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Thesis in Microeconomics

A COMPARATIVE ANALYSIS OF THE HEALTHCARE SYSTEMS

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ACADEMIC YEAR 2012-2013

TABLE OF CONTENTS

1. INTRODUCTION

Healthcare is a system of governmental, social and health activities aimed at the preservation and enhancement of human health, disease prevention and control. Development of healthcare system is focused on ensuring a proper environment in which an individual lives, on creating favorable working conditions and welfare, on the delivery of complete medical care to patients, on preventing the disease in the population.

The purpose of this work is to outline the defects of the two major health systems, private and public systems, with consequent analysis of the possible solutions to the problems. Finally, this paper will try to figure out what is the optimal model, both in terms of efficiency and in terms of equity, to be pursued with the purpose of achieving the highest possible level of health, i.e. condition of complete physical, mental and social welfare.

The first chapter of this paper deals with the issue of healthcare as a vital good, absolutely different from other goods and services essential to life. It continues with a general description of the healthcare system, of the problems of this sector, of the reasons of the failure of this specific market and of the possible solutions.

The following two chapters describe the operations of the private and public systems, respectively in the United States and in Italy, also with the help of graphs. Particular attention is given to the Italian system, with a detailed description of the model since its creation, trying to highlight the institutional failures - with obvious negative effects on the financial systems - in the construction of the healthcare apparatus.

Chapter 5, talks about the healthcare situation in the world, referring to the database of the Organization for Economic Co-operation and Development (OECD), Global health Organization (WHO) and The Euro Health Consumer Index (EHCI).

The thesis concludes with reflections on both health systems, mentioning some economists and outlining once again the faults and the merits of each system, to give more consideration to the public healthcare system, which seems to have fewer defects of the other and thus be able to provide an adequate healthcare to the population.

2. THE HEALTHCARE INSURANCE

2.1 *The Healthcare*

Healthcare systems have characteristics, which cannot be assimilated to other markets for goods and services. Healthcare is actually different from other vital commodities. We can talk about the nature of demand, as stressed in Kenneth Arrow's article, "Uncertainty and the welfare economics of healthcare"; the individual cannot know when or how much healthcare she will demand. So the demand is irregular and unpredictable. The nature of ''provider'' is particular in case of health services. In fact, the physician cannot be compared, for example, to a grocer. The service offered, cannot be tasted before use. So, the relation between the patient and the doctor is based on trust. Moreover, a physician's behavior is supposed to be governed by a concern for the customer's welfare, since the patient usually lacks information about the probabilities of different outcomes of different types of treatment. In case of healthcare, the problem of uncertainty becomes serious. The uncertainty, due to the inexperience of patient - since the medical matter is complicated and she cannot rely on experience - creates difficulties in predictions. Information about prices of particular treatments is often absent. Therefore, healthcare market cannot be put on the same level of others.

There are two types of healthcare system:

- Private Healthcare System
- Public Healthcare System

The private healthcare system is based on an insurance mechanism while the public one is based on compulsory state funding.
Whatever is the model of the healthcare system, the State must intervene as a regulator, due to different reasons. One particular reason is the asymmetric information, that is, the lack of complete and relevant information at one of two parties. Asymmetric information affects negatively the functioning of the market, as explained by George

Akerlof in his article ‘’ The Market for Lemons: Quality Uncertainty and the Market Mechanism”. The Insurance sector does not know the real risk of the customers. As a result, it sets a premium, which is the average between the lowest risk individuals and the highest risk individuals’ premiums. This will bring the low-risk customers to leave the market, due to too high a price for their level of risk, and to create a market of only high-risk individuals, thus compromising the diversification of risk on the market. To avoid these situations, it is used to create coinsurance, which helps to revel the level of individual risk and thus spread the risk over the parties.

The asymmetric information leads to state intervention that guarantees protection of patients, for instance, by regulating access to the profession, reserved for people who have a particular license, since errors are irreversible and very expensive, or through a compulsory testing of new treatments or medications etc.

As stated before, Healthcare is non comparable to other good or services. The right to healthcare is a right of citizenship. Therefore, the access to medical care must respond to equitable principles and should not be led to the purchasing power of the individual, represented by her income. Social justice, equity, efficiency and positive externalities justify the state intervention.

2.2 *Healthcare Spending*

The health expenditure is very important for the gross domestic product of the countries. Most developed countries have a higher healthcare spending, due both to the number and higher quality of care, and to the greater aging of the population.

According to Organization for Economic Co-operation and Development (OECD) data, Health spending per capita increased on average across the countries by 3.8% in 2008 and 3.5% in 2009. Public spending on health grew even faster, at an average rate of 4.8% in 2008 and 4.1% in 2009. Private spending also continued to increase in most countries, but at a slower pace (1.9% in 2008 and 2.7% in 2009).

In Italy, healthcare spending was about 9.2% of GDP in 2011, lower than the OECD average (9.3%). The share of health expenditure in GDP in Italy, however, remains far below that of the United States (17.7%) as well as that of some other European countries such as the Netherlands (11.9%), France (11.6%) and Germany (11.3%).

Italy ranks below the OECD average in terms of health spending per capita, with spending of 3012 USD, compared to an average of 3339 USD in OECD countries. The United States spent 8508 USD on health per capita in 2011, two-and-a-half times more than the OECD average of 3339 USD.
For what concerns the payment systems for the health services, we may talk about fee-for-service (fix tariff payment for actually offered services), Diagnosis-related group (payment is decided according to the "group" the patient is enrolled in) and per capite quota.

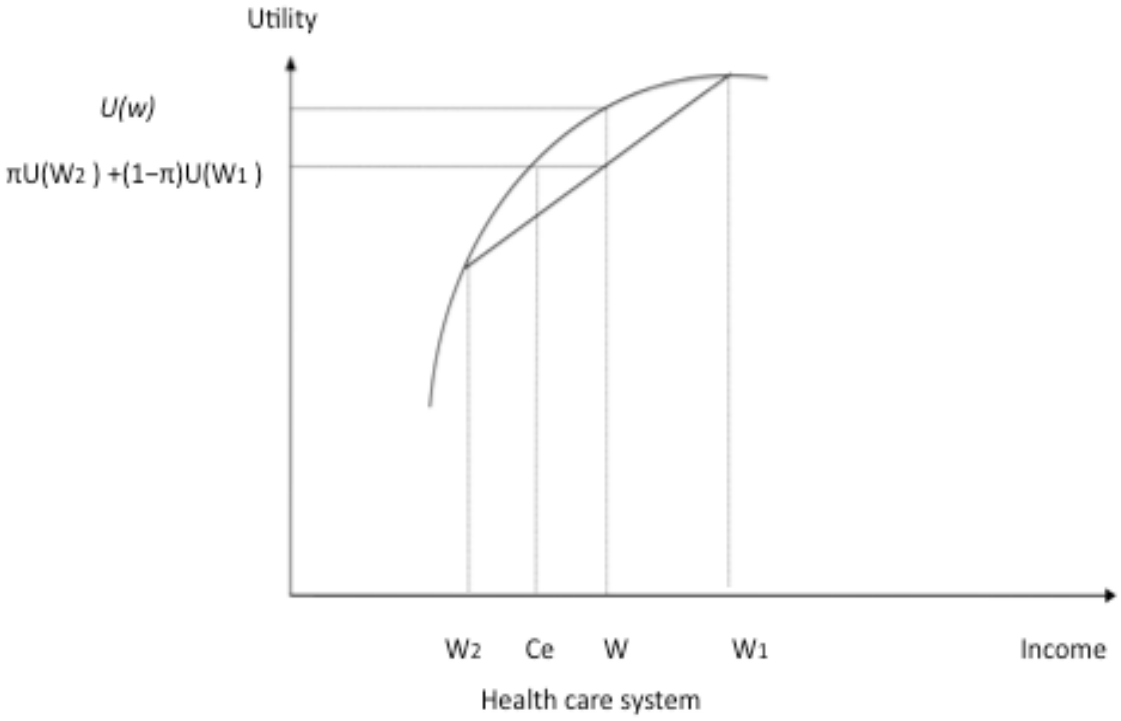
2.3 *Private Healthcare System and Its Problems*

The private healthcare system is based on health insurance. The state can act as a counterpart of private insurance providers, regulating their activities and encouraging the operation through tax incentives or replacing them when inadequate operations occur. Health insurance has two important functions: deleting completely or in part the risk, depending on the health insurance policy and risk-pooling, that is, mechanism by which a risk borne individually is diversified collectively; in this way, ensuring a high number of individuals, the insurer will reduce the variance of the negative events, compensating them with positive events.
Given the costs to afford and difficulties to obtain a private health insurance, the question naturally arises: why do individuals require some form of insurance? The reason may be the randomness of health as a good. In fact, the loss of good (health) is associated with a substantial reduction in income. So, the result is loss of income and following expenses for medical care. The insurance reduces the variability of expected income. Therefore, we can talk about risk adverse individual, that is, individual who is willing to pay a price to make stable his income expectation.
Let us assume two states:
1 - favorable (health)
2 - unfavorable (illness)
Lottery of the individual's income (randomness) is W=(W1 ,W2), where
W1 = w
W2 = w - d (d- damage associated to a negative event)

Probabilità of negative event: π

Expected value of the lottery: $W = w(1-\pi)+(w-d)\pi$

Due to the concavity of U : $CE <$W



Graph 1

The health of an individual is dominated by uncertainty and this makes healthcare spending a random deduction from income. To avoid possible shocks of income, risk adverse individuals will purchase a health insurance. Thus, losing a part of her income -- paying a premium - she will reduce the uncertainty for the future.

Health insurance may offer a complete coverage, that is, the reimbursement fully covers the damage or a partial coverage, when the reimbursement is less than the damage.

- Which is the optimal insurance for the risk adverse individual?

It is possible to show that if the premium per unit (of insurance) is equal to the probability of negative event, that is, p= π, then the optimal insurance is complete (q=d). When p>d, then the optimal insurance is partial.

If the insurance is q, then:

W1 =w–pq<w

W2 =w–pq–d+q=w–d+(1-p)q>w–d since p<1

If q↑⇒W1↓ and W2↑

Effect of insurance is the reduction of the variability of income lottery.

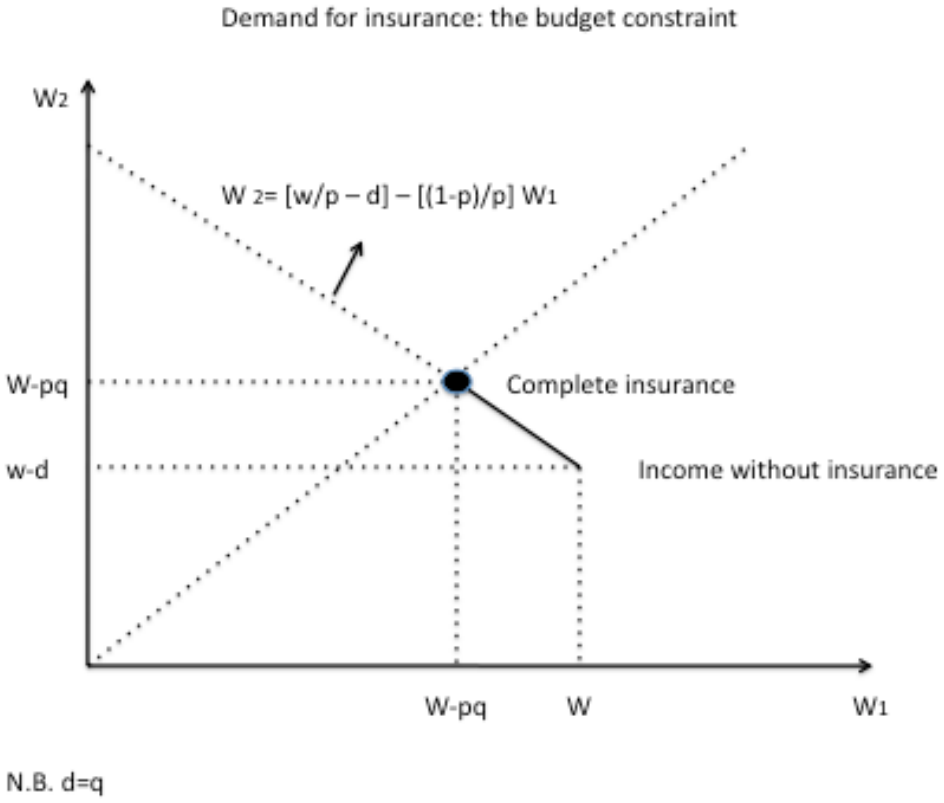
If q=d, we have the coplete insurance, W1=W2

Since q=w/p–W1/p, then we have:

W2 =w–d+(1-p)q=w–d+(1-p)[w/p-W1/p]

Therefore the budget constraint is

W2 =[w/p–d] -[(1-p)/p]W1, with the slope: - (1- p)/ p



Graph 2

Finally for what concerns the insurance supply, under following conditions:
-if individual risks are independent;
-if there are no overheads or administration costs;
the expected return of a company that provides insurance (p, q) to N individuals is:
$E(P) = N\ p\ q - N\ \pi\ q = N\ q\ (p-\pi)$, where Npq is total premium collected and $N\pi q$ is expected compensation.

If $p \geq \pi \Rightarrow E(P) > 0$, hence companies are willing to provide any type of coverage.

In perfect competition, $p = \pi$ and $E(P) = 0$

We may conclude that insurers apply actuarially fair premium and the insured individuals can find complete and optimal insurance without any intervention by the State in following conditions:

- Risk-adverse individuals have negative probability of the event different from one;
- Individual risks are perfectly independent;
- The information is perfect;
- There are no overheads or administration costs;
- The insurance companies operating in perfect competition.

However, the conditions required for optimality, often do not occur in the real world, with a consequent need for public intervention. In fact, the insurance market tends not to insure people with a higher risk or those with the lowest income, leaving the responsibility to the public sector (cream-skimming phenomenon).
Asymmetric information in the insurance market leads to problems as adverse selection and moral hazard. In the adverse selection the insurer does not know the risks faced by the insured individual. The article “Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information”, Michael Rothschild and Joseph Stiglitz has shown that the lack of information of the insurance companies about the individual’s risk, leads insurers to set a fixed starting price. Thus, individuals with low risk, will leave the market, since they could not afford the fixed price. Consequently, the high-risk individuals will dominate the market. The insurance market will be

characterized by only risky individuals, while the low-risk people will not have any insurance.

When the insurer is not able to observe the behavior of the insured individual, the last one may assume opportunistic behavior. Moral hazard can take two forms: being insured may induce the individual to reduce the disease prevention; third-party-payment problem. In the last case, being insured induces the individual to increase the consumption of healthcare, after the conclusion of the contract and, therefore, create inefficiently large spending. The payouts of the insurance companies will be higher than premium collected and this will lead the companies to leave the market.

Inability to cover the risks, inability to insure individuals with high risk and those who have low incomes, asymmetric information, adverse selection and moral hazard are all causes of failure of the insurance market. To reduce the occurrence of these problems, incentive mechanisms were created to share the cost of healthcare between the individual and the insurer: coinsurance (the individual pays a part of claim), deductibles (the individual pays the initial amount of claim). Moreover, frequent claimants will pay higher premiums.

All these reasons led the more important private healthcare system, the American one, to a new reform in 2010.

2.4 *Obama Reform*

In March 2010, the healthcare reform was proposed by President Obama. Although it is not possible to change the original structure of the American system (still concentrated on private insurance,) the following changes were made:

- Insurance companies were forbidden to rescind the insurance when the patient gets sick.
- It is unlawful to create a maximum cap on spending, used by insurance companies to refuse to reimburse the patient over a certain amount. In effect, it was particularly harmful for patients with serious illnesses that require expensive therapies, such as cancer.
- Parents will have the right to keep their children in their own health insurance policy until they are 26 years old. This norm is particularly

important today, since young people struggle to find a job and therefore have no access to insurance, which is usually connected to stable employment.

- Companies with over 50 employees that do not offer them a health insurance, will be fined.
- Expanding the coverage of Medicaid;
- Creating a National Health Insurance Exchange, a pool of insurance companies that, taking advantage of economies of scale, are able to offer policies at lower premiums.
- Obligation to have an insurance; people who do not have insurance coverage paid by the company (which is the most common form of insurance coverage) are required to purchase an insurance by their own. Those who fail to comply, will pay a fine of $ 95 (or 1% of income) in 2014, to $ 325 (or 2% of income) in 2015, to $ 695 (or 3.5% of revenue) in 2016 (up to a max. $ 2.085 per year). Will be exempted people with incomes less than $ 9.350 (single) or $ 18.700 (couples).

By 2014, other aspects of the reform will bring 32 million Americans to finally have the right to care. Of these, about half, will come under the coverage of the state, Medicaid. The latter, will provide free medical care to the families with gross annual income of $ 29,000. Additional 16 million will instead buy an insurance policy. But they can do so by choosing from a new competitive combination, supervised by the State, and will receive public subsidies of up to $ 6,000, to avoid that the insurance costs more than the 9.5% of their income.

As Obama said: “The Reform is necessary for all Americans who fear losing insurance coverage because they become too sick, because they lose or change their job. Reform is necessary for all those small businesses that have been forced to lay off employees or cut insurance coverage, because this has become too expensive. The reform is necessary because the astronomical cost of Medicare and Medicaid is one of the causes of our federal deficit. Let me be clear. If we do not control these costs, we will not be able to control our deficit. If we do not reform healthcare, your insurance policies and the bills which you pay for medical services will continue to increase dramatically.”

The result of Obama Reform, is not simply the introduction of national health insurance, but it is a recognition of fundamental right to have a healthcare, for the all citizens, enabling them to obtain health insurance even in situations of minimum income or of serious chronic disease.
Obama Reform has been the subject of constant attacks and protests by the Tea Party movement, the insurance lobby and bio-medical, part of Catholic Bishops (due to affirmative action in favor of contraception), and the Republican opposition that has tried to make it void by the Supreme Court because of the unconstitutionality of the obligation to purchase un insurance. But the results speak for themselves: In 2011, the number of Americans without insurance has decreased for the first time since 2007. The number of uninsured people fell from 49.9 million (16.3% of the population) in 2010, to 48.6 million (15.7% of the population) in 2011.
The previous system, before the Reform 2010, will be fully explained in the following pages.

2.5 *Public Healthcare System and Its Problems*

The fundamental characteristics of the public system are:

- Being insured is compulsory and universal for the entire population;
- The funding comes from general taxation;
- A large part of healthcare facilities are State-owned;
- The volume of supply and investments are planned;
- Remuneration of the general practitioner is carried out according to the method of capitation;
- Remuneration of specialists who work in public facilities similar to a normal employment relationship.

In a system of this type, the problem of equity, i.e. the guarantee that access to the system is granted to all regardless of income, is solved thanks to its universal nature. In fact, access to medical care is not bound to the availability of individual income. This eliminates the problem of cream-skimming, present in the private healthcare system, as stated before. Since the public system imposes a compulsory insurance, the problem of adverse selection is also solved. Moreover, since it is easier to control healthcare

expenditure, by centralizing decisions of the State and Local Authorities, as a result it tends to overcome third-party-payment-problem, already explained before.
Even in a public healthcare system some problems arise. Productive inefficiencies with consequent increase of costs and lost of customer satisfaction, so lack of welfare. Moreover, as stated by Arne Björnberg, HCP COO and managing director of the team EHCI (it will be discussed in more details later), waiting lists and waiting times limit the activities and, therefore, cause the inefficiency and inefficacy. Central planning leads to the lack of flexibility and again to the inefficiency in using of resources with consequent lack of ability to meet the consumer's preferences and needs.
As we may see in the following chapter, to solve the problem of inefficiency, the mechanism of quasi-mercato is needed. In this way, it will be possible to maintain the principles of public system, introducing competitive mechanisms between the public and private sectors. This will lead to the increase of efficiency and so, of customer satisfaction, without increasing the total healthcare spending.

The following chapters are going to analyze American healthcare system and Italian healthcare system, respectively the private system and the public system.

3.1 THE AMERICAN HEALTHCARE SYSTEM

3.1 *The Private Sector*

The American healthcare system is characterized by the presence of private health insurance and public coverage plans of health spending, reserved only for certain categories of individuals. (Fig.1)

Table 8.

Coverage by Type of Health Insurance: 2010 and 2011

(People as of March of the following year. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see *www.census.gov/apsd/techdoc/cps/cpsmar12.pdf*)

Coverage type	2010[1]	2011
Any private plan[2]	64.0	63.9
Any private plan alone[3]	52.5	*52.0
Employment-based[2]	55.3	55.1
Employment-based alone[3]	45.7	*45.1
Direct-purchase[2]	9.9	9.8
Direct-purchase alone[3]	3.7	3.6
Any government plan[2]	31.2	*32.2
Any government plan alone[3]	19.7	*20.4
Medicare[2]	14.6	*15.2
Medicare alone[3]	4.7	*4.9
Medicaid[2]	15.8	*16.5
Medicaid alone[3]	11.1	*11.5
Military health care[2,4]	4.2	*4.4
Military health care alone[3,4]	1.3	1.3
Uninsured	16.3	*15.7

* Change between the 2010 and 2011 estimates are statistically different from zero at the 90 percent confidence level.

[1] Implementation of Census 2010-based population controls.

[2] The estimates by type of coverage are *not* mutually exclusive; people can be covered by more than one type of health insurance during the year.

[3] The estimates by type of coverage are mutually exclusive; people did not have any other type of health insurance during the year.

[4] Military health care includes Tricare and CHAMPVA (Civilian Health and Medical Program of the Department of Veteran Affairs), as well as care provided by the Department of Veterans Affairs and the military.

Source: U.S. Census Bureau, Current Population Survey, 2011 and 2012 Annual Social and Economic Supplements.

Figure 1

This system had some changes over the years. The first form of private insurance was the free-for-service or indemnity insurance. This type of plan assumes that the supplier of the health service (doctor or hospital), chosen directly by the patient, receives a fee for each service (hence the title "benefit rate" or fee-for-service) that the insurance company would reimburse to the insured person, based on the characteristics of the

policy. The patient would participate in the expenditure for the provision of health services through deductible - the amount of expenditure on health services , supported by the patient - and coinsurance - the amount of expenditure on health services in proportion to the total expenditure incurred by the patient.

In the private sector, a first distinction can be made between group insurance and individual insurance. The first one is an insurance purchased directly through their employer or by the company to which the individual belongs. A part of the premium is paid by the employer.

Individual insurance is generally directed to the self-employed who can buy insurance at one of the private companies. In this way, however, the individual loses the advantage of a smaller amount, even though it is possible to deduct it from the taxable income.

Today, many Americans - about 50% of individuals who have health insurance - are enrolled in Managed Care plans, whose main characteristic is to be able to use, at a lower cost compared to Indemnity insurance plan, a limited number of General Practitioners and specialized facilities and hospitals, strictly indicated in the plan, affiliated or owned by the same organization.

Much of Managed Care plans are characterized by the formulary, which is a list of drugs shown in the plan and included in the policy. The use of drugs other than those listed in the formulary is not reimbursed by insurance plan.

There are three different types of managed care plan:

- HMOs (Health Maintenance Organizations);
- PPOs (Preferred Provider Organizations);
- POS (Point-of-service plan).

The HMOs normally has a reduced network of facilities providing health services through a fixed annual fee. So, the patient can take advantage of a tight network of salaried doctors from the plan, and hospitals and facilities owned by the plan. When the patient receives care outside the network predetermined by the plan, the costs are not reimbursed by insurance.

PPOs and POS are more flexible and combine features of traditional fee-for-service plan and HMOs. In PPOs and POS plans doctors and hospitals do not belong to a single plane but participate in multi-storey structures, so the network tends to be more extensive. This permits a greater flexibility for patients , however, at higher premium.

In particular, in the plans POS, the patient has the possibility to choose the services provided by a structure that does not belong to the network, however, in this last case the patient may be required to participate in the health spending (so support deductible) and anticipate spending for the service, which will be reimbursed by insurance later; this is a typical characteristic of traditional fee-for-service plans.

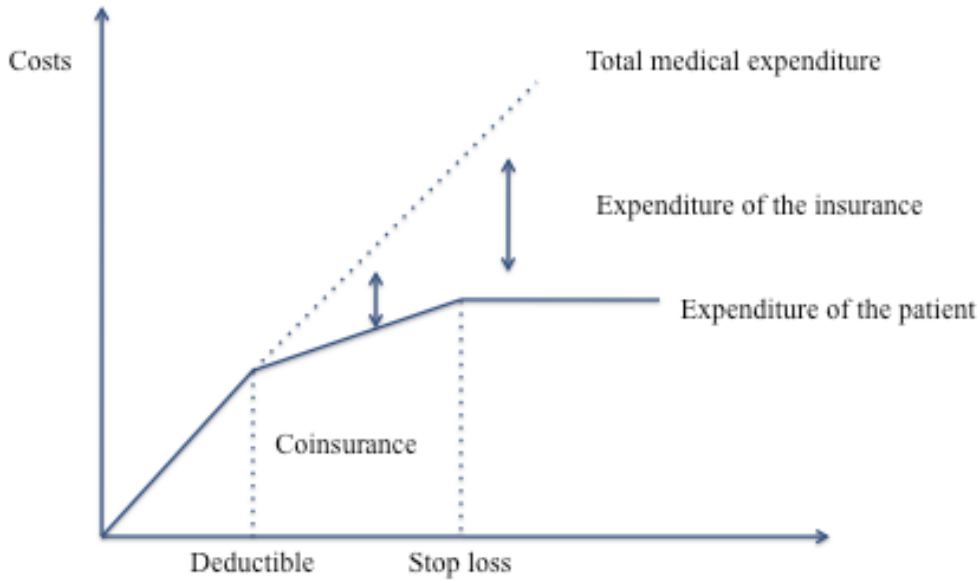


Figure 2

The Figure 2 shows how moves the expenditure incurred by the patient compared to the total one. The Y-axis is the cost per patient, the X-axis is the total cost.
As we can see from, as long as the medical expenditure remains in the deductible area, the patient will have to pay the whole amount. In the area of coinsurance, however, the patient contributes to the payment only by a certain percentage, while the rest will be covered by the insurance. The stop loss point indicates the point from which the patient will not pay anything and the insurance covers the whole amount.

In these plans, the initial costs are paid by the insured individual, albeit he has a wide flexibility in the choices to be made regarding treatment.

3.2 *The Public Sector*

The federal government provides health services to approximately 23% of the population. Old people, disabled, indigenous families, employees of the federal government and of the armed forces are generally beneficiaries of public insurance. There are four principal public insurance palns:

- Medicare;
- Medicaid;
- State Children's Health Insurance Program (SCHIP);
- High-risk pools.

Medicare

The Medicare represents insurance system managed at national level (Healthcare Financing Administration) established in 1965 by the government of Lyndon Johnson and funded partly from the proceeds of the tax authorities, in particular by a contribution of about 3% of the salary of the employees. All American citizens over 65, who have paid contributions for at least ten years for their healthcare plan, may join the Medicare. Also can enroll in Medicare disabled and patients with renal disease or amyotrophic lateral sclerosis permanent, albeit they are younger than 65 years old.
The Medicare consists of 4 parts: Part A which covers hospital facilities; Part B relates to specialized medical examinations and extra-hospital care; Part D (introduced in January 2006) intends to cover expenditure on the purchase of prescribed drugs. To have this coverage the patient has to pay a higher premium. The Part C (introduced in 1997) provides the opportunity to receive the benefits of Medicare, Parts A, B, D, by private insurance plans such as HMOs
or PPOs or fee-for-service plans. This type of coverage is known as Medicare Advantage. The latter, offers greater flexibility and sometimes the opportunity to enjoy extra benefits such as more extensive hospital coverage. In order to access the Medicare

Advantage, patients should be enrolled in a Medicare Part A and B, and pay a premium for the extra benefits.
Since Medicare Part A and B cover only a part of the costs for healthcare, those who do not adhere to the Medicare Advantage can buy private supplementary plan - the Medigap. The Medigap is a private insurance that provides additional benefits to Medicare, similar to those offered by Medicare Advantage. This plan includes 12 additional services.

Medicaid

Medicaid was created for those who have very low incomes and limited resources. The requirements to become a part of the plan are set by individual States and are very rigid. Many families, despite having a low income, are not poor enough to enroll in Medicaid and cannot, however, afford private insurance. For these families exist, at least for what concerns the healthcare of children, the SCHIP.

SCHIP

The State Children's Health Insurance Program (SCHIP) was born in 1997, created for the healthcare, for children from those families which have too high income to fit in Medicaid, but not high enough to be able to buy private insurance. This plan, as well as Medicaid, is administered by individual federal states, which decide what are the requirements to enroll in. In some states, Medicaid and SCHIP are combined, while in others, two plans are separate. Although each State is free to decide what are the benefits of the plan, everyone must guarantee the same fundamental health services. The SCHIP provides health insurance to about seven million children. Therefore, this number may increase up to ten million if only the state would increase funding for the plan.

High-risk pool

The high-risk pool is a plan operating at the state level. It provides health insurance to individuals who do not have access to group or individual insurance, mentioned above, and are not insured by private companies, as they have serious medical conditions. The risk pool is funded through premiums and taxation and provides health coverage to

about 180,000 people in about 30 states. It has been estimated that about one million people could be included in the plan, but the lack of funds does not permit it.

3.3 *Other types of Health Insurance*

Long-term care insurance

The long-term care insurance is an insurance plan designed to cover the high costs resulting from the need for help from an assistant in the control of people with dementia or cognitive problems and mental disorders, such as Alzheimer's desease. The cost of stuff services (which can be provided either at home, or outside) becomes higher and higher, due to the expansion of this sector in the market. This type of plan generally is not included in the normal health insurance except in some special cases.

Disability insurance

The disability insurance is a type of coverage that reimburses the wages, unearned because of an injury or illness in the long term. This plan does not cover medical costs and rehabilitation and for this reason is not considered as an actual insurance plan.

Supplemental insurance

Supplemental insurance is just that – a supplement, or add-on. It is not a replacement for regular health insurance. In effect, some supplemental insurance plans will pay for not affordable medical expenses, such as deductibles, copayments, and coinsurance. Other supplemental plans may provide a cash benefit to cover lost wages, transportation related to health condition, or used to pay for food, medication, and other unexpected expenses the individual has, due to an illness or injury.

3. THE ITALIAN HEALTHCARE SYSTEM

Constitution of Italy
Art. 32 " The Republic safeguards health as a fundamental right of the individual and collective interest, and guarantees free medical care to the indigent. Nobody can be forced to a specific medical treatment except for the provisions of the law. The law can in no case violate the limits imposed by respect for the human person."

Today, it is relatively easy to see that the emergence of new needs and the associated complexity of the demand on the one hand, and that of the supply provided by scientific and technological progress on the other, are phenomena that cannot be dealt without a strong alliance between the different components.
It is important to achieve and strengthen the conditions because the effort is coordinated between those who have the responsibility to ensure the response to the health needs using the best available knowledge (professional sphere); promote consensus necessary to the operation of public health organizations (political sphere); manage companies, ensuring an adequate and lasting operation (managerial sphere).

4.1 *National Health Service*

In 1978 a radical reform (Law of 23 December 1978 n. 833) redefined the overall structure of the Italian healthcare system. The system in force before, characterized by an excess of social insurance, and the fragmentation of services providers, was replaced by the National Health Service (SSN), which was entrusted with the management of the entire range of services to guarantee healthcare of Italian citizens.

National Health Service was created to achieve:
• Universalism and "free" access to services;
• Integration of all health services;

• Democratic control (through elected bodies - municipalities, regions and the State);
• Primacy of direct public management.

It is therefore not only a national insurance, financed by general taxation, but a real public service aimed at protecting the right to health, both as an individual right and as collective welfare.

This so radical and profound reform was possible thanks to the particular political moment of that period. The establishment of a single public system, entrusted with the responsibility ensuring healthcare, was one of the greatest results of the so-called phase of "historic compromise" in which the two dominant socio-political forces of the country agreed to a common understanding of some large issues of political and social relevance. In other words, the establishment of the NHS has been the final act of a long cultural and political debate, with objectives by political, social and economic nature. The principles of NHS as cited below are health as a collective interest, solidarity and universalism for the healthcare, overall responsibility for the assistance, which includes the preventive interventions, diagnosis and rehabilitation.

From the political standpoint, the most significant changes regarded the observance of the principle of equality and the decentralization of decision-making powers. In economic field, they tried to rationalize healthcare spending, through the introduction of programming, to control the use of resources, and of the National Health Fund (FSN); recover efficiency in services, increasing overall productivity of the healthcare system; extend a network of financial controls at various levels of the NHS.

From the institutional point of view, SSN was divided into three Levels (State, Regions and Municipalities) with different political and administrative responsibilities. Specific and autonomous powers granted by law characterized any level; the State level was composed by Parliament, Council of Ministers, Ministry of Health, CIPE, and technical and scientific bodies such as the National Health Council, Institute of Health. The national level was given the definition of the legal, operational and financial framework within which healthcare should have take place, in order to ensure equality and the right to health for all citizens.

The regional level was involved in the respect of the fundamental principles established by the law, for the exercise of legislative functions in the field of healthcare, especially

at the organizational level. Regions were then responsible for the planning of health and social services, the allocation of resources, for the monitoring and evaluation of the functioning of the system, with respect of national and regional programs.
At the local level were assigned administrative responsibilities related to the management of services.

First financial system (Fig. 3)

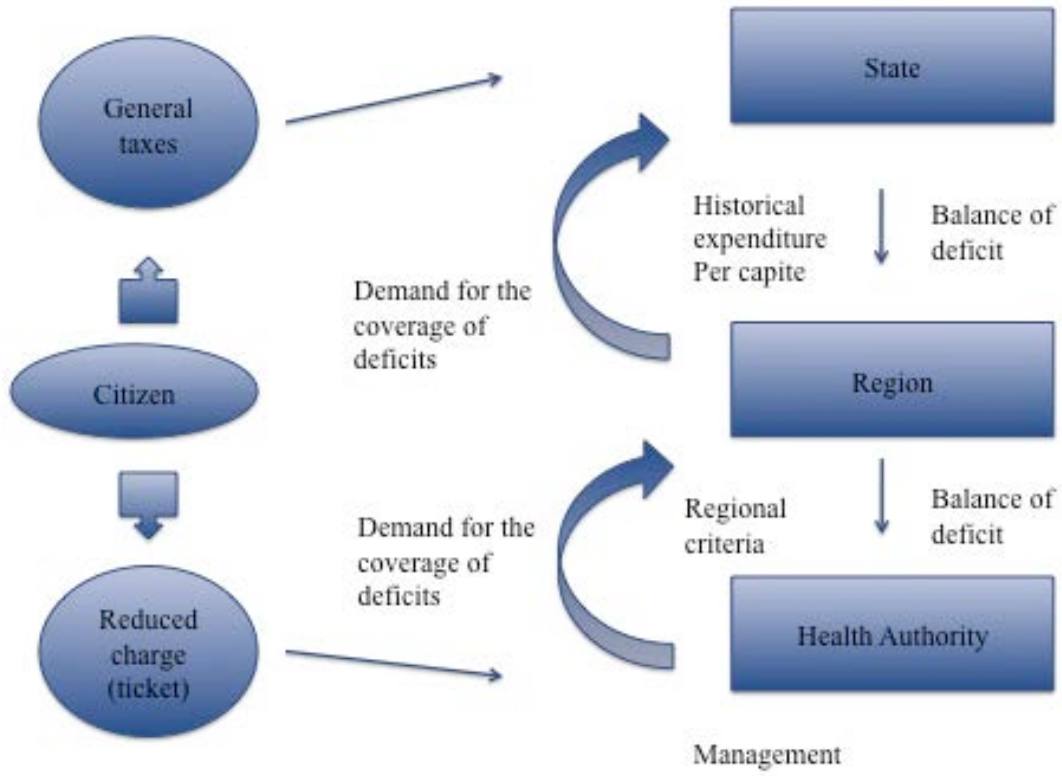


Figure 3

4.2 *Crisis at Macro-level*

The healthcare system that grew out of the 1978 reform, had several weaknesses. In order to identify the reasons for the profound crisis of the NHS, it is important to

focus attention on the inter-institutional relations between municipalities, regions and the state, and on the economic and financial effects.

The difficulties of inter-institutional relations derive from the conflict between the decentralized level, which directly influences spending, and the central level, which directly influences available resources (financial, personal, endowment structures) and ensures uniform treatment of broader groups of citizens.

Law reform had provided the mechanisms to regulate the conflict between decentralization and unity of the system through:

- The establishment of the National Health Fund, the amount of which was to represent the annual spending limit allowed;
- The definition of minimum guaranteed to make compatible the level of funding and the level of expenditure;
- The introduction of programming through national health plan, regional health plans, local plans.

These integration mechanisms did not work for several reasons. Different government organs have generated unprofessional behaviours: they were not able to take their responsibilities.

At the institutional level, the presence of limitations in imposing obligations and constraints to entities with constitutional autonomy as Regions and Local authorities, has contributed to the lack of effectiveness of the integration process.

Special attention should be paid to the funding system by FSN.

Fragmentation between the three levels - State, Regions and Municipalities - has led to a situation where the State had limited possibilities to control the actual expenditure processes. In this way, Regions and Health Authorities have taken behaviours of moral hazard. Indeed, while the Government faced the political costs of financing the system and tried to keep the spending under control, the Regions had no incentive to limit this spending. In fact, the centralized nature of the Italian tax system, did not allow any attempt to give financial responsibility to the Regions and Health Authorities.

Therefore, during the fiscal year, the Regions, exceeded the limit of the allocated resources, protested, arguing that without additional funds it is not possible to provide an appropriate healthcare.

As a result, the Government granted additional funding that would be covered the deficits. In the end, trusting that each deficit would be repaid by the State, the Regions were making plans to spend more than expected, acting without any real financial limit. So, the State rewarded the Regions that had accumulated higher deficits. Despite the requirement of the law 833/78, which required Municipalities and Regions to deal with coverage of budget deficits of the Health Authorities, it has never been activated a concrete control over the spending.

The inefficient management of the budget deficit of health sector, took place in a period characterized by a high average value of the debt / product ratio, immediately after the great inflation. In the period 1987-1988, the needs of the healthcare exceeded 32.536 million euro, with a deficit of 1,342,780,000 euro compared to the availability of FSN, which was added to the 7.23 billion euro of debts of the health authorities.

The increased expenditure was made for staff (40%), followed by spending on pharmaceutical agreement (17.7%) and for the purchase of goods and services (17%). So, the level of health spending increased by 47% in only 3 years.

Since its creation, the NHS has shown that the financing model adopted was essentially based on transfers from the State to the Regions, using as a reference the historical spending. Such a system determined ex ante allocations that were regularly exceeded ex-post, resulting deficit at the regional level. Regions were then covered in their deficit and therefore not only received no advantage in pursuing strict fiscal policies, but they used deficit, as a tool to raise the assignments relating to subsequent years.

It became obvious that healthcare structure needed to implement the managerial qualities to make methodologies and processes, used in health services, efficient and effective.

Managerial prospective means "Run rationally" the organizations.

It concerns:

- Explanation of objectives;
- Adequacy of strategies and policies of the resources;
- Adequacy of operations to implement such policies;
- Adequacy of the organization in its different components.

4.3 *The Reorganization of Healthcare Regulations*

With Legislative Decree no. 502 of 1992, “The reorganization of healthcare regulations", it has been proposed the reorganization of the NHS.
The process of improvement, therefore, requested the strengthening of professional skills and the involvement of health managers, in order to achieve high quality and optimizing the benefit / resources ratio.
Since 1995, the health authorities have had to adopt long-term budget plan, annual budget plan and to fix destination of any surplus and means to cover any deficit.
Some points are relevant in this reform: distribution of State resources to the Regions, based on a criterion “per capite”; compensation between the regions and the empowerment of the Regions for the deficit.
In addition, hospitals would be funded on the basis of a tariff system - payment for performance.
Despite the concreteness of the points of the reform, hospitals continued to be funded for inputs instead of tariff-system. Only few Regions emanated their own regional plan. Therefore, it was necessary to redesign the entire framework with the aim of getting the savings in expenditure, ensuring high quality and efficient support, optimizing the use of resources by encouraging the process of corporatization.

4.4 *BINDI Reform*

Legislative Decree no. 229/99, (Law no. 419), contained rules for rationalization of the NHS. The elements that characterized the new measure are the following:

- new operational mechanisms: introduction of managerial logic;

- get completed the process of regionalization, specifying the responsibilities of the Regions;
- more incisive corporatization of the structures of the national health service, with the aim to achieve efficiency and effectiveness;
- the abolition of financial accounting and the adoption of economic accounting. In this way, it is easier to determine the economic consequences of the choices

made, highlighting the effects on the economic equilibrium and on the structure of the financial sources within the health authorities;

- per capite quota;

- “quasi-mercato”;

For what concerns Management model, we have new principles for the stuff management:
• Increased autonomy of enterprises in the allocation of executive positions;
• Introduction of the compensations;
• Evaluation systems, which involve an explicit judgment on the performance of managers;
In the systems of planning and control based on the output, we have:
• Use of complex budget;
• Relation between the compensations and the achievement of goals;

The changes, in the rules of the system and those relating to the financing, imply a drive to specialization in the local health authorities - ASL.
The increased autonomy leads companies to define their own strategy, thus assuming a specific interpretation of the mission, and to select the combination of services that are believed to be more suited to the needs of the population and the ability of the company. The result is an interconnected system in which firms increase their level of mutual interdependence.

4.5 *New Financial Model*

For what concerns the new financing system, we have two types of tools:
-tariffs, per capita - characterized by a greater degree of perceived neutrality and, therefore, legitimacy on the part of healthcare companies;
- financing for functions and extraordinary funds - necessary for the correction of potential distortionary effects caused by the introduction of new mechanisms;

The adoption of the per capita quota, has led to organizational logics, more oriented to the final results. Compared to the model of the law no. 833/78, the organizational scenario turns out to be modified. The per capita quota is based on the principle of correspondence between the allocated resources and the measured needs of the population. Thus, regions adopted a mix of weighting criteria, based on geomorphological characteristics of the area and the socio-demographic characteristics of the population.

Financing for functions refers to:

- the relevance of the function performed;
- the desired amount required to remunerate a given function, regardless of the activity carried out;
- regional strategic decisions to foster innovation, development and consolidation of specific projects, services and assistance.

This type of financing, however, has been criticized because of definition of the amounts, allocation of resources to functions, timing of resource allocations.

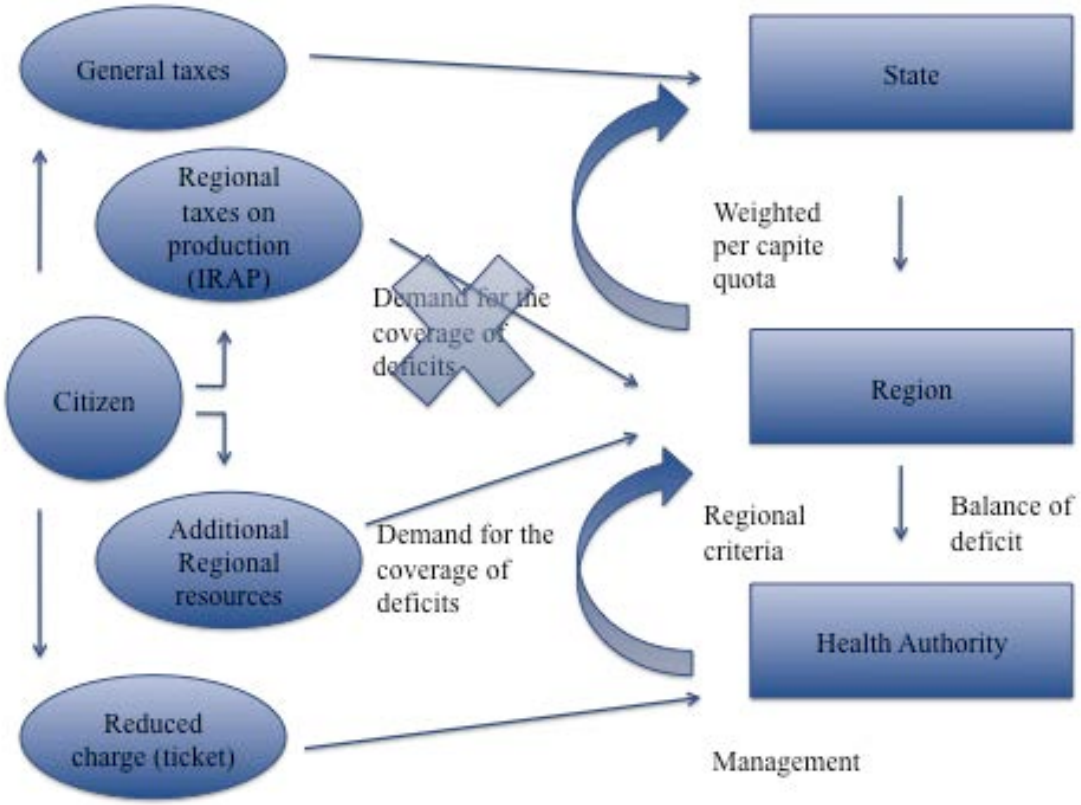


Figure 4

The system of “quasi-mercato” concerns the introduction of any type of link between quantity and quality of the offered services and financial resources the firm has; increasing autonomy allowed; “per capita” financing; the end of the monopolistic protections through the introduction of competition mechanisms. So in a “quasi-mercato” pattern, the decision to use a tariff-system (as the base of financing of health authorities) leads to a competition between offerers of services.

Growth of revenues and of levels of efficiency (cost structure) are the goals that the system poses to hospitals to ensure stable development.

Moreover, the tariff system has the effect of specialization on the structures of private offering. The adoption of the tariff system based on DRG, not only implies a potential increase in the weight of the private component, no longer limited by the number of beds agreed, but makes it more convenient targeting market and adopting the specialization strategies.

Extraordinary funds arise from the need to ensure a smooth transition to the new criteria for financing and support companies, ensuring the management of changes within the institutional framework.

As we can see form the figure, ASL, paid through per capite, obtains, in part, services for its patients from hospitals and from private accredited organizations. While, accredited organizations and hospitals compete for more patients.

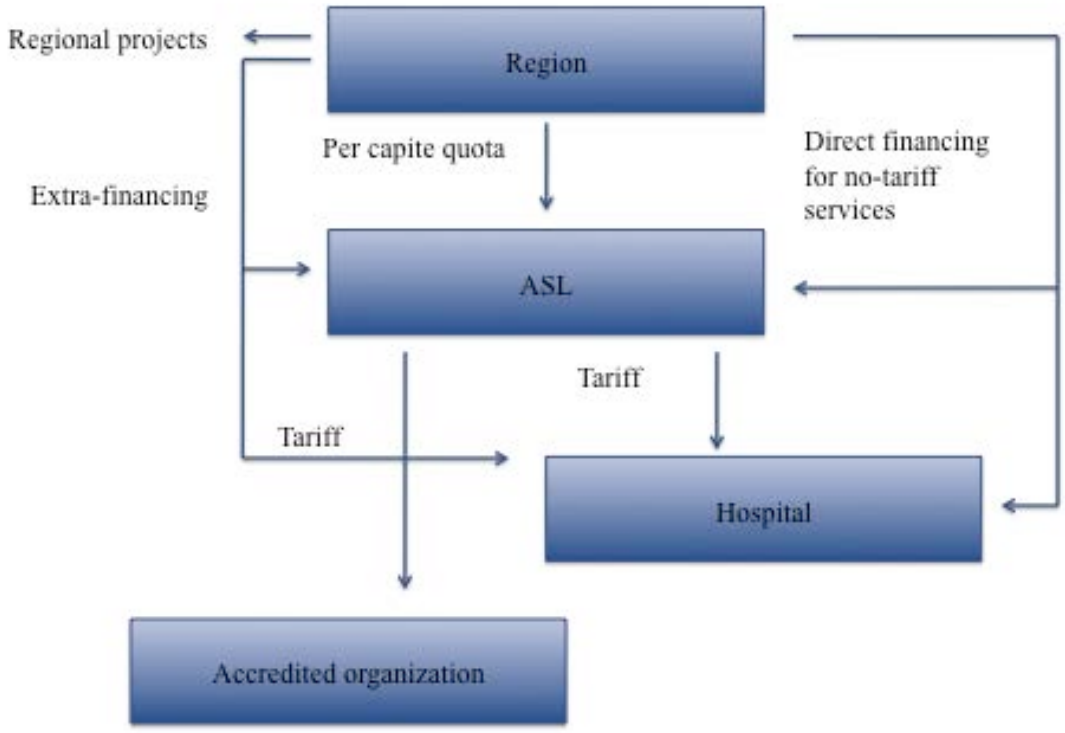


Figure 5

4.6 *Regionalization*

Leg. June 19, 1999 n. 229, Legislative Decree 56/2000 and the reform of Title V of the Constitution began the process leading to the adoption of Fiscal Federalism where the decision power belongs to the Regions. The results achieved from these reforms have been successful, as in the period 1990-2003, public health spending increased by 23% compared with an increase of the Gross Domestic Product (GDP) by 20%.
The devolution of the Regions and uniformity of the territorial public service provision, led to the formal definition of "Essential Levels of Care" (LEA), a new health policy. In fact, the Prime Minister's Decree 29/11/01 26 provided the definition of the levels of assistance that are performance and essential services for the protection, healthcare and recovery.

The healthcare system is organized according to different levels of responsibility and government (according to the principle of subsidiarity):

- State is responsible for ensuring to all citizens the right to Healthcare, through fundamental principles of the system;
- Regions have responsibility for implementing the government and the healthcare costs for the achievement of the healthcare services for all citizens, having exclusive power in the regulation and organization of services and activities intended for the healthcare and the criteria of financing of the Local Health Care Authorities and hospitals.

The Italian public health service is, therefore, based on the division of powers between the State, which has the responsibility to establish essential health services that all Regions have to offer to the citizens, wherever they live, and the Regions, which have responsibilities about the organization and management of the healthcare services.

4.7 *Regional models of financing*

Financial systems adopted by the single regions determined the application of different models of financial resources from Regions to Health Authorities.

- *Centrality of Local Health Authority model;*

The local Authority has a double function to supply and acquire tariffs for the citizens. It is financed per capite from the Region. The control over the spending is made through financial ceilings or through agreements between Authorities. (Fig. 6)

Figure 6

- *Separation model*

Financial system ‘’per tariff’’ is attributed entirely to Hospitals and Accredited Organizations. So the Local Health Authority receives fund per capite by the Region and finances ‘’per tariff’’ all the services received by the citizens. (Fig. 7)

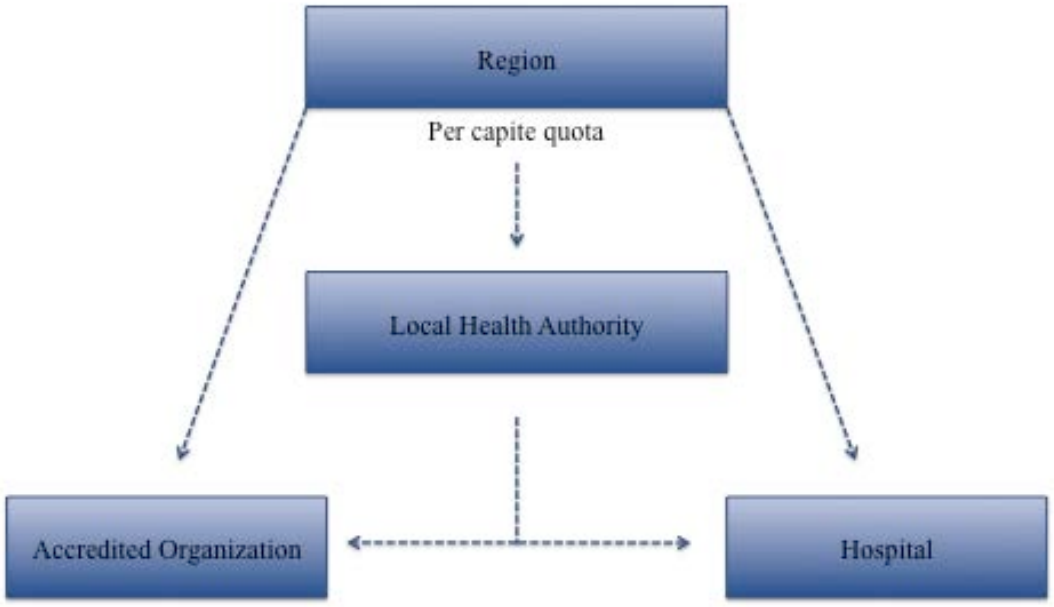


Figure 7

- *Regional centrality model*

Region has a strong control in the allocation of the resources and it does not give way to financial relations between Healthcare authorities. Hospital and Accredited Organizations are financed through tariff (per performance). Local Health Authority is financed through per capite quota or tariff. Financial ceiling is activated by the Region. (Fig. 8)

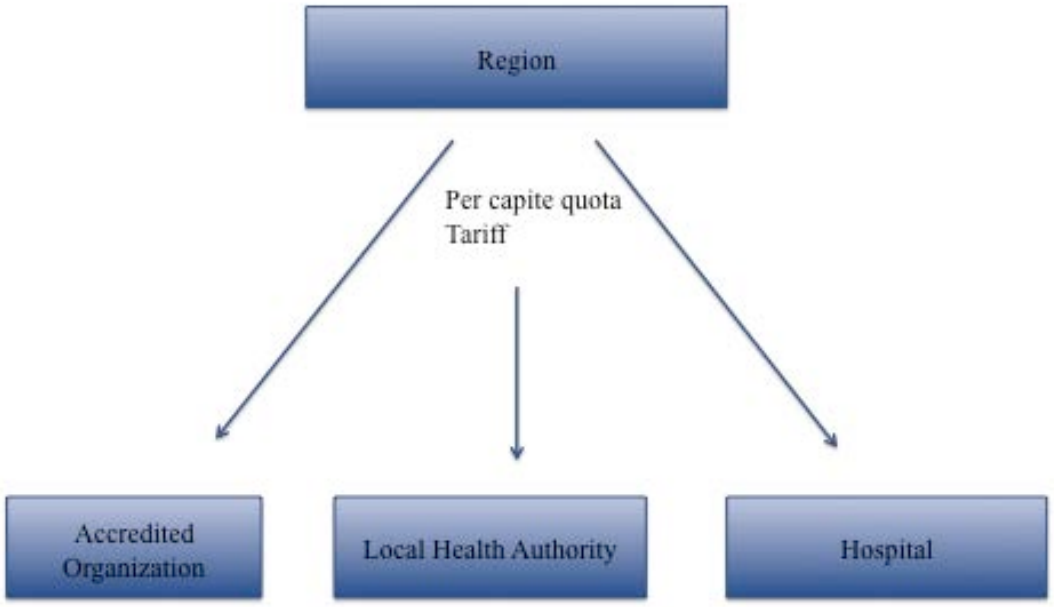


Figure 8

- *Traditional model*

This model concerns those Regions, which still have ‘’old style’’ financial model, that is, historical expenditure as base and the control occurs through the financial ceilings over factors of production. (Fig. 9)

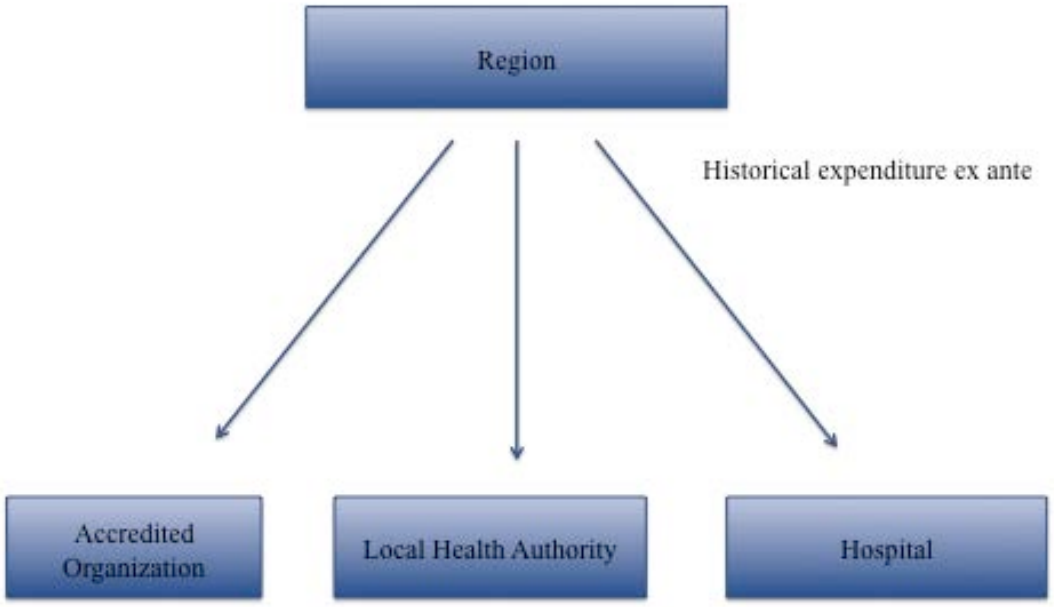


Figura 9

From the analysis of the regional resolutions have arisen various applications of models with respect of the needs of any Region. Today, only 3 regions have adopted decentralized models through the creation of the agreements between health authorities and other providers, public and private. So, 3 regions limit their intervention to the definition of the budget.

In some Regions, financial ceilings are applied only in case of Private Accredited Organizations. In others, same policies are applied both to private and public organizations.

New organizational plan, given by the Reform, trigged a process of empowerment at every institutional level – Regions, Hospitals, Health Authorities etc.). If this project is accomplished, we will achieve significant results, increasing the supply to the care needs of the population.

– – – – – – Agreements

——— Financial Ceiling

5. THE HEALTHCARE SITUATION IN THE WORLD

5.1 *The European Healthcare*

The EHCI has become an "industry standard" of modern healthcare since the start in 2005. The 2012 edition ranks 34 national European healthcare systems on 42 indicators, covering five areas that are key to the health consumer: Patients' rights and information, Accessibility of treatment (waiting times), Medical outcomes, Range and reach of services provided and Pharmaceuticals. The Index is compiled from a combination of public statistics, patient polls and independent research conducted by HCP.
As we can see from the figure, highly developed healthcare systems are in northwestern Europe (the Netherlands, Belgium, the Nordic countries). Germany, Austria, Italy and Spain are in the category of well-established countries, indicating problems to keep up speed with the new challenges. This data shows that European healthcare is far from equal. This goes for basic services, such as infant vaccination or mammography, as well as for heart surgery or access to new cancer pharmaceuticals. Moreover, according to EHCI 2012, there are tendencies of longer waiting times for elective (expensive) surgery among countries most affected by the economic downturn, somewhat increased share of private (not affordable) payment for healthcare services and lack of improvement and even deterioration of access to new pharmaceuticals.

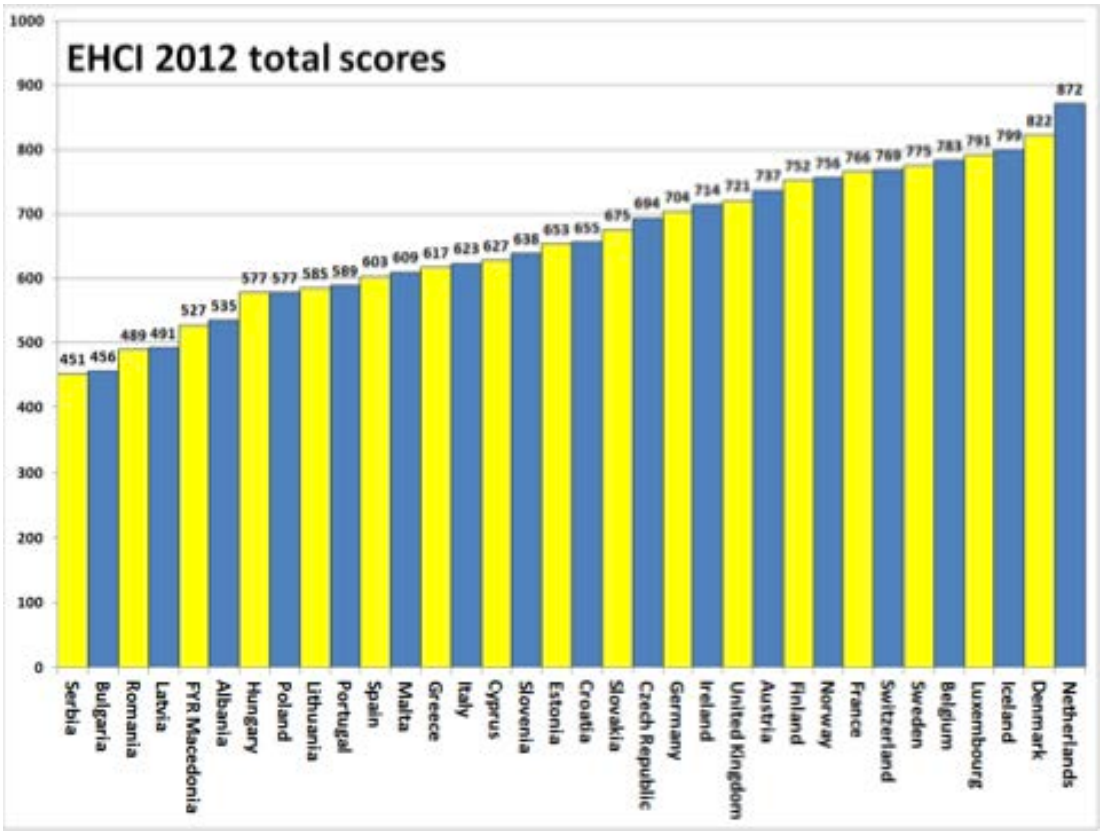


Figure 10

Arne Björnberg, HCP COO and managing director of the team EHCI, states: “Italy is not in step with the progress made by many other states. In Italy, doctors are put on a pedestal, often ignoring patients' rights, transparency and attention to the user. It should be emphasized that Italy is weak in most sectors: waiting, e-health and access to medicines. Italian government should give priority to the healthcare. Italy needs a real turning point to avoid further downgrades in the future.”

According to Euro Health Consumer Index, Austria, Germany, Hungary and Italy should be placed on the list of observation. The negative result of the healthcare sector is alarming and should worry Brussels, especially in the light of European ambition to reduce the gap between the various states.

The Dutch system is rated as the best on European level. It is characterized by:

-Universal insurance, financed through general taxation;

-The obligation of all to enroll in health insurance that includes: support of the general practitioner; hospital admissions and specialized services; dental care (up to 18 years old); pharmaceutical care; health centers; transport by ambulance; nursing care.

- The insured individual can choose between direct assistance or indirect assistance;
- If the individual does not consume health services during the year, he receives a refund of € 255;
- Insurance companies are competing on market and not on price, (established by law), and on the quality of services and the timeliness of the response;
- The performance of insurance companies is evaluated annually by the CQI (Consumer Quality Index), which assesses the quality of care from the perspective of the patient-consumer, collecting their experiences.The results are published on the Health Portal on the initiative of the Dutch Ministry and have a dual purpose: to allow users to be able to compare the various insurance companies and stimulate the various companies to improve their services.

Government does not manage the healthcare system. Private organizations do so; the Government is in charge to guarantee the accessibility and the quality of healthcare. Their excellent performance of healthcare structure were commented by Björnberg in the following way: "The Index shows that the Dutch have found a successful approach that combines competition in grants and preparation of personnel within of a regulated structure. There are also information tools that support the free choice of patients in treatment. In addition, politicians have been removed from its operational decisions in giving care and medical services."

For what concerns United Kingdom, the Index placed it 12th out of 34 countries, advancing from rank 14 in the last measurement (2009). The English healthcare system is characterized by free and universal access to benefits, funding from general taxation and 96% of hospitals are public. It is among the best access in Europe to healthcare information and use of e-Health services such as e-prescriptions and electronic health records.

5.2 The Healthcare in South Africa

Healthcare in South Africa varies from the most basic primary healthcare, offered free by the state, to highly specialized, hi-tech health services available in the both the public and private sector. While the state contributes about 40% of all expenditure on health,

the public health sector is under pressure to deliver services to about 80% of the population.

This two-tiered system is not only inequitable and inaccessible to a large portion of South Africans, but institutions in the public sector have suffered poor management, underfunding and deteriorating infrastructure. While access has improved, the quality of healthcare has fallen.

However, the South African government is responding with a far-reaching reform plan to revitalize and restructure the South African healthcare system, including:

- Fast-tracking the implementation of a National Health Insurance scheme, which will eventually cover all South Africans.
- Strengthening the fight against HIV and TB, non-communicable diseases, as well as injury and violence.
- Improving human-resource management at state hospitals and strengthening co-ordination between the public and private health sector.
- Deploying "health teams" to communities and schools.
- Regulating costs to make healthcare affordable to all.
- Increasing life expectancy from 56.5 years in 2009 to 58.5 years in 2014.

According to the National Treasury's Fiscal Review for 2011, the GDP spend on health was split as follows:

- R120.8-billion (48.5%) in the private sector, which covers 16.2% of the population or 8.2-million people, many of which have medical cover.
- R122.4-billion (49.2%) in the public sector, which is made up of 84% of the population, or 42-million people, who generally rely on the public healthcare sector.
- The remaining R5.3-billion (2.3%) is donor and NGO spend. (From ‘’South Africa country portal’’, 2012)

5.3 Global expenditure

In 2009, the world spent a total of US$ 5.97 trillion on health at exchange rates or I$ 6.6 trillion (International dollars taking into account the purchasing power of different

national currencies). The geographical distribution of financial resources for health is uneven. There is a 20/80 syndrome in which 34 OECD countries make up less than 20% of the world's population but spend over 80% of the world's resources on health.

Total global expenditure for health	US$ 6.5 trillion
Total global expenditure for health per person per year	US$ 948
Country with highest total spending per person per year on health	United States (US$ 8362)
Country with lowest total spending per person per year on health	Eritrea (US$ 12)
Country with highest government spending per person per year on health	Luxembourg (US$ 6906)
Country with lowest government spending per person per year on health	Myanmar (US$ 2)
Country with highest annual out-of-pocket household spending on health	Switzerland (US$ 2412)
Country with lowest annual out-of-pocket household spending on health	Kiribati (US$ 0.2)
Average amount spent per person per year on health in countries belonging to the Organisation for Economic Co-operation and Development (OECD)	US$ 4380
Percentage of the world's population living in OECD countries	18 %
Percentage of the world's total financial resources devoted to health currently spent in OECD countries	84 %
WHO estimate of minimum spending per person per year needed to provide basic, life-saving services	US$ 44
Number of WHO Member States where health spending — including spending by government, households and the private sector and funds provided by external donors — is lower than US$50 per person per year	34 Member States
Number of WHO Member States where health spending is lower than US$20 per person per year	7 Member States
Percentage of funds spent on health in WHO's Africa Region that has been provided by donors	11 %

Figure 11

Source of data: Global Health Expenditure Database (GHED)

From the analysis of Global Health Expenditure Database, we deduce that richer countries with smaller populations have higher health expenditure than poorer countries with larger populations. This highlights the absolute need for additional resources for many poor countries and raises questions of efficiency in health spending in richer countries.

It is interesting to understand why USA has so high health spending. The reasons may be that the costs of healthcare are higher than in other countries and so are the quantity of services provided.

In fact, a 2010 OECD study (Koechlin et al., 2010) found the USA price level of hospital services to be over 60% higher than the average of 12 other OECD countries in 2007. Pharmaceutical prices are also higher in the United States than in other OECD countries. A recent study of the 50 top-selling prescription drugs found that US pharmaceutical prices were at least 60% higher than those in five large European countries in 2007.

Therefore the question remains the same: Does some reach countries provide too much healthcare?

Is high health expenditure leading to a high efficiency? It is very difficult to say whether a certain country does too much or too little. OECD Health Data 2011 shows that USA and other reach countries do more of some activities, but less of others. So, it seems that high expenditure is not synonymous with high efficiency and welfare.

6. CONCLUSION

The analysis of the data (available at OCSD) at the international level, shows the evidence of a lower cost and greater effectiveness of National Health Services. NHS provides for the countries a better result with regard to equity, solidarity, efficacy, safety and macro-efficiency. Countries with little public involvement in healthcare typically face sharp and unplanned increases in expenditures (Nicholas Barr).

Integration of the territory and the hospital with the creation of a single authority, means that the goals of those who work in the hospital, are aligned with those of the optimization of the healthcare services of the citizens. If hospitals were to be paid according to the DRG, their goals would cease to be aligned with the healthcare and their interest would be to find diseases rewarded with the most convenient rates (Alberto Donzelli, Comparison of Health Systems).

It is believed that a greater attention to the needs of the consumers can be activated via a competition between public systems, empowering them towards the citizens.

In fact, it was discovered that the great problem of any kind of healthcare system is insufficient satisfaction of the clients. As a result, it would be appropriate to enable internal tools in a public organization, such as incentives for results and not for performance, training of stuff for quality development, social marketing, information and educational strategies, to give more power to the consumer.

In fact, imperfect information, unequal power of consumers and technical difficulties cause serious problems on the demand side (especially for the private market); while, non-competitive behavior may cause problems on the supply side.

In the public sector, on the demand side the consumer ignorance is eliminated by decisions about treatment made by doctors; moreover, if the treatment is largely free, the influence of income on consumption is eliminated. On the supply side, as said before, there is not a fee for service rule, so the oversupply is eliminated.

Already explained, cream-skimming and asymmetric information with the following moral hazard and adverse selection have a great influence on the private system and generate problems that make operations worse.

For the public sector, we may highlight the problem of moral hazard, since the health coverage is universal, and the system is accessible to all, without restriction. This generates the opportunistic behavior, which increases health spending and force to make

cuts in state budgets. The cuts involve reductions in the services provided by the health system.

The evolution of the concept of need, the awareness that healthcare is a fundamental human right and needs to be more protected than any other good, the increasingly stringent health conditions, the recognition of the principle that healthcare is a right of all, brought all systems to approach the idea of centrality of the patient. This is shown especially in the case of the United States and the Netherlands, where despite strong private component, healthcare has been made compulsory.

The public sector, which shows all the characteristics of a solid and fair apparatus, often does not put these principles into practice. It is important to exercise powers responsibly, carrying out the duties, to make the centrality of patient be realized within an economically sustainable and universal healthcare system.

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