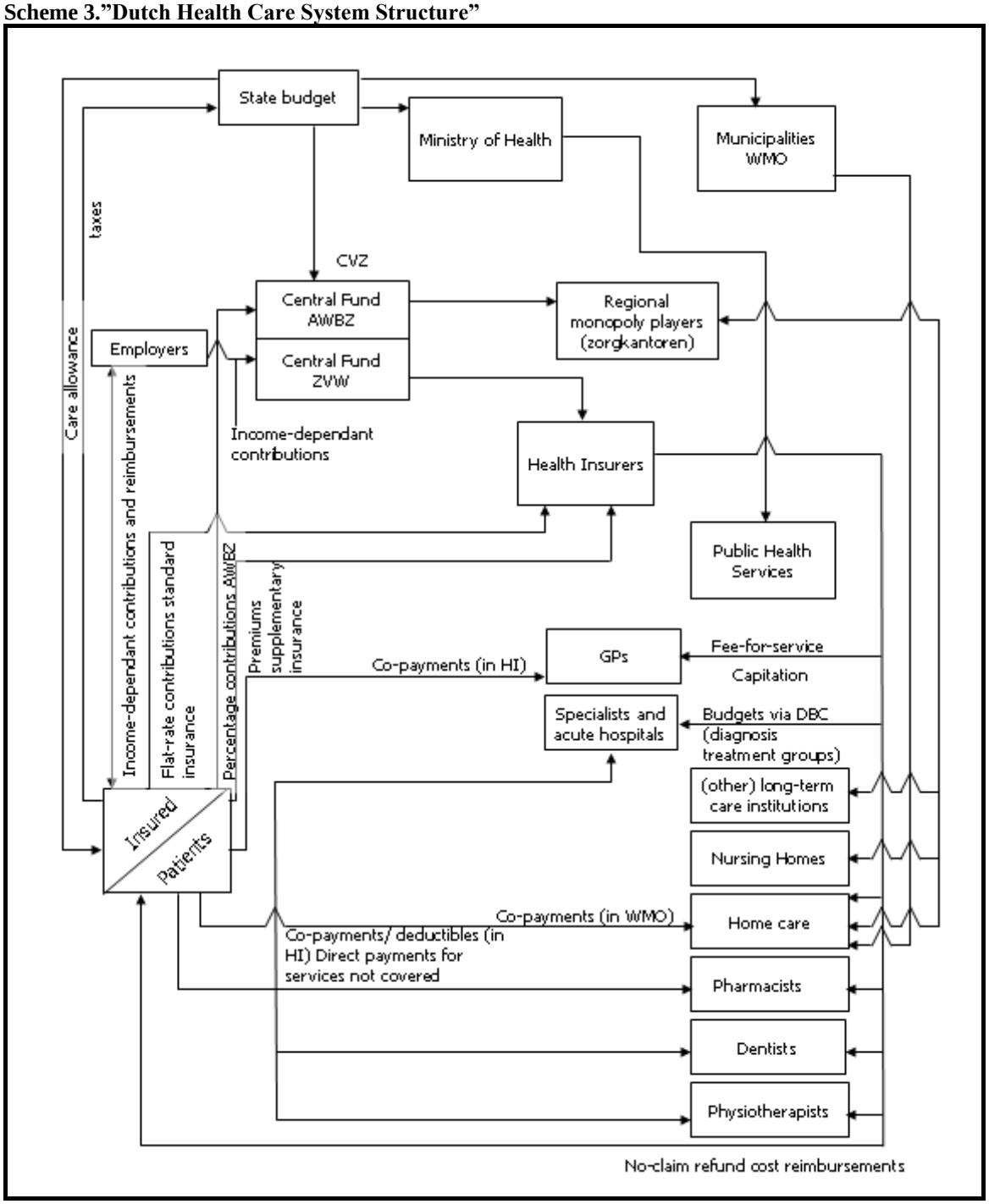
The most important reform in Dutch history was realized in 2006 under the Health Insurance Act. Since then every person living in the Netherlands is obligated to have individual health insurance from private insurance company and all health insurers compete for insured persons. (ENTHOVEN, 2007)

Furthermore, the government changed its role to the position of a controller and a guardian of quality and accessibility. Responsibilities have been transferred to insurers, providers and patients. For that new agencies were set up to support the system. The delegation of responsibility for domestic home care services to the municipalities has resulted in more diverse care arrangements. Traditionally, self-regulation has been an important characteristic of the Dutch health care system. (SCHFER, 2010)

5.1. Structure of the system

The system in the Netherlands is same as in the Czech Republic based on Bismarck insurance system. But instead of out-of-pocket payments utilize individual insurance system. The structure is more complicated including more supervisory and advisory bodies than in the Czech system.

Scheme 3."Dutch Health Care System Structure"



Source: Department of Health and Care, Statistics Netherlands, 2007.

Essential for a proper functioning of this system is the existence of choice for patients. Patients are free to choose their health insurer as well as providers. Patients will only be able to make an informed choice if they have sufficient and reliable information on the insurers and providers at their disposal. Therefore, the government provides information on waiting lists, quality and prices of care through the Internet. Insurers are obliged to provide all care as defined in the basic health insurance package, but they can compete for patients on the price of the basic health insurance, the quality of care and may offer complementary voluntary health insurance (VHI). Furthermore, insurers are free to contract, or not to contract, health care providers (selective contracting) and are expected to make this decision based on the quality and cost of care that providers offer. Negotiation on price and quality is still heavily regulated by the supervisory bodies but is being introduced gradually. (SCHFER, 2010)

An important feature of the Dutch health care system is the gate keeping role of GPs. Citizens with health complaints first go to the GP where they receive a referral to specialist care if necessary. Health insurers are responsible for purchasing long-term inpatient care, but they have delegated these tasks to care offices. Patients who want to organize their own care may apply for a personal budget. The Health Care Inspectorate (IGZ) supervises compliance with laws and regulations by care providers and institutions. Public health is provided by services for occupational medicine and institutions for youth health care and municipal health services (GGDs). These latter institutes are regionally organized. Public health research and prevention is the task of the National Institute for Public Health and the Environment. (SCHFER, 2010)

In the Netherlands, the government is not directly involved in health care. Instead, the Ministry of Health, Welfare and Sport has delegated tasks such as supervision and administration to independent bodies. (SCHFER, 2010)

In addition to this, of course, there have been other arguments for mergers, such as economies of scale. As a result, the number of health insurers (both private health insurers and sickness funds) decreased from 118 in 1990 to 32 in 2008. It is important to note, however, that a majority of these insurers belong to a small number of large insurer combinations. In 2008, four large insurance combinations had 88% of the market. For long-term care, the government has delegated responsibilities towards private institutions, while leaving the government indirect control, as the final budget has to be approved by

the Ministry of Health, Welfare and Sport. Long-term institutionalized care can be characterized as a classical non-profit SHI system. Its provision is the responsibility of the health insurers. The health insurers need to apply for a license to set up a Care Office at the Ministry of Health, Welfare and Sport. Long-term care for disabled or chronically ill persons at home is partly delegated to the municipalities. The rationale was that the municipalities are closer to the population and therefore could take measures that better met the people's needs. Although the rationale behind decentralization is that municipalities can be more effective due to their proximity to citizens, in practice it can also be seen as a cost-containment measure, since the budget for the municipalities is lower compared to the original AWBZ budget. (SCHFER, 2010)

5.1.1. Government

In the Netherlands, the Ministry of Health, Welfare and Sport is responsible for the healthcare . The main role of the government is to safeguard and control the implementation of regulations and the performance of the health care sector. Dutch health care insurance is characterized as a social health insurance system, carried out by private health insurers.

The government also encourages hospitals to focus on specific field of treatment. The dental care is regulated by government in every procedure. (ACCES-NL, 2011)

The government no longer arranges everything. Parties in the market have greater freedom and greater responsibility to compete for the business of the insured. On the one hand, citizens have more financial responsibilities, and on the other more influence and realistic choices in terms of health care insurance. Care providers will have to pay greater attention to their performance and can supply more tailor-made care for their customers. The government remains responsible for the accessibility, affordability and quality of health care.

Municipalities, Regions

In order to fulfill tasks in public health, municipalities are obliged to set up a municipal health service (GGD). The municipal health services are involved in prevention, for example by collecting information on the health situation of the population, contributing to prevention programs, promoting medical environmentology, implementing youth health care and the control on infectious diseases. Furthermore, municipal health services advise municipalities on public health policy issues and they may be involved in other activities, such as care indications for acute psychiatric hospitalizations. It should be noted, however, that the roles of municipal health services are not uniform all over the country. Since 2007, municipalities have become responsible for implementing the Social Support Act (Wmo); this includes the provision of a range of home care services to citizens who have limitations due to (chronic) health problems, ageing or disabilities. Clients can choose between either a personal budget (or organizing the care himself/herself) or provision in kind. Most municipalities have created a special information and entry facility for Wmo care. Municipalities have a great deal of freedom to organize these services and consequently there are many variations in the practice of Wmo-related services. (SCHFER, 2010)

5.1.2. Patients

All individuals must pay an income-related contribution (6.5%of the first €30,000 in annual income) to the Risk Equalization Fund. Employers are obliged to compensate their employees for these contributions, but this is then taxable income for employees. In addition, all adults must pay a community-rated premium (i.e., the same price for the same benefits, regardless of their own level of health) to the insurer of their choice. Insurers set their own prices. Households receive a care allowance if the average community- rated premium exceeds a certain proportion of their income (4%, for single adults). Two thirds of all households currently receive a care allowance. Because they must pay for whatever portion is not covered by such an allowance, adult consumers must pay the full difference if they choose a higher-priced plan. The government pays for all costs incurred by children. For each “basic insurance product,” insurers are obliged to accept every applicant. People

may choose to buy supplemental insurance covering care that is not included in the mandatory basic insurance — for instance, dental care, physical therapy, eyeglasses, and cosmetic surgery. For supplementary health insurance, however, there are no restrictions on premium rates and no requirement that insurers accept all applicants. Since 93% of insured people in the Netherlands have chosen to buy supplemental insurance, insurers have a substantial opportunity to select risks. (ENTHOVEN, 2007)

Patient organizations

The Netherlands has an extensive network of patient and consumer organizations. Over three hundred foundations, associations, and working groups are engaged in protecting the interests of health care consumers. Collectively, they represent the patients' movement. Patient and consumer organizations play an increasingly important role in the Dutch health care system. The most important is the Federation of Patients and Consumer Organizations in the Netherlands (Nederlandse Patiënten Consumenten Federatie, NPCF). (NPCF, 2011)

5.1.3. Health Insurance Funds

All competing insurers, some nonprofit and others for-profit, are to be exclusive buyers of care. They compete by premiums, service, and the quality of care offered to consumers by their contracted providers, and by other supplementary health insurance offered. The insurers may contract, divers types of arrangements, with independent doctors and hospitals, or they may provide care directly, through their own facilities and staff. However, the insurers and providers are predominantly private businesses, they are heavily regulated by government. But the government plans to decline regulation gradually and to focus more on the competitive market. (ENTHOVEN, 2007)

Health Insurers Netherlands is the organization of the Dutch health insurers. According to the organization that serves as the information source for all policyholders there are currently six Groups of health insurance providers that shield 41 subsidiary companies that directly offer premiums to policyholders. More details below in the Table 4.

Table 4. "Dutch Insurance Companies"

Insurance Groups	Labels	Customers	Market share
Achema/Agis	Interpolis, Zilveren Kruis, Groene Land, Avéro, FBTO, DVZ, PWZ, Agis	4 750 000	30%
UVIT	Univé, IZZ, IZA, UMC, Trias, VGZ,	4 200 000	25%
CZ	CZ, OZ, Delta, Lloyd, Ohra	3 310 000	20%
Mezis groep	Amicon, Anderszorg, Geové, Nederzorg, NVS, Confior, Azivo	2 150 000	13%
Multizorg	ONVZ, DSW, VVAA, Fortis, Stad Rotterdam, IAK, Woudsend, Aegon, PNO, Nedasco	1 000 000	6%
De Freisland	De Freisland, Zorg en zekerheid, Salland	955 000	5,5%

Source: ZORGNAVIGATIE; Zorgverzekeraars marktaandelen;2010; Own elaboration

5.1.4. Health Care Providers

In the Dutch health care system, private health care providers are primarily responsible for the provision of services. Health care can be divided into preventive care, primary care, secondary care and long-term care(tertiary). The Netherlands has a large number of hospitals offering European standards of health care, including eight university hospitals. Traditionally, all hospitals in the Netherlands have offered the same range of professional services, after the reform, the government is encouraging hospitals to specialize in particular areas of treatment. All hospitals offer the same standards of care but the University hospitals provide also medical research and offer the most up-to-date facilities. (ACCES-NL, 2011)

Primary care

Every Dutch person is required to register with a GP, who, like in the NHS, act as 'navigators' and 'gatekeepers' to specialist care in order to prevent unnecessary treatment. Nurse practitioners are employed to perform check-ups on the chronically ill. Many GP

practices are solo practices, but support each other through 'cooperatives' to provide out-of-hours care, usually within one of the 105 regionally distributed out-of-hours centers. However, some insurers are beginning to open their own primary-care centers to ensure lower costs for their patients. Typically, a GP will see around 30 patients per day (that average 10 minutes in length), with an extra 10 consultations by telephone. A consultation usually costs €9, which patients can claim back from their insurer. In 2003, the Dutch spent €1,980 million on GP practices; an average of €122 per head. (GUBB, 2007)

Dentists and midwives have always been directly accessible. There are approximately 8000 dentists active in the Netherlands. Physiotherapists have become directly accessible since 2006, although the majority of the patients are still those referred from a GP. After receiving a referral, patients can choose in which hospital they want to be treated. Secondary care encompasses those forms of care that are only accessible upon referral from a primary care provider and are mainly provided by hospitals and mental health care providers. Hospitals have both inpatient and outpatient departments as well as 24-hour emergency wards. Patients with conditions that are not life-threatening go to special GP-posts for out-of-hours care. Outpatient hospital departments are also used for pre- or post-hospitalization diagnosis. (SCHFER, 2010)

Secondary and tertiary care

Long-term care is mainly provided by nursing homes, residential homes and home care organizations. As in the NHS, patients reach secondary and tertiary care either through A&E or GP referral. More than 90% of Dutch hospitals are owned and managed on a private not-for-profit basis, with specialists being self-employed. However, the government has traditionally regulated hospital budgets and doctors' fees very closely by setting down fixed charges that insurers are able to pay hospitals, based on the number of beds, specialists and patient volume. With insurers forced to contract with all providers and unable to negotiate on price, there were few incentives for hospitals to become more efficient; when they lost money on a particular kind of care they simply rationed it resulting in long waiting lists. Since the recent reforms this is beginning to change. A new system of payment – Diagnose- Treatment Combinations (DBCs) – is being phased in,

which links prices to real costs and will increasingly allow insurers to negotiate prices for the services hospitals offer. Currently this only applies to 10% of services, but is due to rise to 20% by the end of the year. Crucially, insurers are also now free not to contract hospitals; hospitals offering poor standards of care will not be propped up as insurers direct large numbers of patients to the best providers. Trials are also taking place for 'pay-for-performance-for-quality', which should give insurers a further tool by which to drive hospital performance by monitoring and rewarding quality outcomes. (GUBB, 2007)

5.1.5. Health care professionals

The Individual Health Care Professions Act (Wet BIG), regulates the provision of care by professional practitioners, focusing on the quality of professional practice and patient protection. The primary aim of the act is to create the conditions necessary for fostering and monitoring standards of professional practice in individual health care. Hence the act contains provisions relating to the protection of titles, registration, reserved procedures and medical discipline. (MINVWS, 2011)

The Netherlands statistical office provides these numbers of health care professionals in the system over 7 years. In each profession can be seen increase of employees. Especially after the year of reform (2006) there is rapid increase in health care specialist.

Table 5."Number of health care professionals in the Dutch system 2003-2009"

Numbers of health care professionals in the Dutch system 2003-2009							
	2003	2004	2005	2006	2007	2008	2009
Genaral practitioners (GPs)	8298	8482	8601	8713	8807	8846	8921
Medical specialists	15879	16349	17002	17818	18550	18744	19073
Social welfare doctors	3745	4082	4141	4181	4210	4204	4168
Dentists	7759	7950	7994	8113	8241	8357	8390
Pharmacists	3181	3250	3329	3373	3417	3475	3463
Midwives	2013	2106	2242	2303	2351	2472	2522

Source: CBS Statline- Netherlands statistical office. Own creation.

Professional groups

Most professional groups in Dutch health care have a professional organization. Some professions have separate organizations for professional "emancipation" or defending the interests and for scientific and professional development, while in other professions these functions are united in one organization. The professional groups contain employers' organizations as well as employees' organizations. There are also professional organizations in which employers and employees are joined together. (SCHFER, 2010)

5.1.6. Advisory institutions

Decision-making in the Dutch health care system is characterized by consultation and consensus between the government and stakeholder groups. Advisory bodies play an important role in this process and their number rapidly increased during the decades after the Second World War.

The Medicines Evaluation Board (CBG)

CBG is responsible for assessing, authorizing and for monitoring the safety of human medicinal products lies with a Board made up of doctors, pharmacists and scientists. This Medicines Evaluation Board (MEB) has autonomous powers to take decisions on the availability of these medicinal products. The MEB is responsible for authorizing and monitoring safe and effective medicinal products on the Dutch market and shares in responsibility for authorizing medicinal products throughout the European Union. (CBG, 2011)

Health Care Insurance Board (CVZ)

The CVZ is an independent organization with three important tasks: The Board must make sure that the health insurers explain regulations and the implementation of the Health Insurance Act and the Exceptional Medical Expenses Act uniformly, in particular since the limits of the benefits package may be ambiguous and prone to different interpretations. The second important task of the Board is to manage and administer the Health Insurance Fund and the General Fund for Exceptional Medical Expenses. The

members of the Executive Board of CVZ are appointed by the Minister of Health, Welfare and Sport. And, finally, the CVZ advises the Ministry of Health, Welfare and Sport on the basic health insurance package. (SCHFER, 2010)

Health Council

Each year, the Health Council draws up a work program containing an overview of the issues that will form the subjects of advice for the coming calendar year. The Health Council of the Netherlands' independence - which is required by law - is an important asset to public health system. The Council gives detailed process of quality assurance. Members and external experts together fill around 40 ad hoc committees and seven standing committees. The standing committees have a very broad remit and focus on draft reports of the ad hoc committees as well as on issues subject to advice. The Health Council is financed completely by the government. (HCN, 2011)

The Netherlands Institute for Social Research

The Netherlands Institute for Social Research / SCP is a government agency which conducts research into the social aspects of all areas of government policy. The main fields studied are health, welfare, social security, the labor market and education, with a particular focus on the interfaces between them. The Netherlands Institute for Social Research supplies central government with information on the Dutch welfare state. For more than 30 years, the SCP has been charting developments in the daily lives of the Dutch population: work, income, health, education, social security, housing, culture, how they spend their time and their opinions on a whole range of subjects. The SCP also shows how government policy does or could influence these aspects. Each year, SCP publishes around fifty reports. (SCP, 2009)

National Institute for Public Health and the Environment

The National Institute for Public Health and the Environment (RIVM) is a leading institution of expertise in the fields of health, nutrition and environmental protection. RIVM is employing around 1500 employees. Its results of research, monitoring, modeling and risk management are used for policy creation. The institute is working mainly for government working on tasks including forecast of future development, evaluation of quality.(RIVM, 2011)

5.1.7. Supervisory institutions

Dutch Health Care Authority (NZa)

The Healthcare Authority was created in the year 2006, as an independent sector specific regulator for three main types of healthcare markets: healthcare provision, healthcare purchasing and healthcare insurance. The Authority consists of a politically independent three-member board that is appointed by the Health Minister for a fixed four-year term that is once renewable. The institution is supported by an administrative staff of currently about 270 people. As the authority responsible for the functioning of health markets within the new healthcare system the Healthcare Authority combines regulatory, supervisory, executive, enforcement and advisory functions. The creation of the Healthcare Authority should be seen in the context of the political ambition to replace centralized planning and control by regulated markets. Hence the creation of the Healthcare Authority as a sector-specific regulator forms an alternative both to the classic system of detailed regulation, and to relying on general competition policy – although the latter applies in parallel. (NZA, 2009)

Health Care Inspectorate (IGZ)

The IGZ supervises the quality and accessibility of health care. the Health Care Inspectorate (IGZ) promotes public health through effective enforcement of the quality of health services, prevention measures and medical products. It advises the responsible ministers and applies various measures, including advice, encouragement, pressure and coercion, to ensure that health care providers offer only 'responsible' care. The Inspectorate investigates and assesses in a conscientious, expert and impartial manner, independent of party politics and unaffected by the current care system. (IGZ, 2011)

Dutch Competition Authority (NMa)

The NMa's statutory task is straightforward: 'making markets work'. The Dutch Competition Authority monitors effective competition and contribute to markets functioning properly. Businesses know that the NMa takes action against anti-competitive restrictions that inhibit their chances of success. Innovation and creative entrepreneurship result in new products and methods of production, thus stimulating competition, while also boosting the competitive force of businesses. (NMA, 2011)

5.2. Financing of the system

In the Netherlands, 8.9% of GDP was spent on health care in 2007. Between 1998 and 2007 the expenditure (in constant prices) increased in real terms by 38%. The Dutch health insurance system is divided into three so-called compartments. The first compartment consists of a compulsory social health insurance (SHI) scheme for long-term care. This scheme provides for those with chronic conditions continuous care that involves considerable financial consequences and is regulated in the Exceptional Medical Expenses Act (AWBZ). The AWBZ is mainly financed through income-dependent contributions. A complicated cost-sharing system applies to individuals using AWBZ care. The care is provided after a needs assessment and the provision of care is organized via care offices. Care offices operate independently, but are closely allied to health insurers. The second compartment also consists of a SHI system covering the whole population for "basic health insurance". Basic health insurance covers essential curative care tested against the criteria of demonstrable efficacy, cost-effectiveness and the need for collective financing. The scheme is regulated by the Health Insurance Act (Zvw). (ENTHOVEN, 2007)

All Dutch citizens contribute to this scheme in two ways. First, they pay a flat-rate premium, the so-called nominal premium, directly to the health insurer of their choice. Second, an income-dependent employer contribution is deducted through their payroll and transferred to the Health Insurance Fund. The resources from this Fund are then allocated among the health insurers according to a risk-adjustment system. A "health care allowance" should partly compensate the lower incomes for their health insurance costs. The third compartment consists of complementary voluntary health insurance (VHI), which may cover health services that are not covered under the AWBZ and Zvw schemes. Prevention and social support (including certain home care services) are not part of the SHI or VHI, but are mainly financed through general taxation. Since the introduction of the 2006 reform, the payment of the health care providers has also changed drastically. General practitioners (GPs) are now paid via a combination of capitation fees and fee-for-service. For hospitals and mental care an elaborate diagnosis-related groups (DRG)-type system called Diagnosis and Treatment Combinations has been in place since 2005. Long-term care providers are paid according to an assessment of the care intensity needed for each patient. Both hospital payment and long-term care payment follow the principle that money follows the patient. (ENTHOVEN, 2007)

Inpatient services provided by hospitals and physicians are paid for mostly on the basis of Diagnostic Treatment Combinations (DTCs), for which prospectively fixed amounts are charged per episode of care. For 20% of the 35,000 DTCs, insurers and hospitals are allowed to negotiate prices freely and to contract selectively. The government intends to increase this proportion to 70% if certain preconditions are fulfilled. (ENTHOVEN, 2007)

5.2.3. Expenditures

Regarding the data from Netherlands Statistical Office the total expenditures on health care accounts for 13,3% of GDP in the year 2008. Even there are increasing over several years as shown in the Figure below their proportion to the GDP is stable over time, changing at maximum of 0,2%.

The average monthly salary in 2009 was 1822 Euro in whole health care sector. Comparing to the year 2008, it is a increase of 2,2%. (CBS,2011)

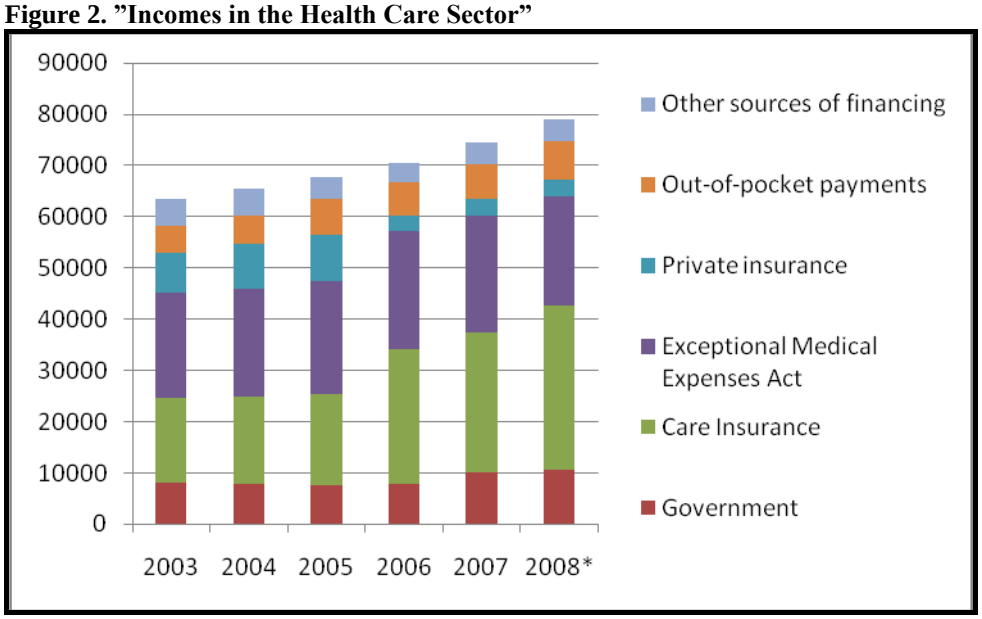
Regarding the data from Loonwijzer, which is a server providing information about wages in all sectors of Dutch economy. The average salary of surgeon with university degree, five years of experiences is 3195 Euros. Dentist earns after five years of experiences 5111 Euros. General practitioners earn with same conditions in average 4048 Euros. The average monthly salary of general nurses and midwives represented around one half of the average monthly salary of physicians and dentists its 2725 Euros. (LOONWIJZER, 2011)

5.2.4. Incomes

As the data source for this part of diploma thesis was chosen again Netherlands Statistical Office.

Incomes in the health care since the year 2003 are presented in Figure 2. The Dutch system combines six type of resources. First and the biggest one is from social health insurance followed by government, out-of-pocket payments, private insurance and other sources.

Figure 2. "Incomes in the Health Care Sector"



Source: Netherlands Statistical Office; own elaboration

The General Exceptional Medical Expenses Act (AWBZ) is a national insurance scheme covering exceptional medical expenses which cannot be covered on an individual basis. As it is a national scheme, it covers every Dutch resident, but also non-residents working in the Netherlands under an employment contract. The contributions are collected from people's income tax payments. This, however, does not mean that citizen is excluded if does not pay income tax. AWBZ insurance covers care such as:

- Admission to a hospital or revalidation centre for longer than one year;
- Care and nursing, for example, in nursing homes or old people's homes;
- Psychiatric care;
- Care of the physically and mentally handicapped;
- Preventive care, such as vaccinations.

Benefits received under the scheme are provided through your healthcare insurer. Certain benefits are subject to an excess or deductible. Everyone who has to take out a Dutch public healthcare insurance is also insured for AWBZ. Citizens only pay towards AWBZ when they pay income tax as the contributions are taken out of the first band of your income tax payments. The AWBZ contribution comprises 13.45% of the first €16,893 of your taxable earnings. Remember that if you do not pay taxes, but are ordinarily resident in the Netherlands, you will still be insured. (EURAXESS, 2006)

Insurance financing has two basic components. First, all residents pay income based contributions into a national insurance pool to finance risk-based premium allocations. This is a fixed 6.5 percent of income, regardless of the insurance plan chosen. Employers must pay this amount on behalf of workers; the self-employed and nonworkers pay it on their own. (LEU, 2009)

This contribution is levied up to the first € 30,000 and therefore amount to a maximum of approx. € 2,000 per year. Employers are obliged to reimburse this contribution to their employees. Self-employed persons and pensioners pay 4.4 percent. The income from this contribution is put into a Health Care Insurance Fund. Second, enrollees pay a flat premium for each adult directly to their insurer. Which is the same for all citizens: an average of approximately € 1050 in 2006 Children is enrolled free of charge and paid for from public funds. Each insurer sets its own premium, which may not vary by enrollee, health status, or other characteristics. (MINVWS, 2011a)

6. COMPARISON OF SYSTEMS

6.1. Comparative analysis

Qualitative and quantitative comparative approaches are applied, to find out strengths and weaknesses of the health care financing system in the Czech Republic. The year 2008 is used as reference year. Some data where compared since the year 1990, if there were no data available, only last 10 years were identified. The exception is the GDP development indicator, which is already available for the year 2009, the rest of the data is not available for this year yet.

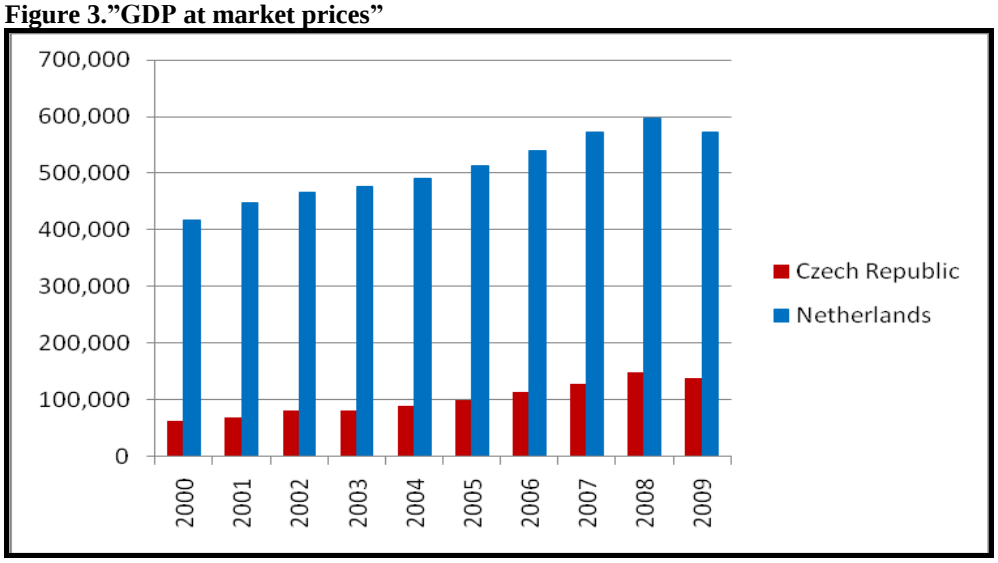
6.1.1. Comparison of Economies (Health Care Sector)

In this section, overall picture of the economic situation is provided via a widely used general indicator of economic performance the GDP, which is compared in both countries. According to the Eurostat, which is the administrative body of the European commission for statistics, the total GDP of the Czech Republic was 137,161 millions of Euro in the year 2009 with contrast to the Netherlands (NL) GDP of 571,979 millions of Euro that's 77% more than in the Czech Republic (CR). Figure 4 below contains more details.

In the year 2009, the GDP in the Czech Republic is below the level of previous year by 7%, in the Netherlands the decline of GDP was 4%. The factor which influenced the decline in performance for both countries was the global financial crisis in these years. Since the year 2000 the economy of the Czech Republic has been growing each year in average by 12%, the Dutch economy has been behind with the average growth rate of 4.5%.

Some economists criticize the GDP for its omitting of human development such as education, life expectancy and other. For that reason the Human Development Index (HDI) needs to be mentioned to compare the development in both countries. The HDI is in the Czech Republic 0.903 in the year 2008 in the Netherlands it is 0.964, both results are high.

Figure 3."GDP at market prices"

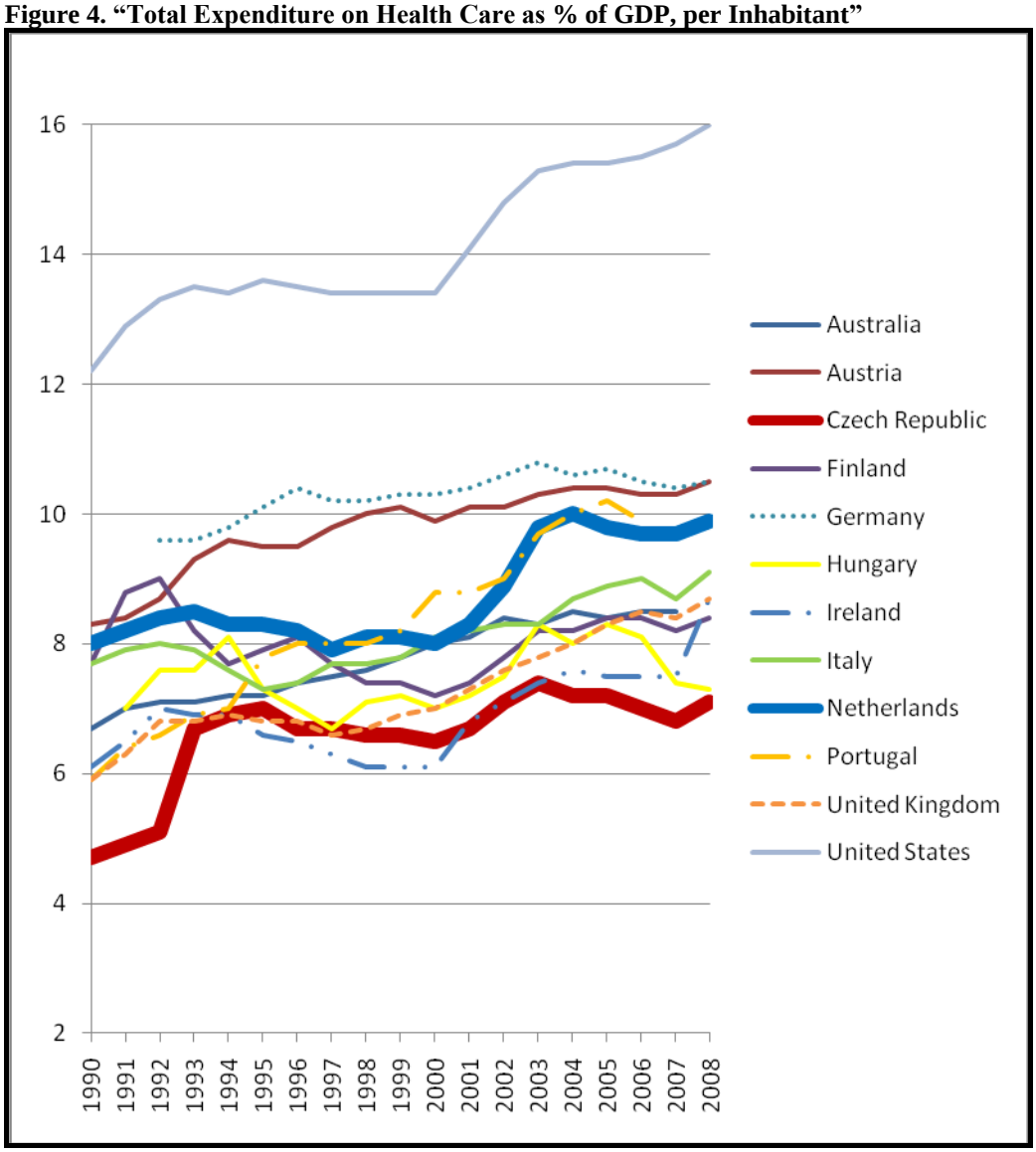


Source: Eurostat; own elaboration

Total expenditure on health is defined as the sum of expenditure on activities that consists of – through application of medical, paramedical, and nursing knowledge and technology (OECD, 2011a).

The total expenditure on health care as % of GDP is shown in the Figure 5. Both selected countries are compared with other countries to determine their worldwide position in health care financing. All data are since the year 1990 until the year 2008 to express the increasing proportion of health care expenditure in global economies. The amount of 16% GDP is spent in the USA for the health care, it is the largest amount among other countries. Germany is specific by the stable proportion of health expenditures over time. Surprisingly the Austrian system seems to be accounting for one of the largest proportions of GDP in whole Europe by 10.5%, following almost identical curve as the Germany. The Netherlands is on the fourth position from selected countries with 10 percentages of GDP. The usual average spending on health care in the rest of the Europe is around 8%. Surprisingly, the Czech Republic remains on the bottom of the figure with other post-communist countries including Poland, Hungary and other. Mainly, due to average increase of GDP and overall low investments in to the system. Rapid increase of expenses can be recognized since the year of 2000 till the year 2004. It is supposed that it is due to increases of population, aging of population increasing investments in to technology and high pressure on quality of health care services.

Figure 4. "Total Expenditure on Health Care as % of GDP, per Inhabitant"

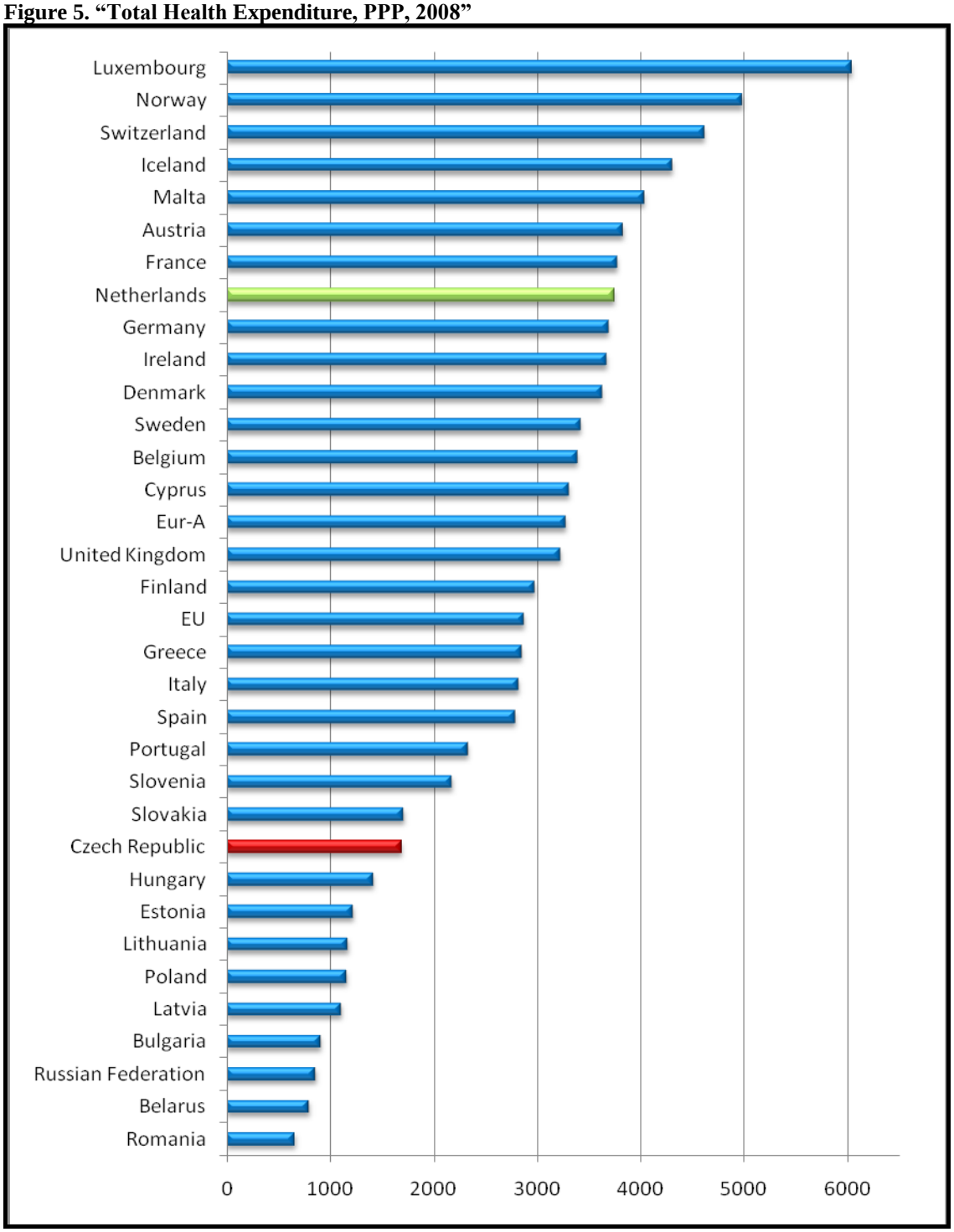


Source: OECD Health data; own elaboration

The next indicator - the Purchasing Power Standard (PPS) per inhabitant eliminates price level differences between countries. Due to that, PPS buys the same volume of goods and services in all countries.

That allows to compare more precisely both selected countries. For the Czech Republic PPS is 19,200 per Inhabitant for the Netherlands its 30,800 PPS. The average of EU 27 countries is 32,600 PPS. In percentages where EU PPS is 100% the CR is under the average accounting for 80% and the NL are 30% over the average, that's difference of 50% between these two countries. All data are for the year 2008.

Figure 5. "Total Health Expenditure, PPP, 2008"



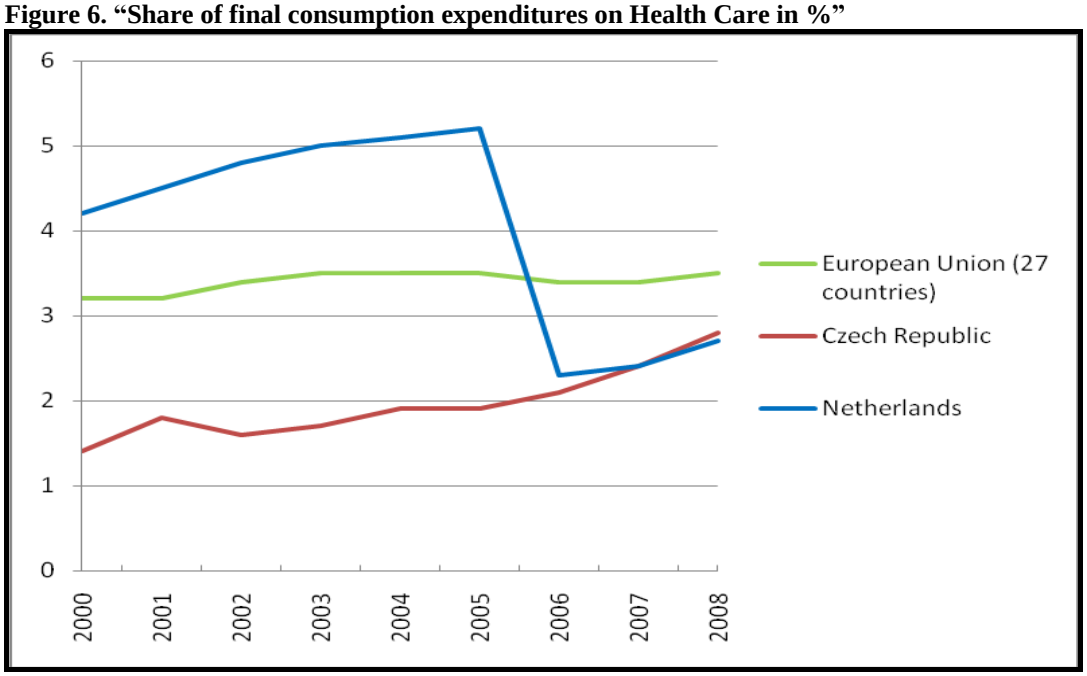
Source: WHO Europe; own elaboration

After the analysis of the whole economy and proportion of health expenditures in selected countries, it is necessary to focus more on health care details. Figure 6 expresses the household's expenditure on health care as a % of the whole consumption. The whole

consumption includes clothing, alcohol consumption, housing, water, electricity, furnishing, transport, culture, health and other. Expenditures increased in the Czech Republic since the year 2000 by almost 1.5% to the 3% of the whole consumption. Even the expenditure on health as a share of GDP is one of the lowest. Household's expenditures are increasing progressively.

The Dutch households were spending around 5% of their whole consumption till the year 2006 where the biggest reform of health care system rapidly reduced households' participation. The average expenditure of households in the EU27 is slightly above 3 percentages.

Figure 6. "Share of final consumption expenditures on Health Care in %"



Source: Eurostat; own elaboration

6.1.2. Comparison of Demographic Indicators

The demographic indicators include population density, illnesses of population and other factors determining the quality of life and health care services provided. World Health Organization for Europe publishes many useful statistics that are used for analysis furthermore.

First the demographic differences are defined. The Czech Republic (CR) had 10.36 million citizens in year 2008, the Netherlands (NL) had greater population by 63% with 16.4 millions. Both countries have similar proportion of males and females accounting for 49% to 51% in this year.

Average population density per square km is enormously different - 130 citizens in Czech Republic and 393 citizens in Netherlands. That predetermined the needs for fewer hospitals in the Dutch system. The lower number of hospitals will request lower administrative and operating costs but these hospitals will need higher capacity potential.

Labor force as a percentage of population is 51% in the CR in the NL it is 53%, which is almost identical. More predictions about future development can be found at the end of this chapter.

Persons receiving social/disability benefits which enormously drain public resources per 100,000 citizens are in the Czech Republic 5,645 and in the Netherlands 4,731 citizens receiving social/disability benefits. That is difference of almost one thousand citizens, who are enormously increasing financial expenditures. Average rate in the EU27 is 5,283.

Table 6 includes several important indicators of life styles. Percentage of daily smokers from the whole population in the Czech Republic is 21.8% in the Netherlands 28.5%. Average rate in the EU27 is 26%. Pure alcohol consumption per capita age over 15 is 15.2 liters in the Czech Republic and 10.5 liters in Netherlands. Average rate in the EU27 is 11 liters. Road traffic accidents with injury per 100,000 citizens are 215 in The Czech Republic and 144 in Netherlands. Average rate in the EU27 is 248. In all life style indicators except for smoking is the CR worse off.

Table 6. "Life styles in countries influencing health expenditure"

	Czech Republic	Netherlands	Average EU27
Daily smokers	21.8%	28.5%	26%
Alcohol consumption	15.2 liters	10.5 liters	11 liters
Road traffic accidents	215	114	248
HIV	1.4	8.2	5.3
Cancer incidents	752	605	476

Source: WHO Europe; own elaboration

The Czech Republic excels in low rate of HIV incidents; per 100,000 citizens there are only 1.42 incidents compared to 8.2 in the Netherlands. Average rate in the EU27 is 5.3. However in cancer incidents per 100,000 the CR is well behind the NL with almost 150 incidents, average rate in the EU27 is 476.

Table 7 contains qualitative data including illnesses in both countries. The SDR is the age-standardized death rate, more specifically represents what the crude rate would have been if the population had the same age distribution as the standard European population. The data were obtained from World Health Organization for Europe.

The biggest differences between the countries are marked in red (weaknesses of the Czech Republic) and green (strengths of the Czech Republic). Unfortunately the weaknesses predominate, especially in diseases of circulatory system where the SDR per 100,000 is higher by 57% in the CR. It is supposed that the main reason is higher percentage of obese population which in CR is 18% and in the NL 11% (OECD, 2011b) and also due to higher alcohol consumption in the CR. The same apply for ischemic heart disease which is 74% higher in the CR.

The strengths of the CR is in treatment of bronchitis/emphysema/asthma and mental disorder & disease of nervous system & sense organ which is fare above the Dutch results.

Table 7. "SDR density in population, year 2008"

TYPE of SDR	Czech Republic	Netherlands	Difference in the Czech Republic per 100000	Difference in %
SDR, diseases of circulatory system, all ages per 100000	356.99	154.18	202.81	57%
SDR, ischaemic heart disease, all ages per 100000	170.12	43.88	126.24	74%
SDR, cerebrovascular diseases, all ages per 100000	79.08	34.85	44.23	56%
SDR, malignant neoplasms, all ages per 100000	197.4	186.4	11	6%
SDR, trachea/bronchus/lung cancer, all ages per 100000	39.63	46.28	-6.65	-17%
SDR, cancer of the cervix, all ages, per 100000	4.52	1.85	2.67	59%
SDR, malignant neoplasm female breast, all ages per 100000	20.05	27.26	-7.21	-36%
SDR, external cause injury and poison, all ages per 100000	48.21	26.77	21.44	44%
SDR, motor vehicle traffic accidents, all ages per 100000	6.94	3.51	3.43	49%
SDR, diseases of the respiratory system, all ages per 100000	43.73	54.2	-10.47	-24%
SDR, bronchitis/emphysema/asthma, all ages per 100000	16.66	24.84	-8.18	-49%
SDR, diseases of the digestive system, all ages per 100000	35.89	21.18	14.71	41%
SDR, chronic liver disease and cirrhosis, all ages per 100000	15.75	4.1	11.65	74%
SDR, diabetes, all ages, per 100000	13.19	12.44	0.75	6%
SDR, mental disorder & disease of nervous system & sense organ, all ages/100000	9.36	44.31	-34.95	-373%
SDR, selected alcohol related causes, per 100000	71.27	40.49	30.78	43%
SDR, selected smoking related causes, per 100000	315.73	161.25	154.48	49%

Source: WHO Europe, own elaboration

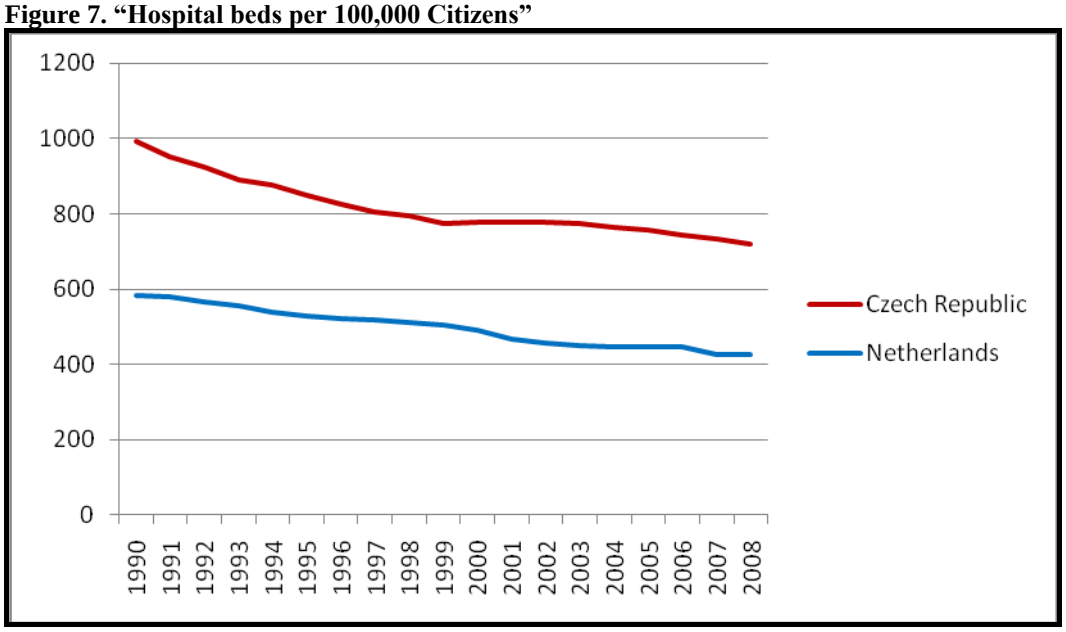
6.1.3. Comparison of Health Care Resources

Unfortunately data available about hospitals density are only for last four years. The numbers of density in the CR are 2.56 hospitals per 100000 citizens in the year 2005 and 2.44 of them in the year 2008. For the same period of time in the Netherlands were 1.21 hospitals in the year 2005 and even less in the year 2008 of 1.11 hospitals per 100000.

The exactly same situation is with number of beds that are maintained for each 100 000 citizens. As shown in Figure below 710 in the Czech rep. and 425 in the Netherlands makes difference of 60%. In the Czech Republic is the number of beds still diminishing but to save resources the decline should be faster that the current.

Average number of beds per 100000 within the EU27 is 528, that confirms the position of Czech above and Netherlands belong the average.

Figure 7. "Hospital beds per 100,000 Citizens"



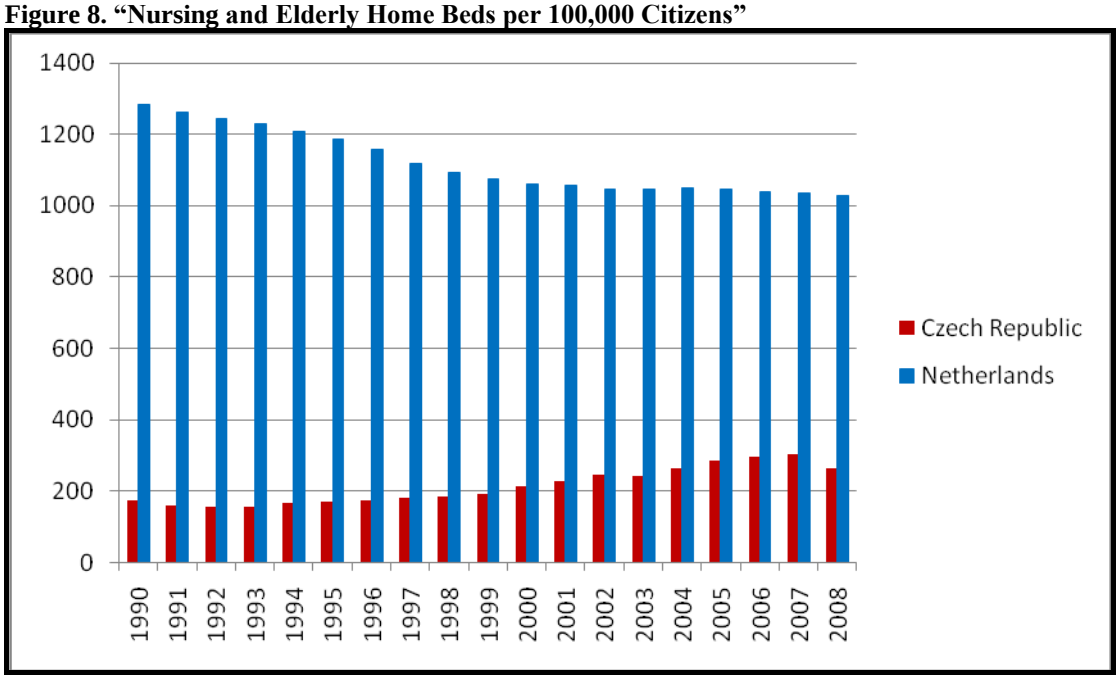
Source: WHO Europe; own elaboration

On the other hand the analysis of quality not only quantity should be provided.

The number of acute beds per population in the Netherlands is below the EU15 and EU27 averages. The average length of stay is slightly above the EU15 average, but this is also caused by a high degree of substitution to day care, leaving the more severe cases to hospital care. Both indicators show a decreasing trend.

However, there is a significant difference in nursing and elderly home beds per 100000. In the Dutch system is this system of treatment used more often than in the Czech Republic. Assumption is that it is due to quality reasons of services provided.

Figure 8. "Nursing and Elderly Home Beds per 100,000 Citizens"



Source: WHO Europe; own elaboration

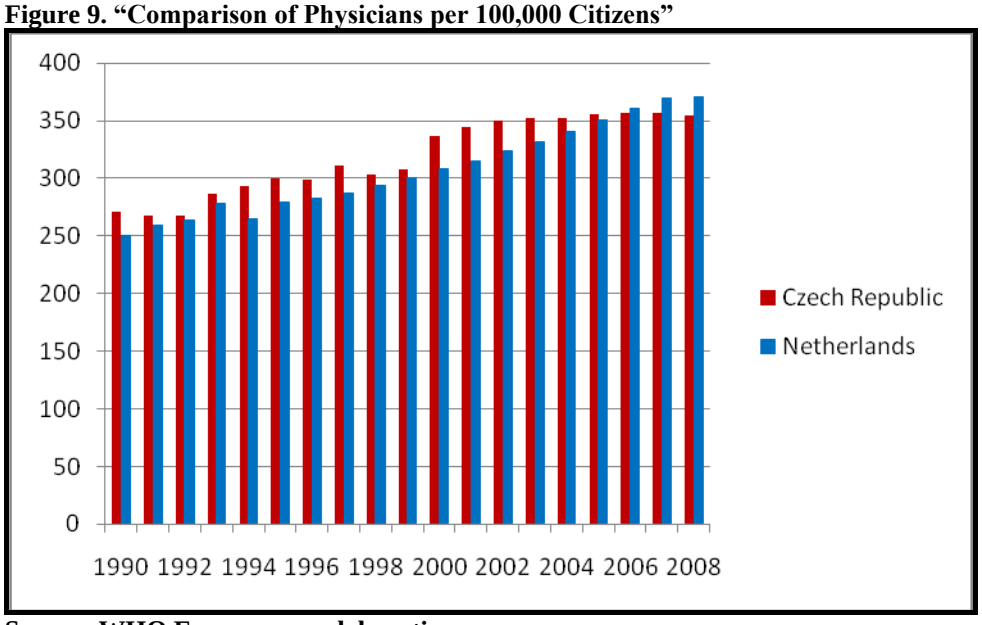
Figure 8 specify the number of elderly home beds in CR and NL. In response to the specific characteristics of nursing home residents, the Netherlands has become the only country to develop the specialty of nursing home medicine. The "nursing home physician" has attained independent status. This development has created a division between medical care in the community and medical care in nursing homes, which challenges the quality of the transitional processes taking place when a patient is admitted to or discharged from nursing home care. (NIVEL, 2011)

Regarding to the data from WHO Europe the enormous deference in number of nursing beds is based on the worldwide specifics of Netherlands nursing homes system that is not so typical for Czech system. There is difference of 767 beds per 100 000 citizens that will increase cost in the system. However, these beds are used effectively because of the gate keeping function of General Practitioners. The Ministry of Health, Welfare and Sport focus on quality of these homes.

Nevertheless according to future projection of population development, the average age of European population will increase every year, for example in 2050 the average year in the Czech Republic will increase by 6 years as mentioned in last chapter of this thesis. According to that the Dutch system is well prepared for the future development.

Regarding figure 9 number of physicians in both countries is almost identical over the time. Since the year 1990, number of physicians has been still increasing till the year 2004 when the number reached 350 that seems to be sufficient and both countries keep the number on the same level now on.

Figure 9. "Comparison of Physicians per 100,000 Citizens"

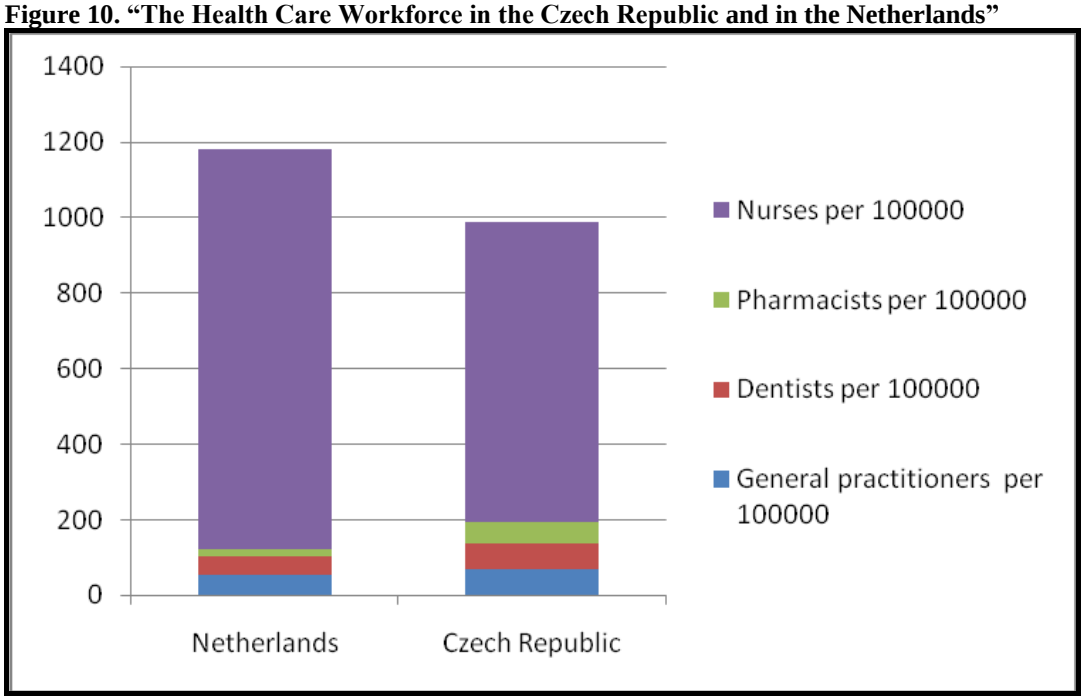


Source: WHO Europe, own elaboration

Number of employees are stable over time. There is average change of 2% in last two years. Nurses represent 80% of all proffesionals with 793 nurses per 100000 citizens. In the second place in the Czech Republic are GPs with 70 of them per 100000. Then denstists with 67 and Pharmacists with 56 professionals. In total there are 985 proffesionals per 100000 citizens in total more than 990000 proffesionals in whole population.

In the Netherlands the situation is as follows - 90% of whole workforce are nurses. GPs and Dentists are accounting for 4% each and the rest of 2% is left for pharmacists. That is quite different comparing to the Czech Republic. Because number of nurses is higher for 10% and the number of pharmacists is significantly lower than in Czech. The total health care work force includes 178,720 citizens in whole country plus other administrative employees and other specialists.

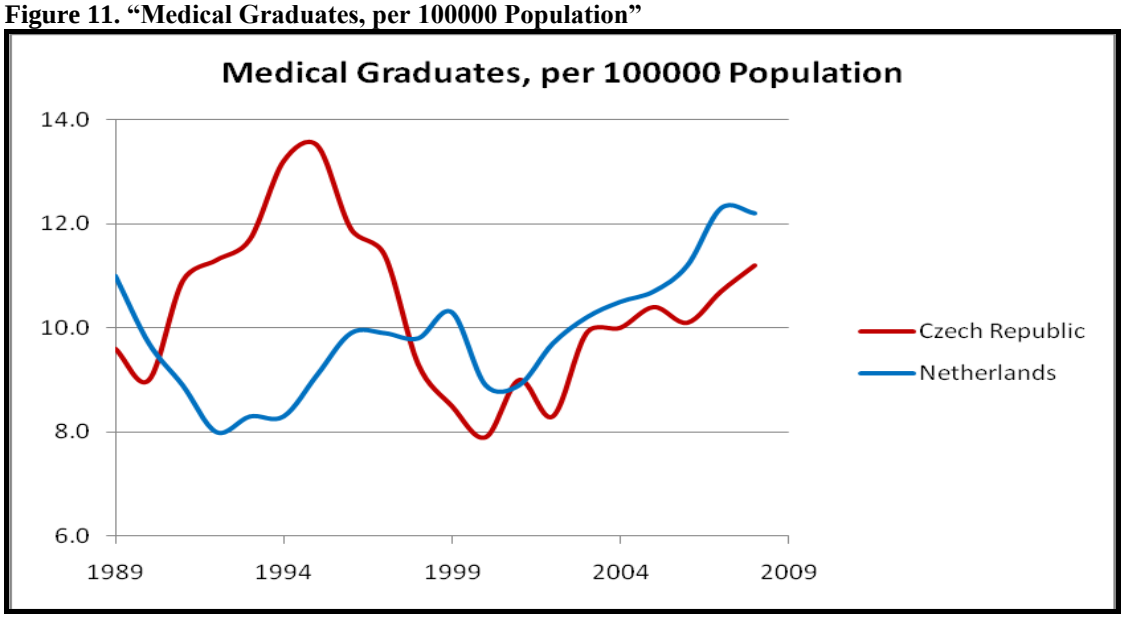
Figure 10. "The Health Care Workforce in the Czech Republic and in the Netherlands"



Source: WHO Europe, own elaboration

Important analysis is also further development of new medical graduates in health care sector to predict if there is going to be sufficient number of new professionals in the sector. In the CR, 10 students graduate per 100,000, are 1,100 new professionals every year. In the NL are over 12 graduates per 100,000 citizens, almost 2,000 professionals. Future analysis could compare positions of graduates after leaving the school. The system in the Czech Republic is criticized for low salaries and the lack of opportunities for new doctors.

Figure 11. "Medical Graduates, per 100000 Population"



Source: OECD Health Data; own elaboration

Table 8 consist of salaries details in both countries. Regarding the data from (LOONWIJZER, 2009) the average salary of surgeon with university degree, five years of experiences is 3,195 Euros, in the year 2009. Dentist earns after five years of experiences 5,111 Euros. General practitioners earn with same conditions in average 4,048 Euros. The average monthly salary of general nurses and midwives represented around one half of the average monthly salary of physicians and dentists its 2,725 Euros.

. The average monthly salary in the CR in the year 2009 was 26,750 CZK (annual increase 7.6 %). The average total monthly salary of physicians and dentists was 48,723 CZK, of that tariff salary constituted 48.1 %. The share of tariff salary had slowly increased till 2007, but in the past two years it gradually decreased. The average monthly

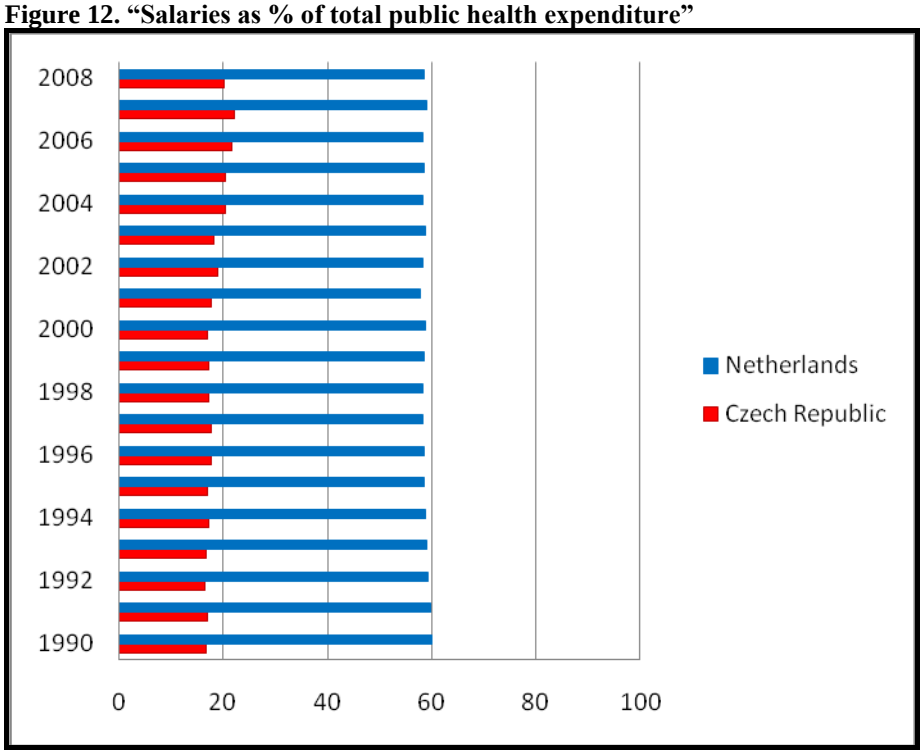
salary of general nurses and midwives represented around one half of the average monthly salary of physicians and dentists. The total average monthly salary in 2009 was 26,261 CZK (UZIS, 2009a). For comparison, the average monthly wage in the CR was 23,488.

Table 8. "Salaries in healthcare sector"

	Netherlands	Czech Republic	Difference between countries in %
Dentists	5,111€	48723/25=1,949€	-62%
General practitioners	4,048€	48723/25*=1,949€	-52%
Nurses/Midwives	2,725€	26261/25*=1,050€	-61%
Average salary in Health Care	1,956€	26750/25*=1,070€	-45%
Average salary in the country	2,229€	23488/25*=939€	-58%

Source. UZIS, 2009a; LOONWIJZER, 2009, own elaboration. *Exchange rate EUR/CZK

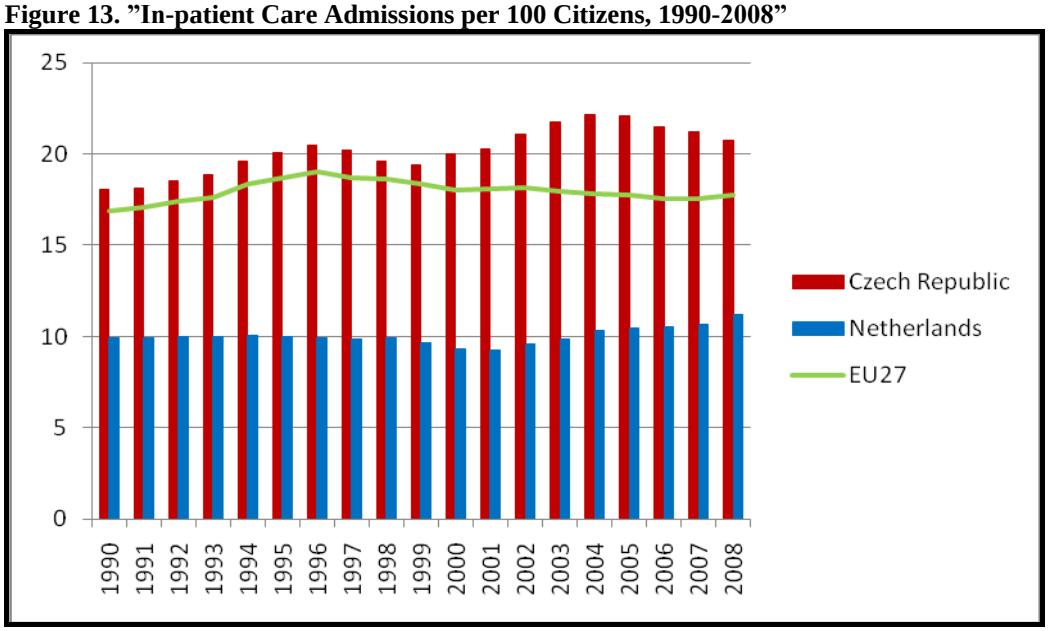
Figure 12. "Salaries as % of total public health expenditure"



Source: WHO Europe; own elaboration

Since the year 1990 the % of salaries, as expenditure in the system, has not changed significantly. Nevertheless the Czech Republic keeps the level on 20% of whole expenditure. On one hand it is great result, on the other hand compared to the salaries in Netherlands the professionals are unevaluated. But as compared above the increase of salaries would be reasonable only around 5%. The development over time is shown in Figure 12.

Figure 13. "In-patient Care Admissions per 100 Citizens, 1990-2008"

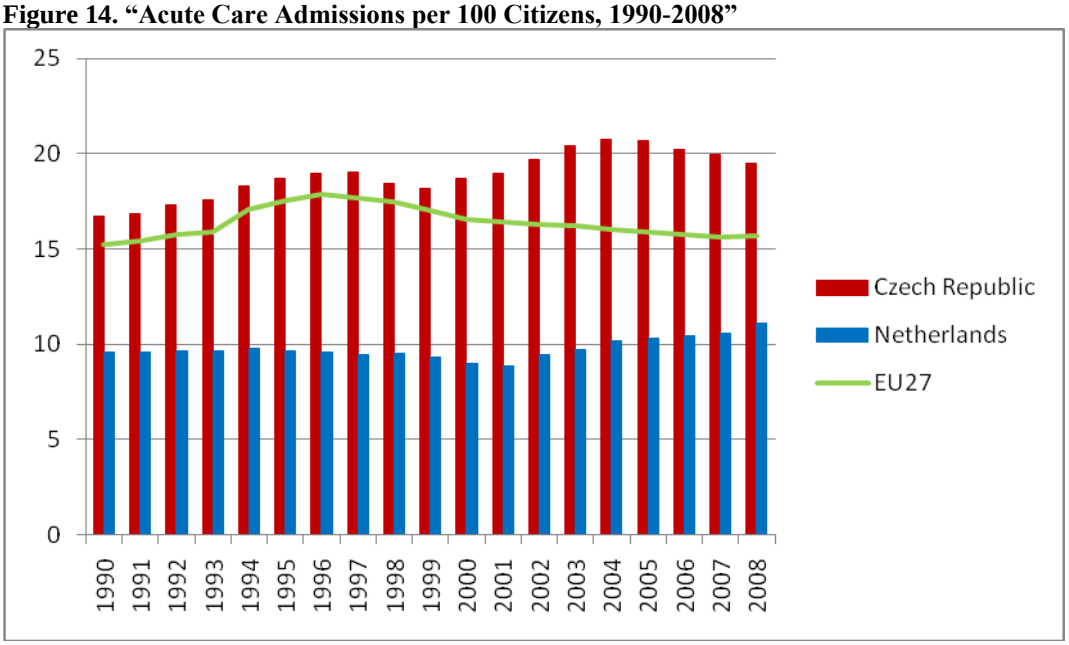


Source: WHO Europe; own elaboration

In-patient care admissions makes one of the biggest difeerences between both systems. The data for Inpatient surgical procedures per year per 100,000 citizens are available only for the years 2006 and 2007. The dissimilarity is presented in this field as well, unfortunatelly again Czech Republic is worse than Netherlands because only 3,973 procedures were reported in Netherlands in each year and in Czech 8,433 and 8,355 respectively. Such a difference of 4,382 procedures again increses budget expendetures in the system. It needs to be find out if the quality of life is increasing as well.

The same situation as in acute care where is again twice as many admissions as in the Netherlands. Simple reason for that: The GPs are not the gate-keepers that would advice patients where to go and what to do. Furthermore the Czech system does not follow the direction of EU27 and keeps admission over the EU average.

Figure 14. "Acute Care Admissions per 100 Citizens, 1990-2008"



Source: WHO Europe; own elaboration

The last Table in this chapter compares medical technology equipment in both countries. Here the CR excells almost in each area, except for Magnetic Resonances. There are 13.5 Tompograhpy scanners per one milion population, 13.5 Mammographs compared to the NL with only 4 of them and Radiation therapy equipment is in both countries similar. All of that equipment is really expensive to purchase.

Table 9. "Medical Technology equipment in 2008"

Netherlands	Czech Republic
Magnetic Resonance Imaging units, total, Per million population	
10.4	5.1
Computed Tomography scanners, total, Per million population	
10.5	13.5
Mammographs, total, Per million population	
3.9	13.5
Radiation therapy equipment, total, Per million population	
7.2	8.6

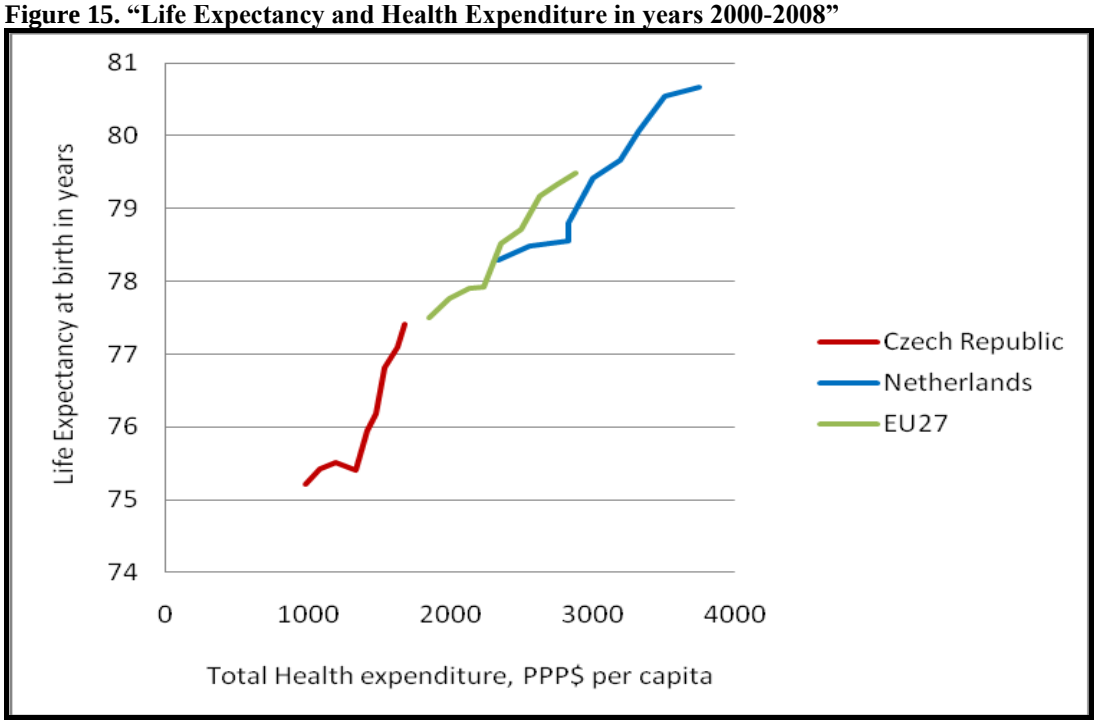
Source: OECD Health Data, own elaboration

6.1.4. Comparison of Financial Flows in the Systems

Health care expenditures, whether measured as a fraction of GDP or on a per capita basis, are frequently used to support international comparisons of health care resources.

In Figure 13 two types of measurement are combined, one is measure of quality (the life expectancy) the second one is measure of economic investments in health (total health care expenditures PPP). As can be seen, with increasing expenditures in health care, the life expectancy increases as well. In the Czech Republic the life expectancy is rapidly increasing from 75 to almost 78 years. That will be influenced also by the increasing standard of living in the country. Nevertheless the Czech Republic is in expenditures again below EU27 average and the curve is behind the Netherlands curve for more than 10 years.

Figure 15. "Life Expectancy and Health Expenditure in years 2000-2008"



Source: WHO Europe; own elaboration

The Netherlands is in top 10 European countries in spending for health care. They spend substantially more on health care than countries in East and Central Europe almost identically as Sweden, Denmark, Austria or Ireland. The Czech Republic is on the opposite site of the graph with expenditures around 1,700 USP PPP per capita.

Currently in both countries the Bismarck system of financing is applied, the system which is mainly based on social health insurance incomes. In the CR same as in NL is the proportion coming from this source 77%. However, citizens are charged differently. In the CR is applied 13.5% taxes from incomes on social health insurance, in the NL the rate is only 6.5%. The proportion of government spending rate of 5 percentages is also identical. The rest of the sources are absolutely different. The CR was selected as the major source, the out-of-pocket payments, system, which is based on direct payments in hospitals. The positive factor of immediate payment for treatment is information for citizens that the service is not for free and due to that they are motivated not to over use it. In the CR this source creates sixteen percentages of incomes compared to the NL it is 10% more.

In the NL was chosen system which is absolutely different, the voluntary health insurance. The positive factor is that all citizens do not have to pay directly, can choose the optimal protection adequately to their age and health status. If selected properly it can save a lot of money to the customer by paying less for treatment than for services consumed. It also creates resources for citizens who cannot pay by themselves due to low social status. In the NL 6% of incomes come from this source. In the CR it is only 0.1%. The last two sources are from Non-profit institutions and Corporations, unfortunately both these resources are frequently used in the NL, and they are accounting for 3.2 and 2.5 percentages. In the CR it is almost inapplicable 1.3 and 0.3%.

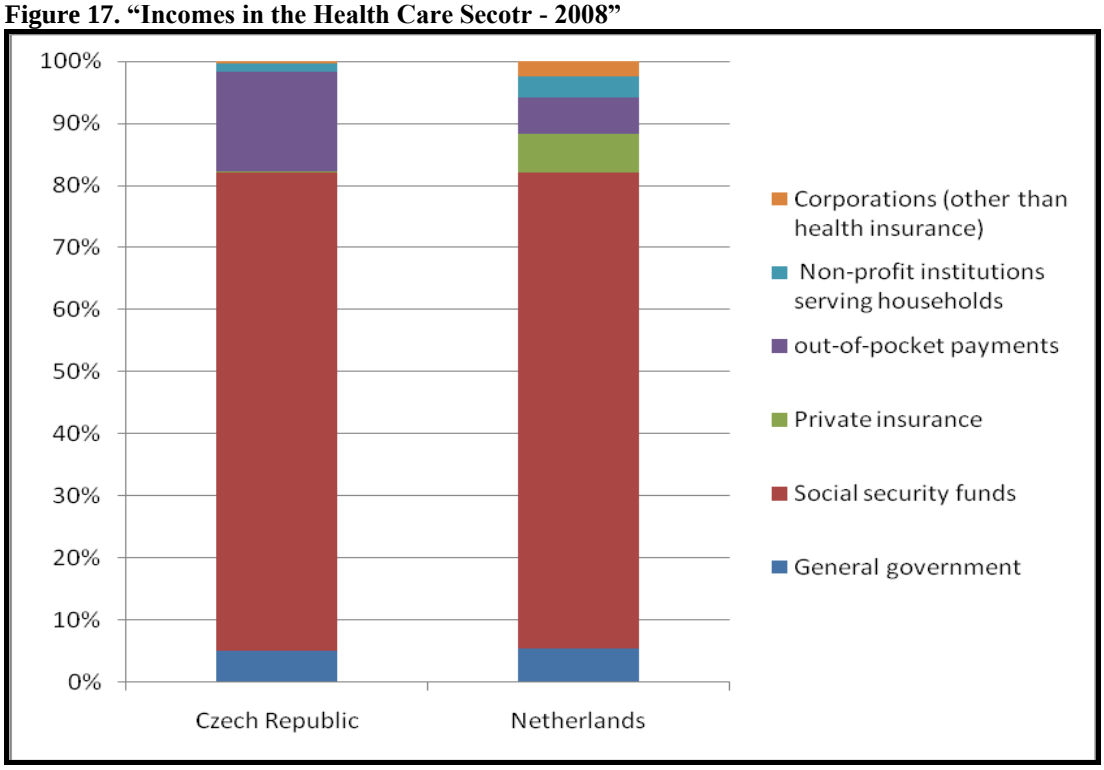
The attached Figure 16. Named: “Sources of Health Care Financing across the World” consists of details about specific policies applied across the world. Australia, Canada, Spain, Sweden and especially Denmark apply policy which is primarily based on incomes from government budget. Yields from this source are around 80% in these countries. Countries with essential sources based on social health insurance are Czech Republic, Netherlands, Germany and Slovenia with average income share of 75%.

The proportion between out-of-pocket payments and voluntary health insurance is two thirds for out-of-pocket payments across countries.

Figure 16 shows incomes in the Czech Republic and Netherlands. The major income contributions in the CR to the fund are income-related salary deductions, deducted from the taxable income of employees or social security beneficiaries by the employer or the responsible institution. In 2008, the contribution was 13,5% of taxable income. Second biggest contributions to the health care budget are out-of-pocket payments that cover 15% of all incomes. The government contributes to the system by 4% of budget expenditures. The rest of incomes from corporations and non-profit organization is not fully developed and policy makers should focus more on cooperation with such institutions.

In the Dutch system the largest contributions are also coming from income-related salary deduction, all incomes are taxed by 12.55%. The total contribution of revenues from this source is 74%. The voluntary health insurance accounts for 7% it is same as government budget spending. The Dutch system also implements the type of incomes mainly used in the CR system, out-of-pocket payments account for same percentages as the sources before. Finally corporations and non-profit institutions contribute by 5%.

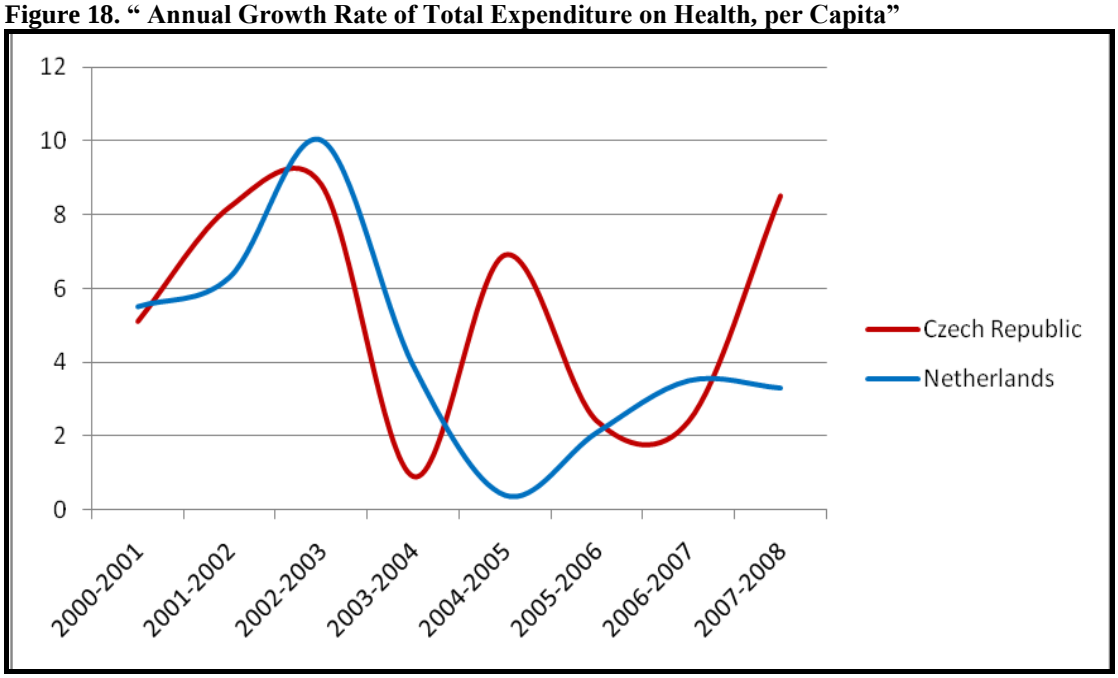
Figure 17. "Incomes in the Health Care Secotr - 2008"



Source: OECD Health data; own elaboration

Annual growth rates express how the expenditures in the system develop from year to year. While, in the Netherlands the expenditures growth rate declined due to the reform in year 2006 and the system was stabilized, with less than 4% growth over 2 years. In the CR the rates fluctuate in 4 years period. The fluctuation might be caused by changes of governments and their types of health care policies. Nevertheless the growth rate of expenditures from the year 2007 to 2008 is more than 6% and this is not inappreciable growth for citizens, who mainly contributes to the system. More details below in Figure 17.

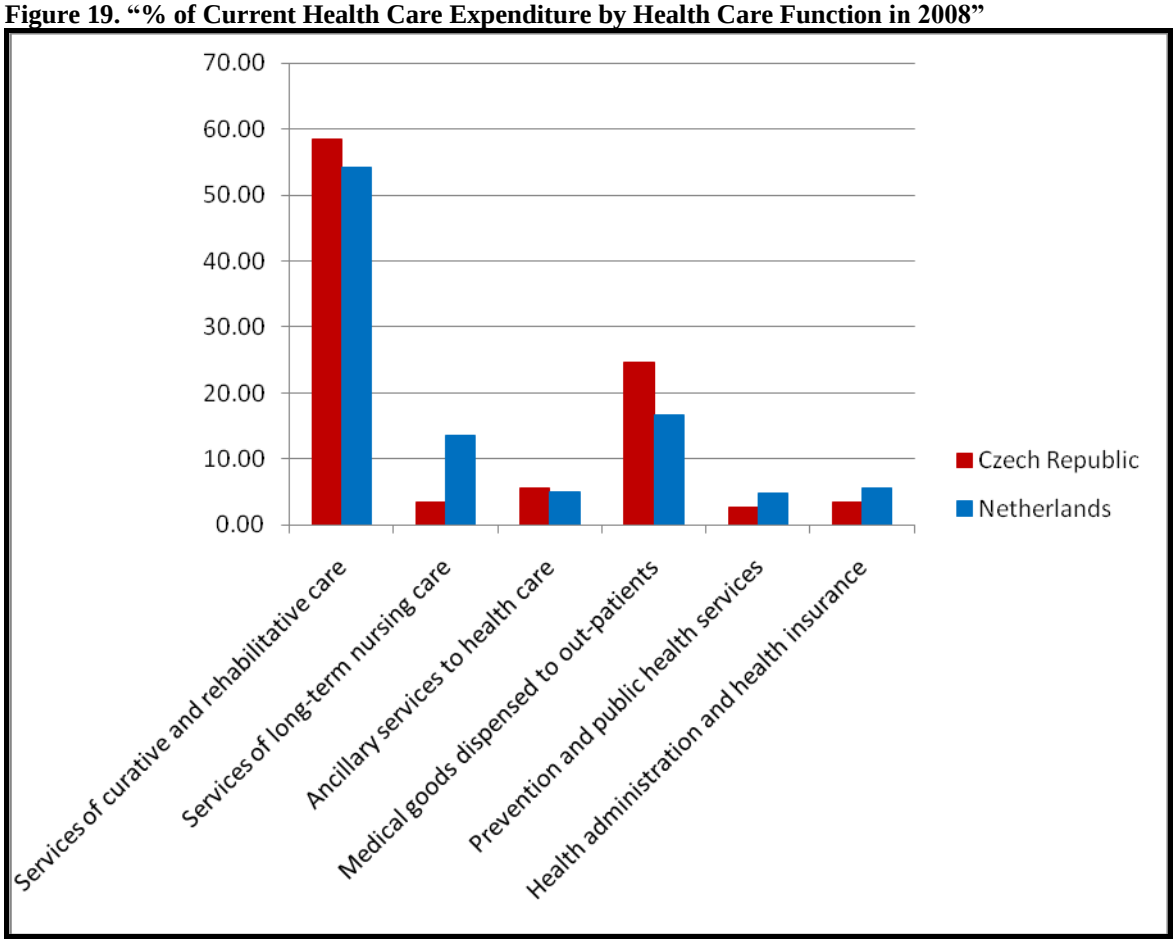
Figure 18. " Annual Growth Rate of Total Expenditure on Health, per Capita"



Source: OECD Health data, own elaboration

Figure 18 consist of information regarding expenditure by health care function in year 2008. In CR same as in NL the rehabilitative care is the main expense in system with share of 55% in NL and 58% in CR. The rehabilitative care is preventive type of treatment. The expenditure in CR overlaps the NL in medical goods for out-patients. It is another possibility for savings in the system. Other expenditures are without significant differences expect of nursing homes which are common more for the Dutch system.

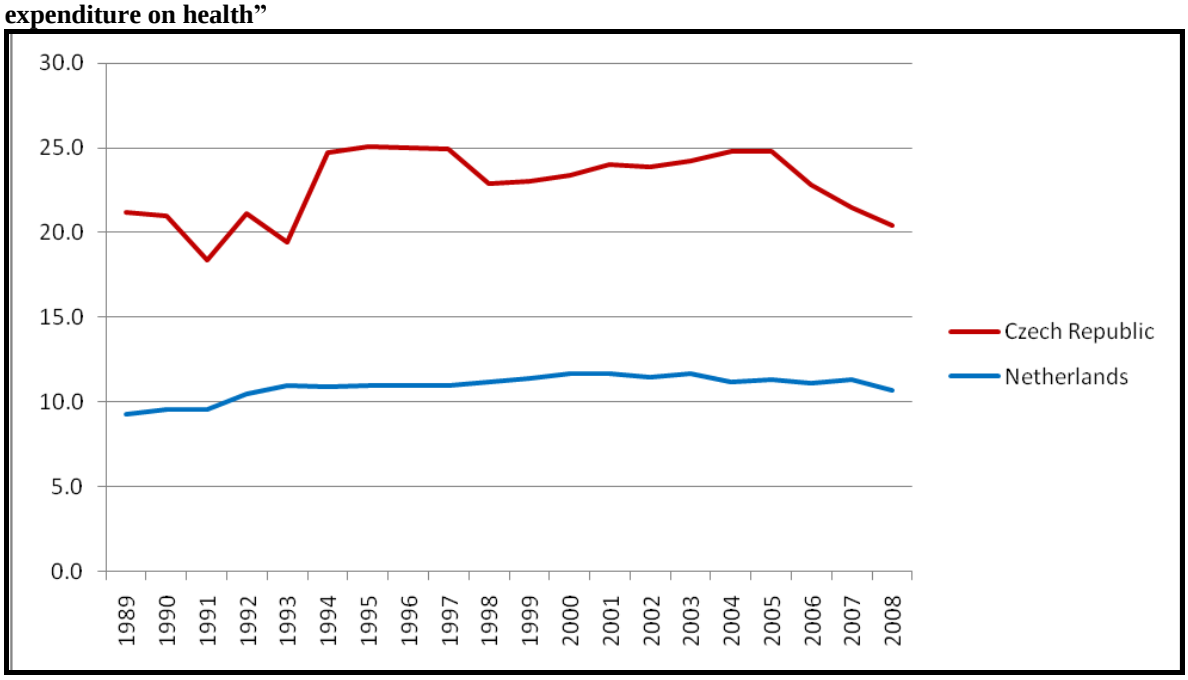
Figure 19. "% of Current Health Care Expenditure by Health Care Function in 2008"



Source: OECD Health Data; own elaboration

In the Czech Republic so called reference prices or reimbursement rates are applied for groups of pharmaceuticals. The process of setting reimbursement rates for pharmaceuticals, is managed by the SÚKL In each group of pharmaceuticals at least one medicament on prescription has to be available without co-payment by customer, but some pharmaceuticals are really expenses that creates enormous demand on financial resources. The cheap way how to get medicaments is one of the reason why are pharmaceuticals in CR used more than in other countries. Compared to Netherlands expenditures are twice as much higher in the CR. Reason for such a high consumption might be the government financial support for each group of pharmaceuticals. That makes the medicaments cheaper and more affordable on one side, on the other side it requires more financial sources from government and presumably overconsumption of pharmaceuticals.

Figure 20. "Total expenditure on pharmaceuticals and other medical non-durables, % total expenditure on health"



Source: OECD Health data; own elaboration

As a reimbursement method is in both countries used the fee-for-service agreement in retrospective form, where are providers paid after the services have been done by the third party. In some areas of health care is also used the case-based payment (DRG). It is based on predefined case values for providers. If the provider provides care for less it can keep the difference. This is motivating factor for providers to increase their efficiency and decrees prices. However, after several years of usage in the Czech Republic the DRG system of reimbursement has been abolished for the year 2011. The only type of reimbursement method that remains is the fee-for-service agreement.

6.1.5. Future projection of health care expenditure in the Czech Republic

This part of the diploma thesis targets especially on the Czech Republic. First the biggest difference of the Czech system from any other health care system, the position of General Health Insurance Company (VZP), is analyzed from the costs per customer point of view. This cost and ineffectiveness in financing will significantly influence thy financial system. Furthermore, the population development projection is analyzed as another factor influencing financial flows same as differences in female and male expenditures during its lifetime.

Table 10 summarizes costs and number of customers of each insurance company in year 2009. Unfortunately, there is no time development analysis possible because older annual reports from insurance funds are not available. Nevertheless, next column consist calculation of costs per one customer. Base on that calculation are the differences of each fund compared to the VZP.

The hypothesis that VZP is ineffective due to almost monopoly position on the market is confirmed. The second biggest insurance company, the interior ministry fund operates with 20% less operating costs.

The hypotheses is also confirmed by the Platform of health insurance policyholders, which published the analysis of different spending by the VZP among regions in the Czech Republic. (PZP, 2011)

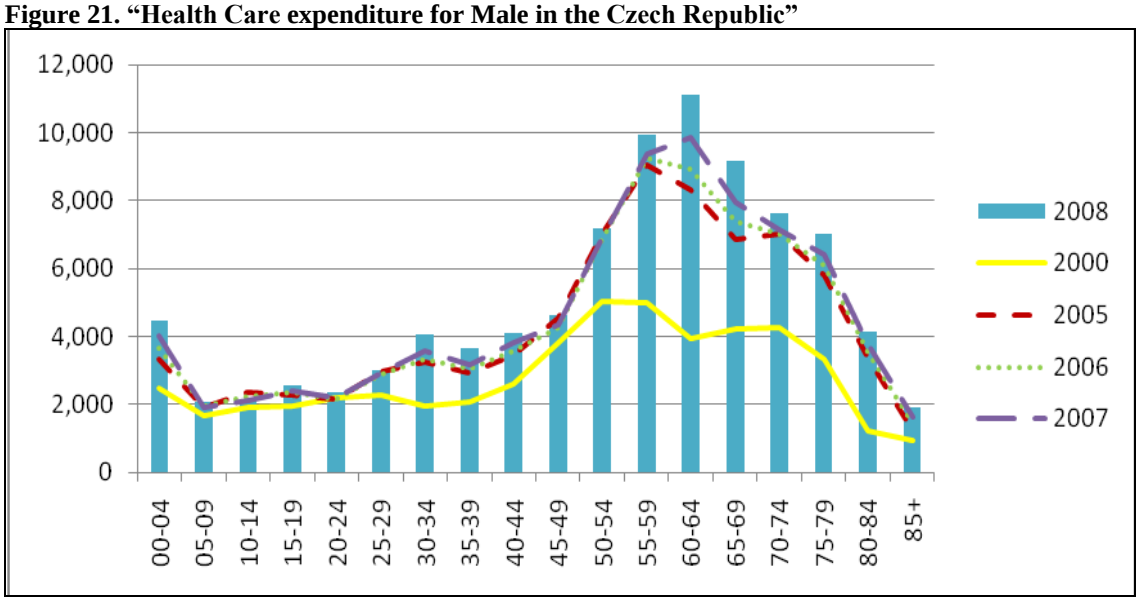
Table 10. "Effectiveness of Insurance companies in the Czech Republic"

Insurance Company	Costs in 2009	Number of customers	Costs per one customer	Indexes
General Health Insurance Company	143,604,581,000	6,261,809	22,933	100%
Health Insurance Company of Interior Ministry	20,559,236,000	1,121,497	18,332	80%
Czech Industry Health Insurance Company	8,356,794,000	721,834	11,577	50%
Occupational Health Insurance Company (OZP)	12,706,743,000	684,428	18,565	81%
Military Health Insurance Company	11,144,775,000	592,443	18,812	82%
Coalfield Brotherhood Cash Office, a health insurance company	6,770,602,000	415,759	16,285	71%
Health Insurance Company METAL-ALIANCE	6,496,041,000	401,232	16,190	71%
Employees Health Insurance Company Skoda	2,718,230,000	133,214	20,405	89%
Health Insurance Company MEDIA	224,253,000	43,036	5,211	23%

Source: Annual Reports of Insurance companies; own elaboration

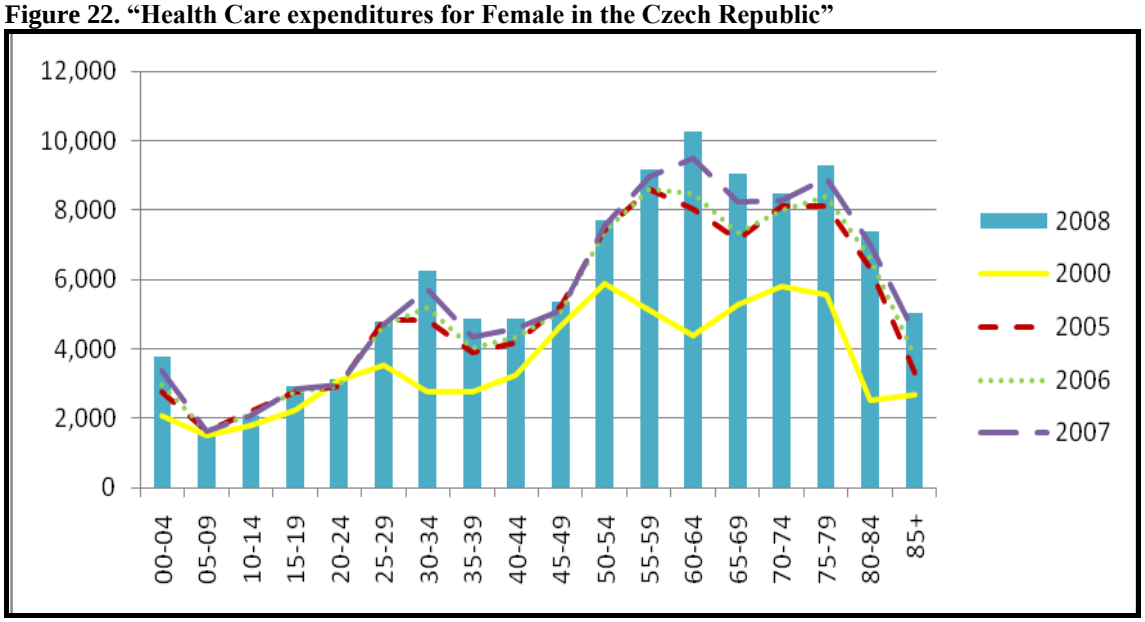
Figure 20 and 21 show the different expenditure per male and female over lifetime. Female lifetime expectancy at birth is 78.9 years significantly higher than male who have lifetime expectancy of 72.1 years in 2002. Figures also describe the increase of expenditures from the year 2000 till 2008. The growth is the highest around the year of 60 where expenditures increased by 100% in case of male and in case of female around 64 where expenditures increase by 120%.

Figure 21. "Health Care expenditure for Male in the Czech Republic"



Source: CZSO; own elaboration

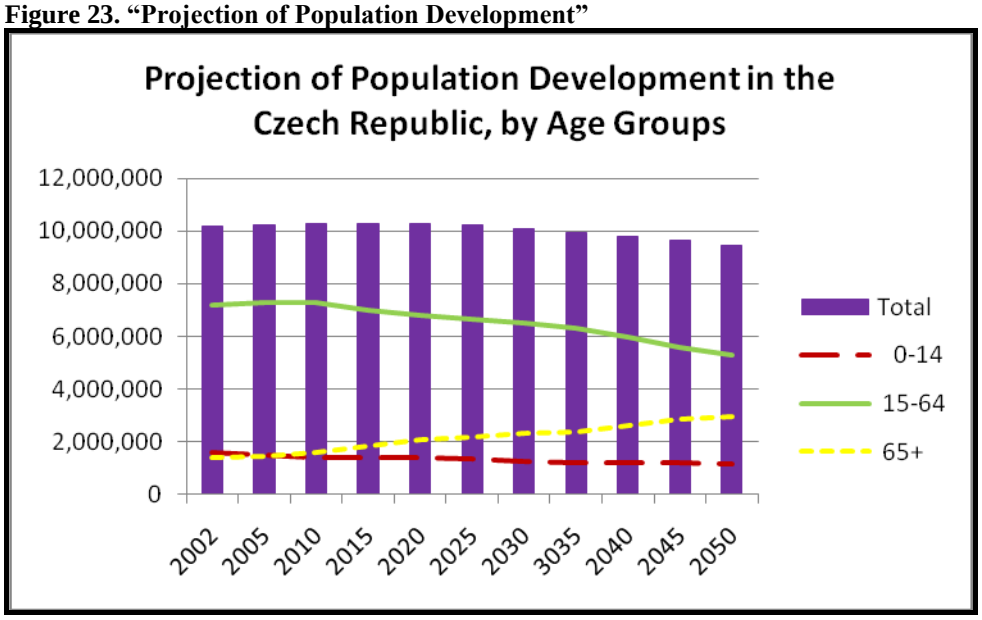
Figure 22. "Health Care expenditures for Female in the Czech Republic"



Source: CZSO, own elaboration

However, the life expectancy is expected to grow to 78.9 for male and to 84.5 years in 2050. That will create significant demands on health expenditures because as mentioned in Figure 20 and 21 the expenditure increase rapidly with aging of population. Even the total population will decline the expenses will significantly growth. The average age is expected to be in 2050 48.8 years that is almost 10 more than in year 2002.

Figure 23. "Projection of Population Development"



Source: CZSO; own elaboration

Figure 22 projects the future development of the population in the Czech Republic. The total number of citizens is projected to decline to 9.5 million citizens in year 2050. Although, the age composition will differ, number of citizens between 15 and 64 will decrees from seven million to 5.8 million. That expectation will be for the health care financial system catastrophic because it is based from 74% on SHI system which is based on financial contributions from taxes. Thus, if there is not enough workers the incomes will be lower and the other financial contributions from out-of-pocket payments will have to increase or new financial source as voluntary health insurance will have to be implemented. Furthermore, the number of population over 65 that is the most expensive to treat will increase by one million.

7. EVALUATION OF POSSIBLE IMPROVEMENTS FOR THE CZECH HEALTH CARE SYSTEM

SWOT Analysis

The SWOT analysis is used to synoptically summarize findings and evaluate its possible impacts in the system.

Table 11. "SWOT Analysis"

STRENGTHS	**WEAKNESSES**
• Short waiting times • Advanced technology and equipment in hospitals • Low salaries of health professionals in the sector • Highly experienced and skilled health care personnel	• Distribution of resources • Strong VZP position on the market • Low competition among insurance companies • Instability of health care policies • Reimbursement system that does not motivates providers to save resources • High SDR rate in several areas • High % of alcohol consumption, obesity and car accidents • High number of population receiving disability benefits
OPPORTUNITIES	**THREATS**
• GPs as "gate-keepers" for specialists • Reduction number of beds • Improvement of patients organizations • Economics of Scale – Mergers of Hospitals • Introduction of Voluntary health insurance or additional payments for quality of care • Increase of income cooperation to the system by corporations and non-profit organizations • Higher participation of citizens for rehabilitative care • Lower co-payments for pharmaceuticals and medical goods by state	• Reduction number of beds • Liberalization of the health insurance market • Higher cost for health care services • Cheap medical goods used due to savings • Higher salaries of health care professionals

Because there is no “gate-keeping” system of General Practitioners applied in the Czech Republic, patients can get their treatment faster than in other countries with such a system. On one hand, this is a strengths, but on the other, it is an opportunity for development and reduction of expenses. A health care system with accessible primary care being a first point of entry for all citizens, further distribution of patients in to specialized centers that are fully integrated into the wider health care system, may offer the best guarantee for cost-effective patient care. Because patients are not fluctuating between specialists to find the cause of illnesses, most of the treatments can be managed by GPs.

The other strength of the system in the CR is the technological equipment and medical goods used in the system. Although, these technologies significantly increase expenditures and this trend will be more important due to new technological features approaching the market. The quality of care is growing as well.

The last two strengths are little bit contradictory because health care professionals are respected due to their knowledge and quality, although they earn less than any other health care professionals in Europe.

The Czech system also has weaknesses, including the distribution of resources, that are not easily measurable and organized, especially by the General Health Insurance Company (VZP). VZP takes advantage over other health insurance companies and influences the competition in the market.

To be more specific about the Czech system, differences can be found especially between insurance companies. Currently there are 9 of them offering almost identical services. Only one of them is different. It is the General Insurance company (VZP), and it accounts for 60% of the market. Due to its monopoly, the whole system is ineffective. There is no pressure by competitors to decrease expenses.

According to the results, VZP has 20% higher costs per client than any other insurance company on the market. Furthermore, the government created specific regulations for the VZP and the remaining insurance providers are regulated by different laws, offering them less power than the VZP has. This is Czech-specific. The government can create any regulations, increase payments or taxes but if there is still inequality and ineffectiveness in the first stages of health care services, it can never be solved.

The following weakness is the instability in health care policies, especially for the value of item determination, which is changing every year as mentioned in the chapter: Expenditures in the Czech Republic. The DRG system that had been introduced several years ago has not been, according to the new value of item determination notice for the year 2011, used anymore. Once again, this complicates the system and lowers the motivation of health care professionals to decrease cost of procedures. It also increases of the administrative costs of transforming the system.

SDR comparative analysis between the Czech Republic and the Netherlands shows higher death rates especially in diseases of the circulatory system, ischaaemic heart disease, cancer of the cervix, motor vehicle traffic accidents, smoking and chronic liver disease. Furthermore, the Czech Republic falls behind in social/disability payments because in the CR there are 5,645 citizens receiving social/disability benefits and in the Netherlands it is 4,731 citizens per 100,000 citizens. This open-handed policy creates enormous demand on public budget and should be reduced.

As mentioned before, one of the opportunities for the system is the introduction of General Practitioners as gate-keepers who will distribute patients in the system. That will eliminate number of admissions, which is significantly higher than in the Dutch system, where such a system has been already implemented. Unfortunately, longer waiting times are expected afterwards.

Furthermore, the amount of bed care should be reduced, as there are more beds than needed. Each bed has to be maintained, which increases expenses. Therefore its reduction would lower expenditures.

There is almost no competition between insurance companies on the market. The unique position of the VZP is from its principal ineffective. Unwelcoming conditions for new doctors after receiving a degree. There are low salaries in whole sector. Ineffective and regularly corrupted Public tenders while purchasing equipment, sanitary materials and other aids. Poor evaluation of quality provided in hospitals. Currently in the CR there are twice as many beds available per 100,000 than in NL, that makes almost eight hundred extra beds.

According to European Health Care Powerhouse (EHCP, 2009) the patients' empowerment and impact on the system is really low. Thanks to a patient organization this could be more easily transferred to fit the needs of patients and to the government, which could adequately react when deciding about health care policies.

Another opportunity for savings in the system could be the mergers of hospitals, which are actually taking place, due to economies of scale, mergers could reduce the operating costs.

To maintain the system stable into the future, more financial resources should be used, especially voluntary health insurance or additional payments for higher quality of care. Most citizens would rather pay extra for better quality; however, there is no such opportunity in the current system. Another financial source could be contributions from corporations and non-profit organizations that would also increase the empowerment of patients.

State expenditures could be saved by lower co-payments for pharmaceuticals and medical goods by state and by higher payments of citizens for rehabilitative care.

There are also threats connected with such changes. Reduction of beds might reduce the number of personnel, and if not reduced based on appropriate findings, some hospitals might get shortage of beds.

Problem with savings might force the hospitals to buy cheaper goods with lower quality that would influence the over-all quality of the system and provided care. If the system was liberalized and decentralized without appropriate control mechanisms from state the reduction of cost will not be successful.

8. CONCLUSION

This diploma thesis compares the health care system in the Czech Republic with the Dutch health care system. Thanks to this comparison with one of the best organized health care systems, strengths and weaknesses of the system in the Czech Republic could be found.

Expenditures in the health care are similar to other post-communist countries. However, compared to more developed countries in Western Europe, expenditures are still low. All health care expenditures rapidly increase due to aging of population, increase of quality of health care services and technical development that creates enormous demand on resources.

The Czech system is financed mainly from public resources and has only three types of resources: the government budget, the social health insurance and the out-of-pocket payments. The Dutch systems combine more financial resources, including especially voluntary health insurance.

The most important findings for the Czech Republic are:

- Needs to increase efficiency of the system, mainly by competition on the health insurance market. Current leading position of General Health Insurance company supported by law does not allow proper competition among insurance companies and increase the operating cost.
- Introduction of voluntary health insurance or additional payments for quality care would create another source of financing that will be ,according to the future population development, needed. Furthermore voluntary health insurance would be motivated factor for health care providers to offer quality services to keep their customers.
- Implementation of Gate-keeping role for General Practitioners would eliminate large number of admissions in the system, that are created by patients who are trying to find out the proper specialist for their treatment
- Decrease number of beds in hospitals would eliminate additional cost connected with utilizing these beds in hospitals. As proved the number is twice as higher as in the Netherlands.

- New advisory body for financial flows in the sector that would take over the agenda currently dedicated to General Health Insurance Company. This advisory body would impartially administrate the financial flows.
- The system might get more effective when third party expenses are eliminated by Forcing the pharmaceutical and medical companies, to lower their prices of products, by increasing the competition on the market.
- The stable value of item determination over years, which will include DRG system that is used globally, due to its exact characteristics of financing flows for procedures and either for motivation factors for health care providers to lower costs.

Legal and ethical issues equal to professional principles of ensuring access for all. This has to be considered in the decision-making processes in health care. That makes the decisions for the policy-makers difficult and ineffective because system of solidarity has to be included. There is no easy solution; system has to always generate sufficient recourses that might cover patients in the society who are not able to pay for their treatment expenses by themselves. Due to that there is no possibility to apply pure business models that might be effective, however they are not including solidarity matters.

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10. Supplements

Table 12. " GDP Development Millions of Euro"

	Gross domestic product at market prices (Millions of euro)		
GEO/TIME	European Union (27 countries)	Czech Republic	Netherlands
2009	11,786,862	137,162	571,979
2008	12,493,131	147,879	596,226
2007	12,396,457	127,331	571,773
2006	11,699,115	113,696	540,216
2005	11,071,531	100,190	513,407
2004	10,616,818	88,262	491,184
2003	10,118,456	80,924	476,945
2002	9,950,225	80,004	465,214
2001	9,588,080	69,045	447,731
2000	9,209,173	61,495	417,960
1999	8,589,711	56,415	386,193
1998	8,167,124	55,383	359,859
1997	7,795,767	50,406	341,139
1996	7,383,469	48,852	329,316
1995	7,018,153	42,268	320,502

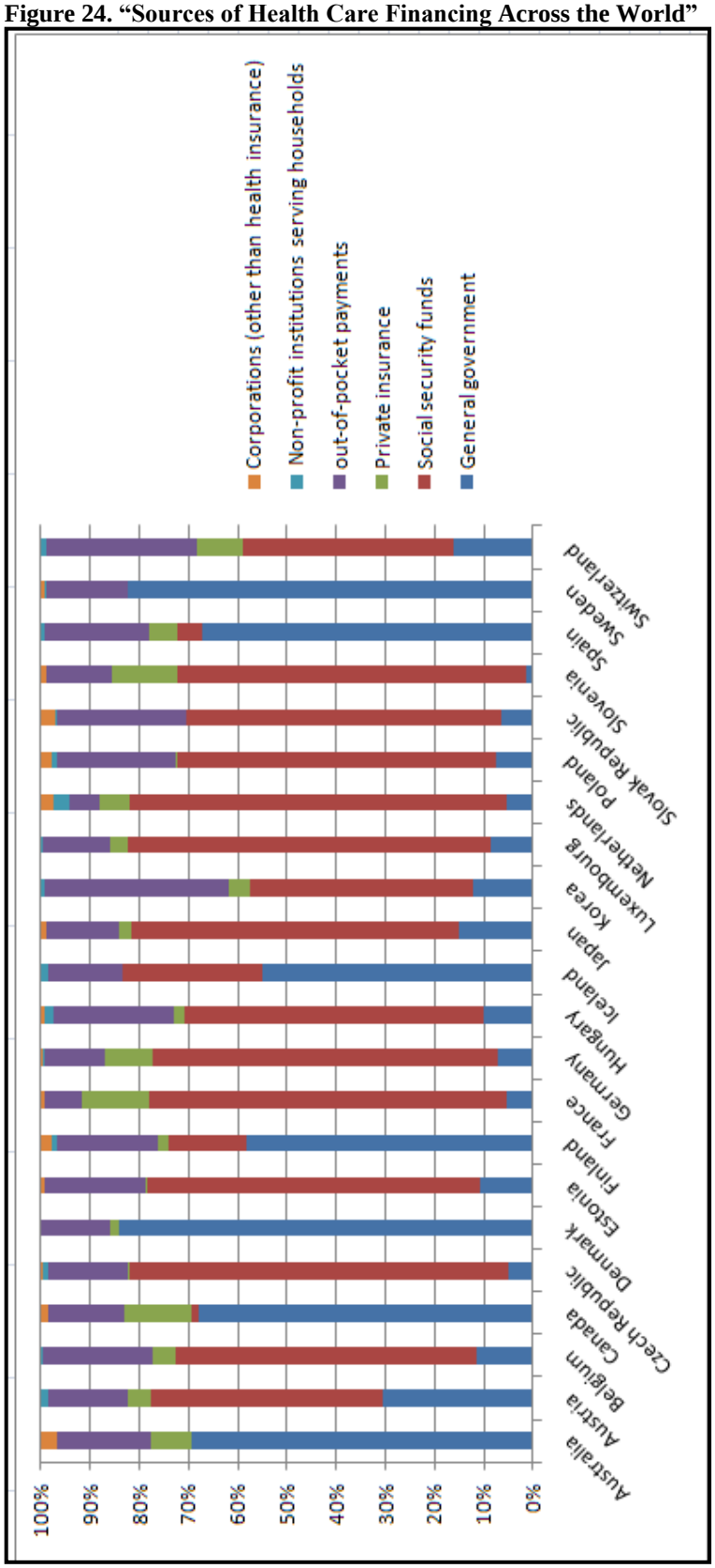
Source: Eurostat, own elaboration

Table 13. "GDP Development Euro per Inhabitant"

	Gross domestic product at market prices (Euro per inhabitant)		
GEO/TIME	European Union (27 countries)	Czech Republic	Netherlands
2009	23600	13100	34600
2008	25100	14200	36300
2007	25000	12300	34900
2006	23700	11100	33100
2005	22500	9800	31500
2004	21700	8600	30200
2003	20800	7900	29400
2002	20500	7800	28800
2001	19800	6800	27900
2000	19100	6000	26300
1999	17800	5500	24400
1998	17000	5400	22900
1997	16200	4900	21900
1996	15400	4700	21200
1995	14700	4100	20700

Source: Eurostat, own elaboration

Figure 24. "Sources of Health Care Financing Across the World"



Source: OECD Health Data, own elaboration