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The Relation Between Public Expenditure and Performance in the Italian Healthcare Sector.

Relatore: **Tesi di Laurea di:**

Prof. Alessandro Spano **Enrica Cinus**

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Index

Introduction.

The health care sector is a constitutionally guaranteed system in Italy and it is considered one of the most important sector in Europe and in the rest of the world for three indicators: improvement of the health state of citizens, answering to the expectations of health and health care of citizens and health insurance for the population[1]. In fact, all governments have the responsibility to guarantee the health and wellness to the entire society.

However, the increase of the life expectation and the consequent ageing of the population rise questions on the adjustment on the quality of health services that results low in many countries.

The sustainability of the health care sector is a very important concept not only on the financial basis, because an increased resource availability doesn't allow to solve five of the most important problems documented in industrialized countries[2]:

- The variability on the utilization of services and health performance, that is not justified from the clinic heterogeneity and from patient's preferences;
- Adverse effects from the excess of medicalization, such as over diagnosis and overtreatment;
- Inequalities deriving from the under-utilization of high-value health services;
- The inability to effort effective prevention strategies;
- The wastes, that nest to all levels.

However, if it is certain that Italy is facing an unprecedented cut in public funding in the healthcare sector, in any industrialized country there is no evidence that showing a direct relationship between the entity investments in health and improvement of people's health outcomes[3].

The Health Pact 2014-2016, that included various relevant measures for the reorganization of the HCS and the requalification of the health expenditure, has remained largely unworked for different reasons (such as institutional conflicts

[1] OMS, World Health Statistics, 2015.
[2] Gimbe, Evidence for Health- Secondo rapporto sulla sostenibilità del Servizio Sanitario Nazionale, pag.3.
[3] Hussey PS, Wertheimer S, Mehrotra A. The association between health care quality and cost: a systematic review. Ann Intern Med 2013;158:27-34.

between State and Regions after the Stability Law 2015 and for the fact that the assigned resources, around Eur 6,79 billion, was insufficient to act all expected measures).

The Health care sector will be required to find an equilibrium between the necessity to safeguard the quality of the public offer- reabsorbing the relevant differences at the national level- and to ensure its contribution to a process of financial repair, in order to have an efficiency recovery.

The goal of this work is focus the attention on the analysis of the public health spending in Italy and, in particular, in some relevant regions which have had important changes over the years about financial and performance indicators. These indicators and their fluctuations in the years represent the principal tool to analyze the correlation between health spending and performance and to give answer to specific questions:

- Is there a relation between health spending and the level of performance at regional level?
- The level of outcome in the public health sector improves or worsens in relation to the increase or decrease of the public health spending in each region?
- Are there other factors that influences the level of health care performance?

To give answers to these questions, the trend of the regions chosen for our analysis has been analyzed, first from a financial point of view and then from a performance point of view, seeing the course of both indicators for each region and trying to make some consideration about their relation.

CAP. 1 THE NATIONAL HEALTHCARE FINANCIAL SYSTEM.

1.1 Definition of the public health spending.

The health care public spending is indeed the most important item in the budget of the regions, accounting for around 9% of GDP in Italy, and it depends in large part on the territorial accountability and administration; the problem of financing of the health care system is tied to containment requirements. The definition of public health expenditure used for the forecasts corresponds to the National Accounts "Current Public Health Expenditure" of the Income Statement consolidated health care system prepared by Istat.

This aggregate includes both spending healthcare in the strict sense that an estimate of investment amortization public in the health field carried out over time. From the point of view of the providers, public health expenditure corresponds, basically, to the health benefits provided by the Local Health Professionals (ASL), from Hospitals (AO), Institutes of Hospitality and University Polyclinics. To these there are other expense components delivered by minor entities, such as the Italian Red Cross, or other entities that deliver, marginally, benefits that can have a health content (like Regions and provinces). The OECD adopts a slightly different public health expenditure definition, aimed to providing an estimate of the amount of healthcare costs actually incurred in the year, directed at consumer spending or at investment costs. In particular, the aggregate is defined on the basis of the expenditure components determined on the basis of the System of Health Accounting System (SHA). The health financing system has endured important changes over time due to relevant distortion that caused the necessity to solve problems related to it. In fact, it was originally heavily centered inspired by a universal and egalitarian view of health protection but already since the 1990s, there was a reorganization of the system since healthcare financing was quantified on the basis of the historical needs of the regions and not of the real needs, with the inevitable consequence of a poor responsibility of local administrators. With the Legislative Decree 56/2000 it has identified new sources of decentralized funding for healthcare, leaving the centralized model of transfers from the State, giving a most relevant role in the resource management to regions. This path has been strengthened by the statutory delegation of fiscal

federalism and the related implementing decrees which aim to empower all institutional actors in the exercise of spending power, both with respect to budgetary constraints and on the continuous monitoring of benefits provided.

Nowadays a State Law annually determine the total level of National Health Service resources (healthcare needs) that it is composed by a bound quota to the pursuit of specific objectives and to an "undistorted" quota, whose funding is mainly based on tax capacity regional, even if it is corrected by appropriate perequative measures. The principal financial resources of the Health care sector are both in part revenue from healthcare companies and tax revenues related to the territory of individual regions (Irap, Irpef regional supplement) and partly by the State through the VAT and the National Health Fund for healthcare costs certain goals and to cover the possible lack of tax revenue of IRAP. The Regions transfer financial resources to individual healthcare companies on the basis of benefits rendered in the hospital and in the outpatient clinics, also taking into account passive mobility (i.e. residents researched in facilities of other healthcare companies or regions) and active mobility (if people from outside the company are being treated).

Consequently, healthcare companies have the duty to ensure their performance in accordance with the LEA (Essential Care Levels) that is a fundamental goal of the central government ensuring that the minimum levels of health care are provided across the national territory. Recent reforms of the National Health Service (NHS) financing system in Italy (D.Lgs. 446/97 and D.Lgs. 56/2000) have potentially given more responsibility for health care to Regions, increasing their power over this function. In this scenario, we have to say that not all Regions have the same level of autonomy about financing healthcare spending: there are Regions with special statutes having a major regional autonomy (represented from the erial taxes shares) than those with ordinary statutes that have more specific constrains.

In particular, in Sardinia, the healthcare financing mechanism has undergone major changes to the law of 27 December 2006, no. 296 (Financial Law 2007). Until 2006, the region financed the healthcare system for a statutory amount of 29% of the annual requirement with the Interministerial Committee for Economic Planning resolution, which was to add to the coverage given by IRAP and the Additional IRPEF revenues and ASL's own revenues. The remaining amount (40% of the needs) was funded by the transfer of shares from the National Health Fund.

Today the Region is able to choose autonomously the funding levels of the healthcare system, even outside the determination of the needs of the state.

Modality of financing in HCS:

The State law determines the health needs annually that is the total level of resources of the National Healthcare Service (NHS) to which the state contributes to financing[4].

The undifferentiated components of financial resources that cover Health needs are the following:

- Self-produced revenues of National Health Service organizations (fees for medical visit and revenues deriving from the activity of their employees), in a defined amount resulting from an agreement between the State and the Regions;
- General taxation of the regions:
    - regional tax on productive activities (in the measure destined for healthcare service);
    - regional tax on income of natural persons (both determined by the application of the national base rates).
- Co-participation of the Regions with Special Statutes and the Autonomous Provinces of Trento and Bolzano: these entities contribute to health care funding when the other sources described above don't cover all health needs. Sicily Region is in a different situation and the share of joint participation is set from 2009 to 49.11% of its healthcare needs[5].
- State budget: it finances the health needs not covered by other sources of funding through the Value Added Tax (for ordinary statutory regions), excise on fuel and the National Healthcare Fund (from which a share is used for Sicilian region while the remaining part covers other healthcare costs tied to certain objectives).

[4] Ministero della Salute, 13 March 2017
[5] Law 296/2006 art. 1, paragraph 830

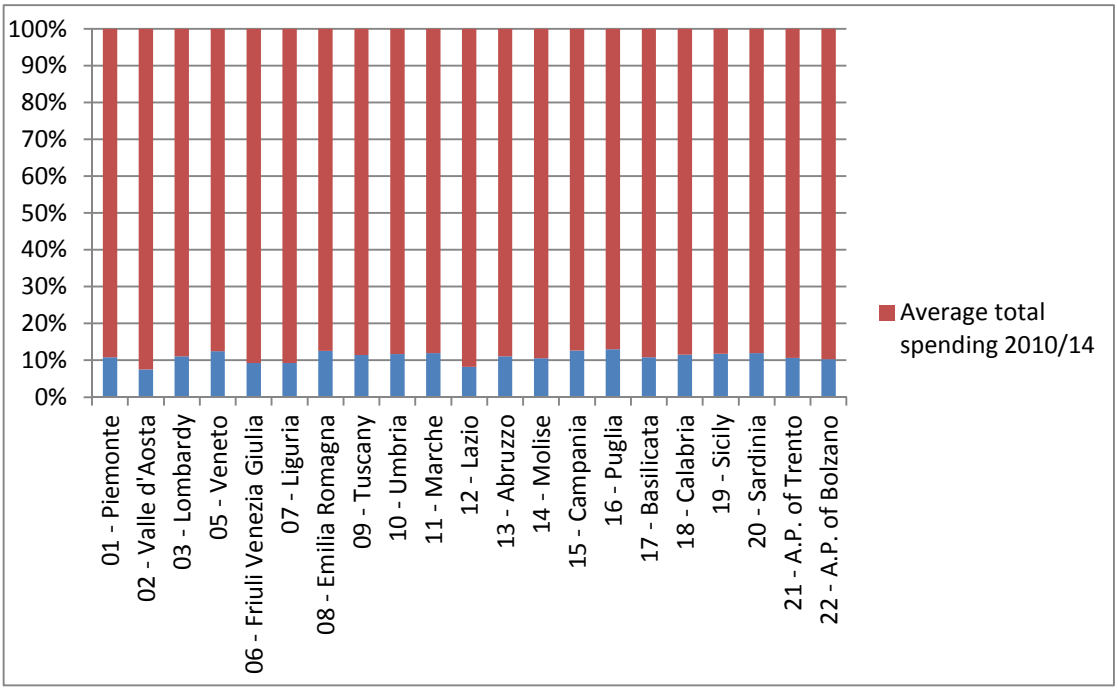
There is also a "bound" quota to the pursuit of certain health objectives. Over the years the mechanism for accessing the financing of the national priority objectives, foreseen by art. 1 paragraph 34 bis of Legislative Decree 662/96, has remained the same in its essential structure. From the year 2009 due to the modification made on art. 1 co. 34bis from art. 79, co. 1c of the Law Decree of 25 June 2008 No.112, added by its Law of Conversion August 6, 2008 n. 133 establishes a new path for assigning bonded resources to Regions: the Ministry of the Economy and Finance will provide 70% of the annual total amount for each region, while the remaining 30% is subject to approval by the Permanent Conference for the relations between the state, regions and autonomous provinces of Trento and Bolzano, on the proposal of the Minister of Health, of projects submitted by the regions. If there isn't the presentation or the approve of projects in the reference year, it will involve the non-delivery of the 30% quota and the recovery of the anticipated 70% quota. Resources are given to companies on the basis of the benefits provided in hospitals and in outpatient clinics, also taking into account passive mobility (i.e. residents take care of themselves in other healthcare companies or regions) and active mobility (if people from outside the company receive cure in a structure or regions where they don't reside). At this point it should be shown that some regions having special statutes have pursued the objective of greater regional autonomy in financing health spending, following a different way than regions with ordinary statutes. In particular, in Sardinia, the healthcare financing mechanism underwent major changes to the law of 27 December 2006, no. 296 (Financial Law 2007). Until 2006 the healthcare system was financed by Sardinia Region (for an amount equal to 29% of the regional needs) and from IRAP and the IRPEF additions and own revenues of ASLs. The remaining amount was financing by National health fund. From 2010, after a transitory regime period, the region became completely independent form a financial point of view, so without depend from the State budget. In this way, the region can autonomously choose the funding levels of the healthcare system, even outside the determination of the needs of the State.

Even with the law n. 296/2006 (financial law year 2007) we can observe that the expenditure in health care sector is in the hands of the Sicily budget that has

determined the share of the competence of the region at 45% for 2007, 47.5% for 2008 and 50% for the year 2009[6].

1.3 The Public Healthcare Spending in Italian regions.

Figure 1: The Public Healthcare expenditure on the total spending (2010-2014).



Data Source: Regional Public Account Database.

The weight of health expenditure on total expenditure is almost the same for all Italian regions, reaching an average percentage of 10% in the period 2010-14. Until the year 2007, the health expenditure has grown at sustained rates due to the dynamics of the principal cost factors: staff, goods and services, private performances. In the subsequent years the rate of growth of the health spending has reduced progressively, decreasing from 5,8% in the years 2003-2006 to 2,8% in the years 2007-2010 till a perfect stability in the years 2011-20147. In the period 2012-2016, public health expenditure increased on average by 0.9% annually, recording a positive dynamic, after a 0.6% decline in 2013, partly influenced by increased spending on innovative medicines. After the decrease in 2013, there was an increase

[6] Art. 1, paraghraph 830
[7] Data of consuntive models 2008-2014 (NSIS) rielaboration by Agenas

on the spending by 1.7% in 2014 and by 1.3% in 20158. In 2016 public health expenditure accounts for 6.7% of GDP and for 75% of overall health spending.

Healthcare expenditure incurred by voluntary funding schemes for 2012-2016 increased by an average of 1.8%, but in 2016 it decreased by 0.4%. In 2015 its share of total health care expenditure was 2.3% and that of GDP by 0.2%. Direct household spending recorded an average annual growth of 2.0% over the period, with a 0.2% decrease in 2013 and 3.5% and 4.5% in 2014 and 2015 respectively. In 2016 increased by 0.4%, accounting for 2.0% of GDP and 22.7% of total health expenditure9. Between 2012 and 2016 spending on health care and rehabilitation increased in annual average of 0.3%. In particular, the one supported by the public sector declined 0.3%, due to a 1% drop in the hospital care component. Ordinary regime partially offset by the 1.3% increase in outpatient care. This Dynamics is explained by the progressive decline in hospitality and the tendency to transfer services that require low-intensity medical care for ambulatory health services. The direct expenditure of families for health care and rehabilitation has increased in an annual average of 3.7%, up 4.4% for the outpatient component. On this seem to have affected the widening of public waiting lists and rising levels (which approaches public and private sector tariffs). Long-term public funding has increased by 0.5% annual average for the period 2012-2016, with a 0.6% increase in the hospital component and of 1.2% of home care. Direct family care for LTC assistance also has Significant growth was recorded (+ 2.1% on average annually), mainly influenced by the increases in hospital care (+ 1.8%) and in outpatient care (+ 4.5%). In the period 2012-2016, health care expenditure for auxiliary services declined on an annual average of 0.2%.

Expenditures for health care and rehabilitation in 2016 amounted to 82.032 million euro, accounting for 54.9% of total health expenditure. This expense has increased with respect by 2015 by 0.6%, up 1.2% and for ordinary hospital care for cure and rehabilitation, both for day-hospital care. The second expenditure item for health care assistance is for pharmaceuticals and other therapeutic appliances (31,106 million euros in 2016); such spending has increased 1.5% over the previous year, affecting

[8] OECD, Eurostat, WHO (2017). Manual A System of Health Accounts (SHA, revised edition), Paris, OECD

[9] OECD, Eurostat, WHO (2017). Expenditure on Prevention Activities under SHA 2011: Supplementary Guidance - March 2017 version, Paris, OECD.

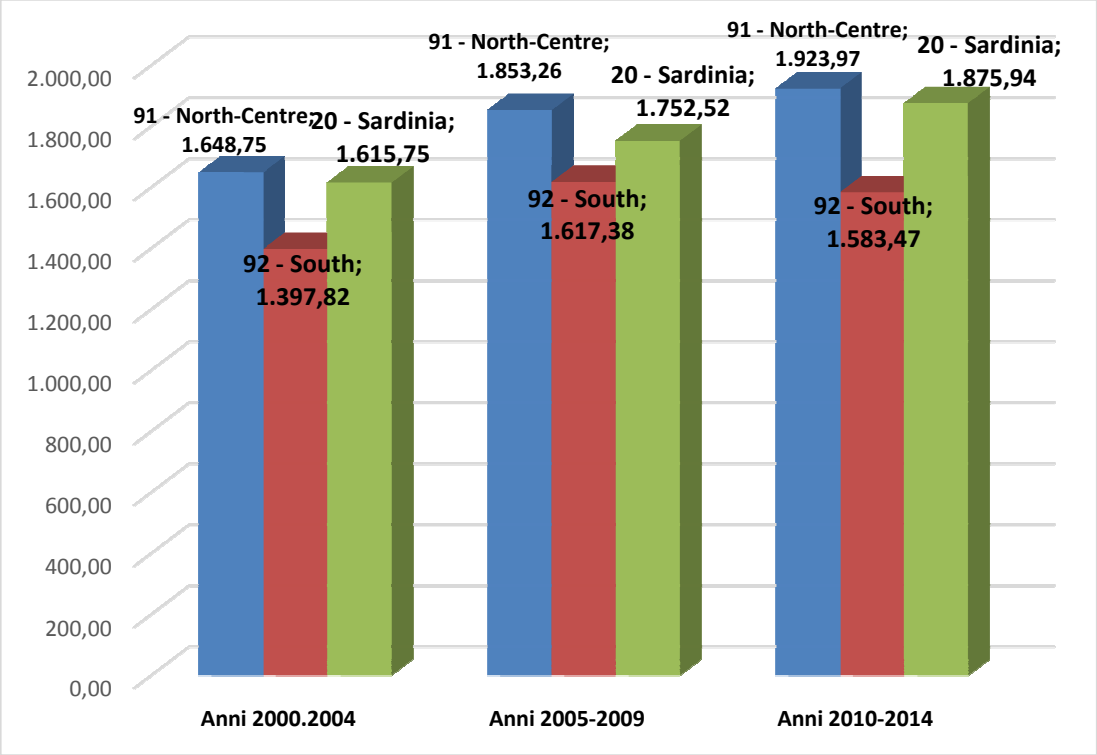
20.8% of total health expenditure. The long-term health care expenditure (LTC) amounts to € 15,067 million in 2016 (+ 0.8% over 2015) and affects 10.1% of total health spending. Auxiliary services, with 12.342 million euros, absorb 8.3% of health spending in the same year[10].

Hospitals represent the main health care providers in the Italian healthcare system, accounting for 45.5% of total current health expenditure. In the period 2012-2016, hospitals recorded an average annual increase in the expenditure of the 0.4%, outpatient health care providers increased by 2.2% and for women pharmacies and other medical prescribers, spending grew by 0.5%. In 2016, expenditure amounted to 68,008 million euros, up by 1.1% over the previous year. Outpatient healthcare providers provide assistance for a budget of € 33,414 million, an increase of 0.1% over 2015[11], representing 22.4% of health spending. Pharmacies and other medical care providers recorded expenditure of € 25,001 million (+ 1.6% compared to 2015) and an impact on total expenditure of 16.7%.

[10] OECD, Eurostat, WHO (2017). Manual A System of Health Accounts (SHA, revised edition), Paris, OECD

[11] OECD, Eurostat, WHO (2017). Expenditure on Prevention Activities under SHA 2011: Supplementary Guidance - March 2017 version, Paris, OECD.

Figure 2: Regional Trend of the Healthcare expenditure.



Data Source: Regional Public Account database.

Despite this, the most recent data highlight a different trend in the spending, that in the year 2014 is grown by 0,89% respect to the year 2013. The average spending in the years 2010-2014 increased by 7% in the period 2005-2009 to Sardinia and 4% in the north, while the value of the South is reduced by 2%. This situation is mainly due to the concentration in the Mezzogiorno of regions subject to recovery plans, starting from 2007 and 2010. As mentioned above, although within the overall regionalization of health expenditure, the state maintains strong intervention in the regions with ordinary status, which is manifested by the introduction of so-called recovery plans.

1.3.1 Per capita healthcare expenditure

Per capita public expenditure is the amount of monetary resources used on average for each individual in a given region, and consequently across the nation, to address the provision of healthcare for a reference period. OECD places Italy among the countries that spend less than 32 of the area in terms of per capita income. In 2014 year, Norway has spent more than 111% for every citizen compared to Italy, 70% for

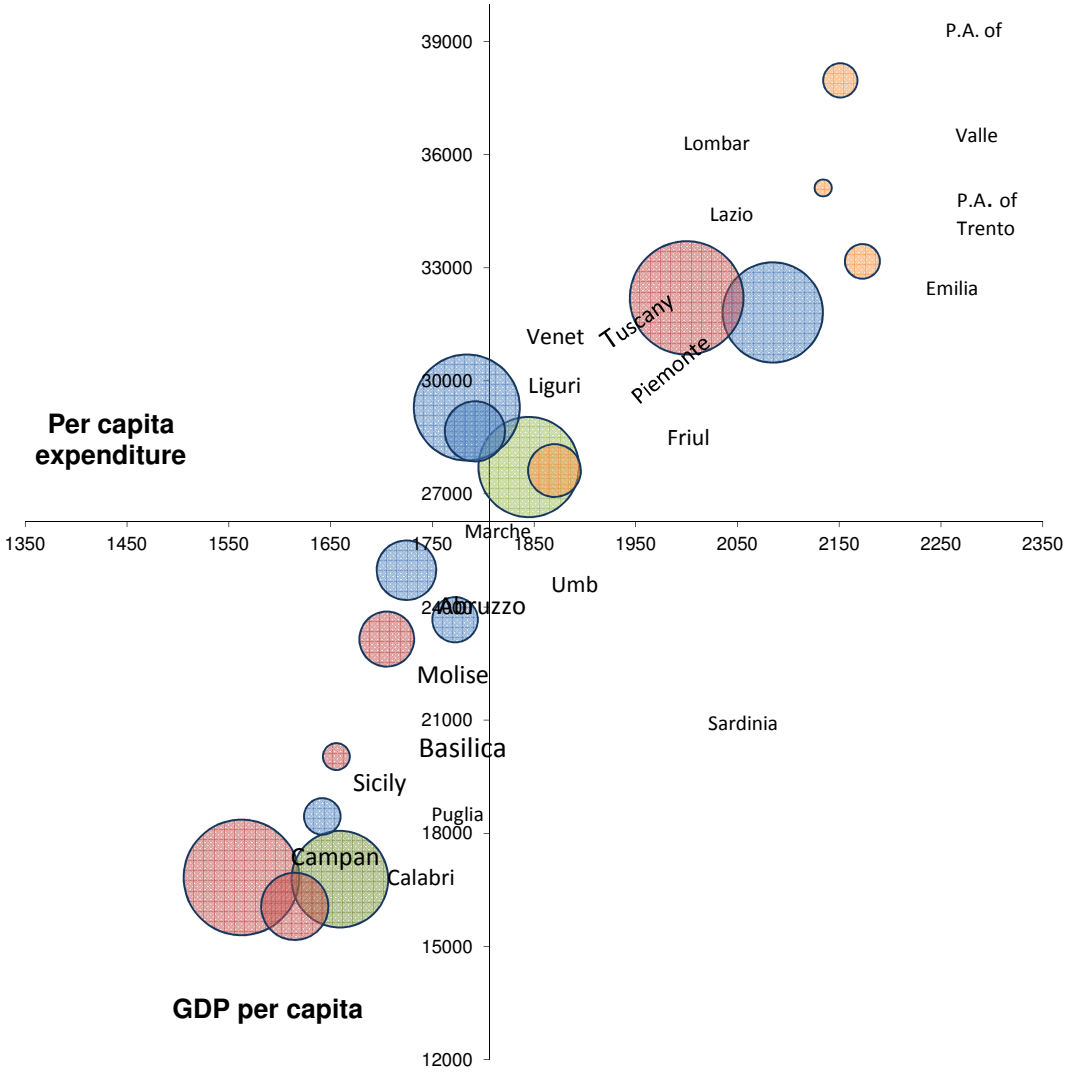
the United States, 49% for Germany, France and Sweden about 35%, and finally United Kingdom with 11% more[12].

Our health spending per capita, compared with other countries, with a health system similar to ours or with different connotations, seems to be placed on very low values.

The public spending / GDP ratio was 7% in the year 2012, despite the contraction of the denominator. With regard to the deficit (€ 1.043 billion in 2012, € 18 per capita) we can see the trend of systematic reduction started after the peak (€ 5.790 billion) reached in 2004, even in the presence of restrained rate of revenues increase. Reasons should be sought according to the ratio "in revenue growth rates over the previous year, which since 2005 has been steadily reduced (from 7.5% in 2005 to about 1% in 2012, with two marginal exceptions in 2007 and 2011), but equally consistently exceeded the corresponding increase in costs, which, in fact, were negative both in 2011 and in 2011.

[12] Rapporto Osservasalute nelle regioni italiane Stato di salute e qualità dell'assistenza 2016: , pag. 337.

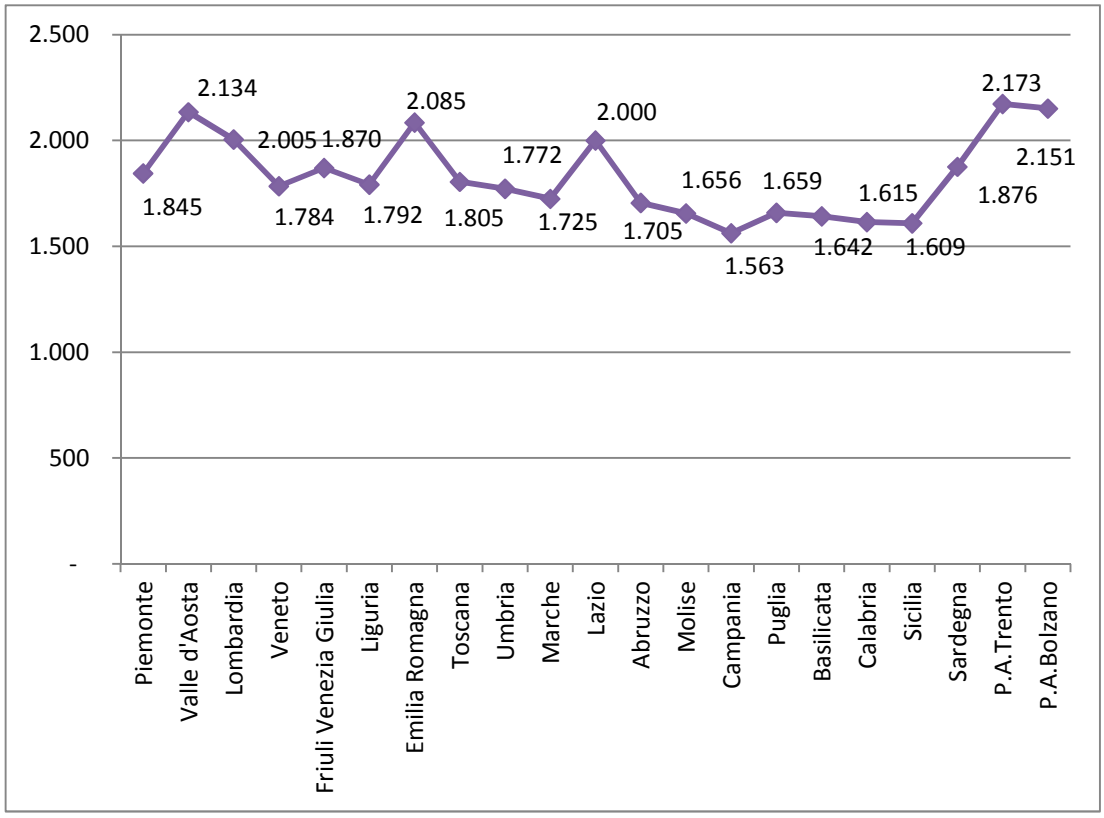
Figure 3: Relation between per capita expenditure and GDP of each region.



Data Source: Regional Public Accounts database.

The change in per capita spending in the period 2010-2014 was negative for all Italian regions except for Emilia-Romagna and in some regions with special statutes (P.A. of Trento and Bolzano, Friuli Venezia Giulia and Sardinia).

Figure 4: Healthcare per capita spending 2010-2014.



Data Source: Regional Public Accounts database.

In almost all central- southern regions (except for Abruzzo, Basilicata and Sardinia) and in some central-northern regions (Piedmont, Liguria and Tuscany) there has been a reduction in expenditure higher than the average. In 2012, on the other hand, the central-northern regions already had a positive result, with only the exceptions of Liguria and Tuscany; the Central-Southern regions were all in deficit, with the exception of Abruzzo and Puglia and with particularly critical situations in Lazio, Molise and Sardinia. But there are exceptions. Starting from Lazio, where in 2013, 36.2% of the total national deficit was concentrated.

The so-called recovery plans, are not the only factors which have contributed to the decline of our healthcare spending; the other factors are:

- The introduction of ceiling of spending with supplier responsibility mechanism;

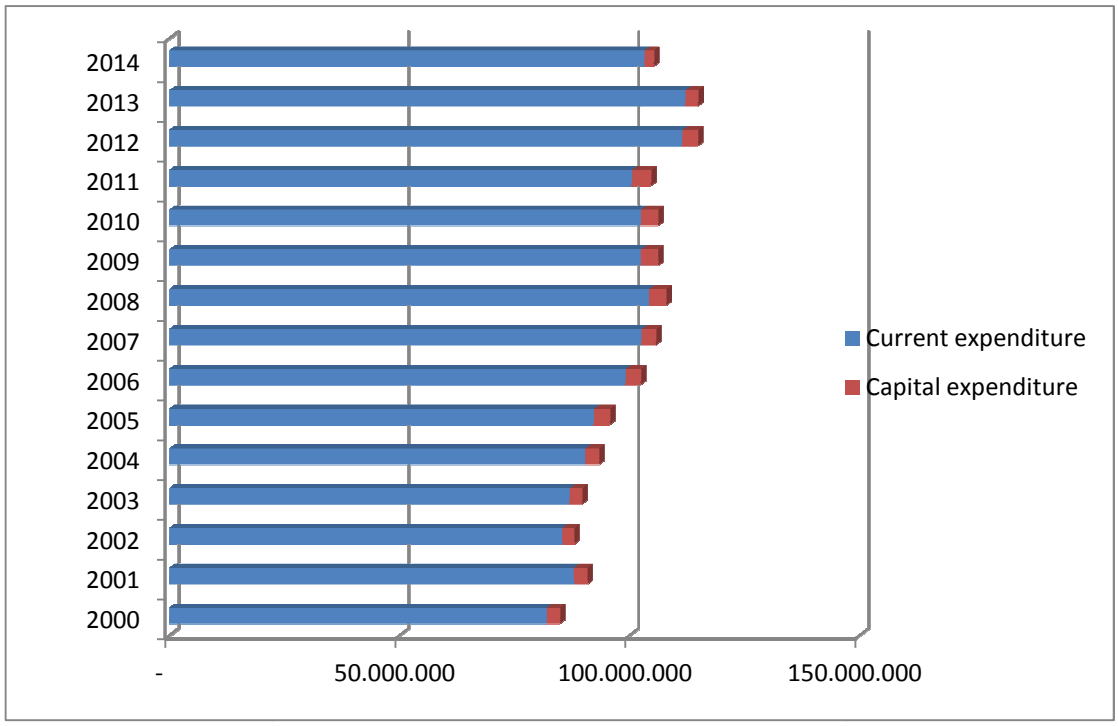
- The renegotiation of supply conditions;
- The individuation of reference prices to which bind purchases;
- The centralization of selection procedures of customers through the use of regional or national centers[13].

1.3.2. The main components of the national healthcare expenditure.

Hospitals represent the main health care providers in the Italian healthcare system, accounting for 45.5% of total current health expenditure[14]

In the analysis of the healthcare expenditure structure, thanks to the articulation for macro essential level of assistance, we find that current expenditures have the highest impact on the total healthcare expenditure (85% to 90%) and capital expenditure accounts for 3% only and tends to decrease over time (2% in 2014)[15].

Figure 5: The weight of current and capital expenditure in the healthcare sector.



Data source: Regional Public Accounts database.

[13] IPRES, La spesa sanitaria delle Regioni: un'analisi territoriale, Nota tecnica n.34-2016, p.4.
[14] http://ec.europa.eu/eurostat/web/health/health-care/data/database

[15] Performance and Expenditure in Public Healthcare Organizations, papers presented to the AIDEA national conference, Rome 14-15 September, 2017.

Between 2012 and 2016 expenditure on health care and rehabilitation increased by 0.3% on average annually. In particular, the one supported by public sector declined by 0.3%, due to a 1% drop in the part of the hospital care function in the ordinary course, partly offset by the 1.3% increase in outpatient care.

This dynamic is explained by a gradual decrease in hospital admissions and the tendency to transfer performances requiring low-intensity medical care to ambulatory health services. Between 2012 and 2016 expenditure on pharmaceuticals and other pharmaceutical instruments increased by an average of 2.7%[16]. Specifically, the one financed by the public administration increased by 3.9% and that of households by 1.3%. The largest contributor to the growth of this service comes from the expense of pharmaceuticals and other short medical attendance (+ 4.0).

About costs of Personnel we find that they reduce over time: we see a decline in 2009-2014, with a greater decrease in 2014 compared to 2013. This trend has been affected both by the choices of health care trusts regarding the outsourcing of services, and by national policies such as the revision of equipment, turn-over blocking and recruitment policies, as well as limits in recognizing increase in employees'remuneration and the freezing of collective interim pay guarantee[17].

The direct family expenditure for care and rehabilitation increased on average 3.7% a year, with a 4.4% increase in outpatient care[18] and the increase of waiting lists of public sector seems had an influence on it. In the period 2012-2016, health care expenditure for auxiliary services decreased on average by 0.2%, the expenditures for pharmaceuticals recorded an average increase of 2.7%[19], while from 2013, there has been a reduction in the volume of purchases of goods and services[20].

[16] http://ec.europa.eu/eurostat/statistics-explained/index.php/Healthcare_expenditure_statistics
[17] Performance and Expenditure in Public Healthcare Organizations, papers presented to the AIDEA national conference, Rome 14-15 September, 2017.
[18] Statistiche Report: Il sistema dei conti della sanità per l'Italia (2012-2016), 2017, p.7.
[19] Statistiche Report: Il sistema dei conti della sanità per l'Italia (2012-2016), 2017, p.8.
[20] Performance and Expenditure in Public Healthcare Organizations, papers presented to the AIDEA national conference, Rome 14-15 September, 2017.

1.4 Italian healthcare expenditure in the International context.

The overall healthcare system in Italy is financed by 81% of tax revenue and 19% by private income. Italy's current health spending (2.404 euros per capita) is lower than that of other EU countries: in fact, United Kingdom, France and Germany spend between 3,000 and 4,000 euros per inhabitant, Denmark and Sweden nearly 5,000 euro, Luxembourg exceeds 5,500 euros per inhabitant. Nine countries have an expense less than 1,000 euros per inhabitant and among them Romania has the lowest value (388 euros per inhabitant). We have to take into account the fact that each healthcare system has its own structure and differ from others for many aspects: for example, as Wikipedia defines, the Italian National Health System as a "universalistic" public system, a social state that provides social assistance to all citizens, financed by the State itself through general taxation and direct income, perceived by local health companies through the tickets, that is, the shares with which the assistant contributes to the expenses and the payment services. Thanks to Bloomberg analysis 2013, Italy is placed at 6th place among the most efficient health countries (at the first place there are Hong Kong, followed by Singapore, Japan, Israel and Spain). The USA cover only the forty-sixth position for the bad spending / result ratio). According to a research by the ISTAT in 2014, Italy has recorded mortality rates within the first five years of life among the lowest in the world (3.3 per thousand births). Italy was also promoted by the OECD for the 2013 edition of "Health at a Glance", although a small contraction (-2.4%) of health spending fell between 2012 and 2011. The same trend has occurred in many other European countries due to the crisis and the need to keep accounts in order.

Finally, Italy has been defined as the second long-lived country among OECD countries for the year 2013.[21]

Among the other principal European Nations, the public healthcare system presents advantages and disadvantages: In some countries, such as France and Germany, it is very efficient while in others there are deficiencies. For example, the British National Health Service, the publicly funded health care system of England [22] , incurred in some serious structural problems such as the increasing waiting times for treatments and urgent operations, healthcare coverage and various scandals (there have been

[21] List of The Organization for Economic Cooperation and Development, 2013.
[22] National Health Service from Wikipedia, the free enciclopedy.

several fatal outbreaks of antibiotic resistant bacteria "superbugs" in NHS hospitals, such as *Methicillin-resistant Staphylococcus aureus* (MRSA) *Vancomycin Resistant Enterococci* (V.R.E.) and *Clostridium difficile*)[23]. For this reason, many English citizens with high personal income have a private insurance coverage.

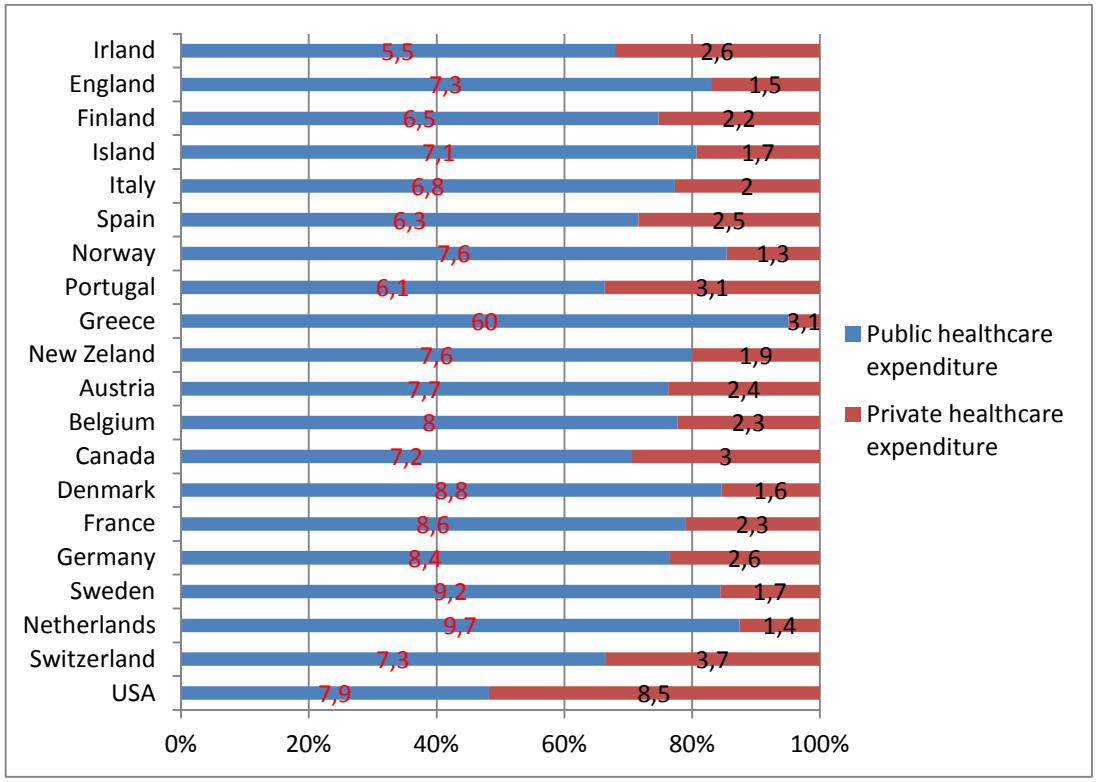
The German healthcare system is characterized by high levels of human resources that provide good access to care with a low direct financial burden on patients.[24] With 4.1 doctors per 100,000 inhabitants[25], Germany has more doctors than the average Ocse (3.3). But a different distribution of these causes concerns about how to ensure adequate access to health services across the country. In the United States, as in many other US countries, the healthcare system is predominantly in the hands of individuals. In order to receive medical benefits, people have to signed an insurance policy with a private insurance company. The only public welfare programs are Medicare, aimed at eleven-year-olds who are independent of income, and Medicaid, which helps the population bands below the poverty line. Anyone who does not fall into the bands must make a policy. The cost of policies changes from state to state and who is not fortunate enough to work in a company that covers all or part of insurance costs, can even get $ 600 a month to receive cures. Some policies, especially the basic ones, cover medical expenses only from a certain amount, while the more expensive ones give enormous benefits and provide excellent treatments. Returning to the center of the work, in Italy the impact on GDP on public health spending has a trend very similar to the medium level of the 28 European Countries, with a small decrease that bring it from 7,5% in 2009 to 7,2% in 2014. It represents a more contained decline compared to that registered in other countries in crisis (Greece -2,1%, Portugal -1,7%, Ireland -0.9%, Spain -0,7%) but, in the other side, we see growing trends in France (+0,3%) and Germany (+0,1%). The Italian public health financing is not so high compared to the Oecd countries: in fact, the percentage (75,3% according to Oecd) is similar to that of European continental countries (Germany 78%, France 78%) and lower than that of Anglo-Scandinavian countries (Denmark 85%, Norway and the United Kingdom 84%, Sweden 81%). Very law percentage are in countries with private insurance system (USA 49%, Switzerland 59%) or in countries where there is a rudimentary system of social

[23] Criticism of the National Health Service from Wikipedia, the free enciclopedy.
[24] http://www.quotidianosanita.it/allegati/allegato1562154.pdf
[25] http://www.quotidianosanita.it/allegati/allegato1562154.pdf

security (Chile and Mexico 46%, Hungary, Slovenia, Slovakia, Poland 68-72%). The family direct expenditure relative to total health expenditure presented in the 2014 very high values for Cyprus (49.9%) and Bulgaria (45.8%); Italy, with a value of 22.1%, covered a position below Spain (24.7%), but far above respect to the other major countries of the European Union (France 7%, Germany 13%, UK 14.8%). For the expenditure on care and rehabilitation represents more than half of the current health expenditure for most of the countries of the European Union: in 2014 the country in which it is most affected is Portugal (66.1%), while the lowest one is the Czech Republic (46.5%); Italy, with the 55.5% incidence of the cure and rehabilitation component, is aligned with the major European countries (Spain 58.6%, United Kingdom 56.6%, France 54.3%, Germany 53.3%). As regards healthcare expenditure on auxiliary services, the Czech Republic is the country with the largest share (12.3%) and the Netherlands with the lowest share (1.8%). The incidence for Italy is 8.6%, with a significantly higher value than other large countries Europeans (France 5.4%, Spain 5%, Germany 4.8%, United Kingdom 1.8%), while for long term assistance expenditure Netherlands, with 27.2%, is the country with the highest incidence while in the opposite position Bulgaria stands at just 0.1%. Italy with 10.3% being below the other major European Union countries (UK 18%, Germany 13.8%, France 12%) but above Spain (9.2%)[26].

[26] The data used in the international comparison refer to the year 2014 but produced for the 2017 edition of the Joint Health Accounts Questionnaire and transmitted by the countries of the European Union and published by Eurostat with the Joint Health Accounts Questionnaire.

Figura 6 Public and Private healthcare expenditure's percentage of the OECD countries.



Source Data: OECD Health data 2015 by Assobiomedical center.

1.5 Recovery Plans.

The Italian budget law for the year 2005[27] introduced the recovery plan: with such measures, the regions arranged with the State the assumption of particular constrains aimed to balance of the health budget deficit, adopting operative instruments suitable for the purpose[28]. There are many reasons that have led the state legislation to elaborate the Recovery Plan:

- The continue evolution of the health debt;
- the emergence of recurrent annual deficits;
- an historic expense that rewarded those who spent the most, independently from the quality of the services offered;
- the overcoming the standard of beds and the rate of hospitalization;

[27] Law n. 311 of 2004
[28] La tutela multilivello dei diritti sociali, Napoli, 2008, p. 668 e ss.

- an assistance predominantly based on hospital-care (inefficient and obsolete);
- expenditure components that have a major impact on health needs (such as staff costs, pharmaceutical expenditure, the purchase of goods and services etc..)[29].

Recovery plans have the purpose of restoring the economic and financial balance of the region in a health deficit and are an integral part of the agreement between the Ministry of Health, the Ministry of the Economy and Finance and the Region, aimed at achieving, within three years of the subscription, the budget balance, introducing sanctions for the defaulting regions. It is also allowed to extend (for a period of no more than three years) the Recovery Plan in the cases expressed by law[30]. The content of the Plan should include actions to rebalance the provision of the Essential Levels of Assistance (this aspect is analyzed in depth in the second chapter) that include a set of essential treatment that every healthcare system has to provide to its population to comply with the National Health Plan and existing legislation that enforces the same Essential Levels of Assistance and the measures necessary for the abolition of the deficit. "The competing legislative autonomy of the Regions in the field of health protection and in particular in the management of the health service may be limited in the light of the objectives of public finances and the containment of expenditure," but in an "explicit sharing framework by the Regions of the absolute need to contain healthcare deficits "[31].

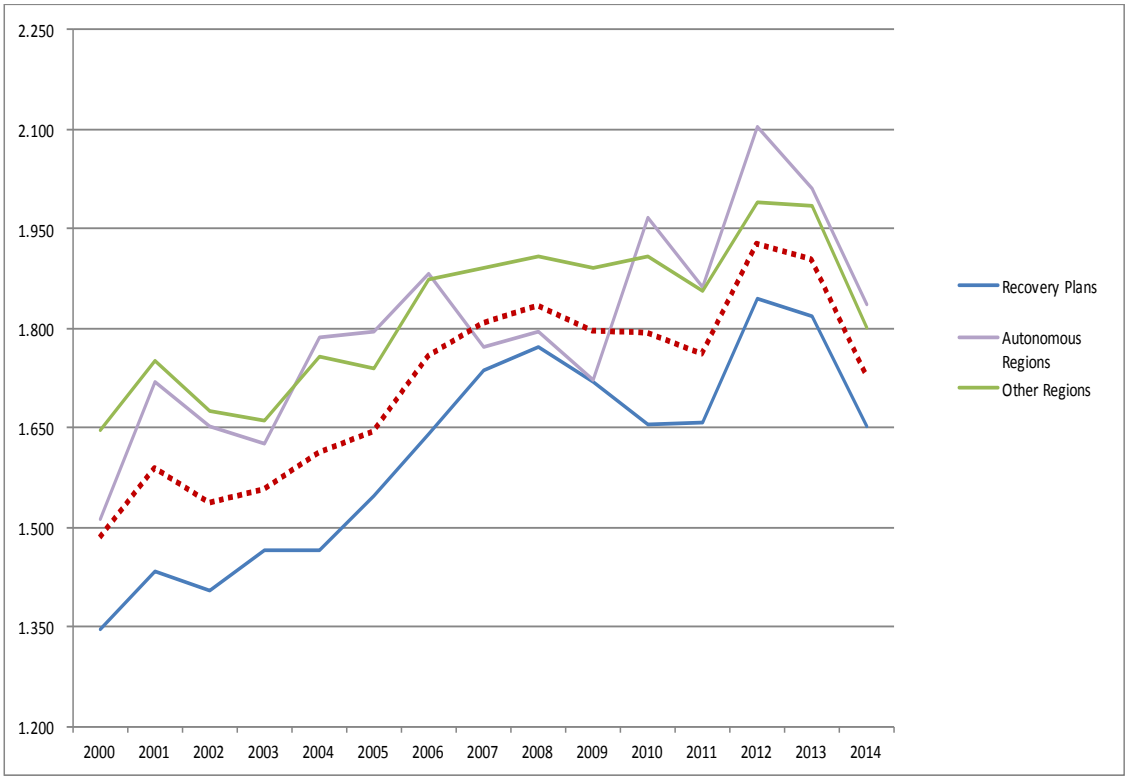
The regional legislative autonomy in the field of health is justified from the need to ensure that the levels of LEA are respected in the whole national territory and to guarantee the economic and financial equilibrium of the interested regional health system. Therefore, the state legislator can "legitimately impose on the Regions constraints on current spending to ensure the unified balance of overall public finances in connection with the pursuit of national objectives, also subject to Community obligations"[32]. The Government may replace the government bodies of the Regions, in particular cases established by law when regions fail to pursue the

[29] Data collected from the report of 22 January 2013 concluding the work of the Parliamentary Committee of the Investigation of Health Errors and the Causes of Regional Health Disadvantages, established by the Chamber of Deputies on November 5, 2008
[30] Art. 11, co. 1, d. the. n. 78/2010, converted into l. n. 122/2010.
[31] Cfr. Constitutional Court, 18 April 2012, no. 91; Id., June 14, 2007, no. 193
[32] cfr. Court Cost, May 29, 2013, n. 104; Id., March 28, 2013, n. 51; Id., April 18, 2012, n. 91; Id., May 12, 2011, n. 163; Id., February 18, 2010, no. 52

goal of the recovery plan or when the regional deficit worsens, by appointing a Commissioner that prepares and implements the recovery plan. This is imposed to ensure the protection of the economic unit of the Republic, as well as the essential levels of performance in respect of a fundamental right (Article 32 const.), which is the one for health. The next figure shows how the health expenditure dynamics, thanks to the constrains introduced by recovery plans simultaneously with other budget maneuvers, has had a positive impact on the health spending trend.

In any case it is important to use actions that enforce LEA performances in Regions where the respective performance is not so satisfactory.

Figura 7 Trend of the real per capita healthcare expense.



Data Source: Regional Public Account

How we can see form the graph, the average rate of variation in healthcare expenditures records a strong growth in the first years of the analysis, while the change is reduced afterwards. The highest value is recorded in the years 2006-2008 as a consequence of an increase in spending in 2006 and from its reduction in the following 2 years, due to specific measures to contain costs such as recovery plans. In fact from the year 2009 significant constraints on regional healthcare spending has

determine a reduction of the whole expenditure (-1,35%) even if some regions (in particular those with special statutes and those included in the deficit reconstitution plan) have recorded an increase on spending. Is useful to know that in the year 2006 the regions of Liguria, Lazio, Abruzzo, Molise, Campania, Sicily e Sardinia have set-up a recovery deficit plan of 3 years (subsequently even Calabria has firmed that plan for the period 2010-2012). In 2010, Lazio, Abruzzo, Molise, Campania and Sicily extended their recovery plans for the next three years (2010-2012), while Liguria and Sardinia came out. In the same year, Piedmont and Puglia signed and started a recovery plan with a lower level of intervention than the other regions, so-called "lighter".

The slight decrease in spending over the last three years is the result of the combined effect of several factors. On the one hand, the considerable push towards growth in spending, following the application of Legislative Decree 192/2012, which approved the measures to reduce the time of payment of trade debts and the subsequent Decree Law no. 35/2013, which provided for an early liquidity reserve of € 17 billion for the regions from 2013 to 2014 for the payment of health care debts accrued for December 31, 2012.

To conclude we can say that in the last few years of our observation, how point out the graph, spending has decreased as a result of the application of Legislative Decree 192/2012, which approved the measures to reduce the time of payment of trade debts and the subsequent Decree Law n. 35/2013, which provided for an early liquidity reserve of € 17 billion for the regions from 2013 to 2014 for the payment of health care debts accrued for December 31, 2012. Nevertheless, by 2015, in absolute terms and percentages of GDP (6.86 in 2014 and 7.03 in 2015), there is a slight increase in health spending, probably due to access to advanced health care by some regions. However, spending remains below 2013 levels.

Cap. 2 IS THERE A CORRELATION BETWEEN FINANCIAL AND PERFORMANCE'S INDICATORS?

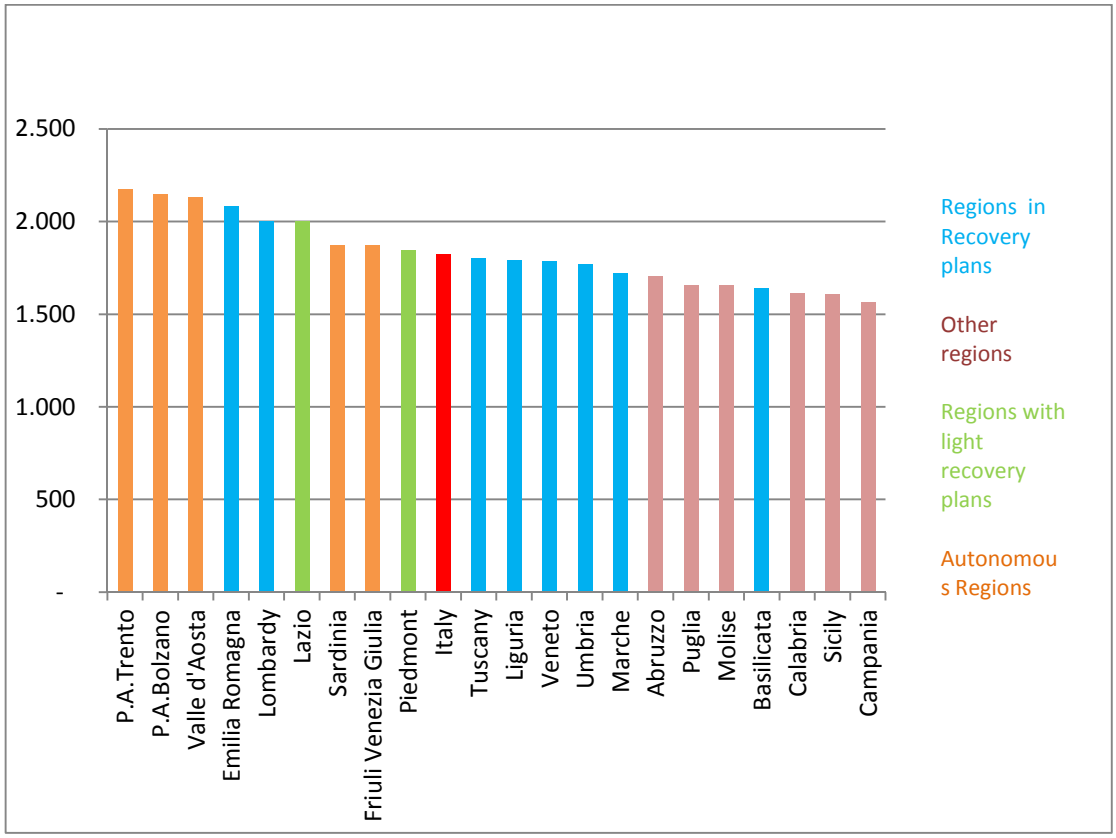
2.1 Financial trend of Italian regions.

Linking to the first chapter, this graph shows the situation of the current per capita spending in all regions creating an average in the years 2010-14. At least positions we found southern regions (Campania, Sicily, Calabria, Molise, Puglia, Abruzzo) that's means these regions have spent less than other regions, in particular than northern regions, in healthcare sector. How explained in the previous chapter, these regions have set up deficit recovery plan to constrain healthcare expense, some since the year 2007 and renewing it, other like Calabria from 2010 and other again like Liguria and Sardinia have decided to come out from it.

The result has been that in Sardinia, for example, has recorded an average spending in the years 2010-2014 increased by 7% compared to the period 2005-2009, in norhtern regions an increase of 4%, while in the South the value is reduced by 2% (direct effect of recovery plans). So, the regions don't subject to recovery plans (Basilicata, Marche, Umbria, Veneto, Liguria, Tuscany, Lombardy and Emilia-Romagna) present an average current per capita health expense not so different from regions in recovery plans (an average about 1.750) and even if Emilia-Romagna and Lombardy present high level of current per capita spending they have always maintained the accounts in order.

It's useful to say that each region has its own rules and organizational structure and the financial equilibrium is a source of continuous friction between the national government and the regional administrations. About the health expenditure of Sardinia, Friuli-Venezia Giulia, Valle d'Aosta and autonomous provinces of Trento and Bolzano there is no monitoring from the State because they have special statutes and consequently the healthcare sector is exclusively financed by regional accounts.

Figure 8: 2010-2014 Average per capita current expenditure.



Data source: Regional Public Accounts.

A different speech is made for the region of Sicily because even if it is an autonomous region its healthcare sector is financed in sharing with the State account. The result is that Regions with special statutes can close annual health care accounts with deficit, perfectly undisturbed.

In the table above, there are the numerical terms of per capita spending for each regions that subsequently will help us to make some observations and evaluations with performance indicators for the same period.

Figure 9: Per capita spending of each region.

Regions	2012	2013	2014	% 2013-2012	% 2014-2013	% 2014-2012
Piedmont	€ 1.819,37	€ 1.992,68	€ 1.695,37	9,53%	-14,92%	-6,82%
Lombardy	€ 2.108,33	€ 2.074,41	€ 1.880,27	-1,61%	-9,36%	-10,82%
Veneto	€	€	€	2,77%	-8,15%	-5,61%

	1.837,15	1.888,08	1.734,12			
Liguria	€ 1.872,77	€ 1.846,18	€ 1.668,79	-1,42%	-9,61%	-10,89%
Emilia Romagna	€ 2.192,97	€ 2.245,61	€ 2.026,60	2,40%	-9,75%	-7,59%
Tuscany	€ 1.827,47	€ 1.810,99	€ 1.622,29	-0,90%	-10,42%	-11,23%
Umbria	€ 1.906,30	€ 1.809,67	€ 1.644,66	-5,07%	-9,12%	-13,73%
Marche	€ 1.829,41	€ 1.767,51	€ 1.593,50	-3,38%	-9,84%	-12,90%
Lazio	€ 1.994,98	€ 1.875,21	€ 2.138,64	-6,00%	14,05%	7,20%
Abruzzo	€ 1.782,11	€ 1.833,38	€ 1.573,78	2,88%	-14,16%	-11,69%
Molise	€ 1.601,44	€ 1.866,31	€ 1.614,01	16,54%	-13,52%	0,78%
Campania	€ 1.790,00	€ 1.779,55	€ 1.484,39	-0,58%	-16,59%	-17,07%
Puglia	€ 1.780,08	€ 1.766,82	€ 1.508,36	-0,75%	-14,63%	-15,26%
Basilicata	€ 1.695,98	€ 1.662,12	€ 1.534,75	-2,00%	-7,66%	-9,51%
Calabria	€ 1.662,50	€ 1.741,83	€ 1.521,52	4,77%	-12,65%	-8,48%
Sicily	€ 1.912,54	€ 1.705,15	€ 1.441,23	-10,84%	-15,48%	-24,64%

Data Source: Regional Public Accounts

But has the trend of the per capita expense showed in the graph above reflexes on the performance's trend of the regions? First to start with the analysis of performance it's useful to introduce performance indicator used in this work for our observational analysis.

2.2 The Essential level of Assistance.

The Essential Levels of Assistance (LEA) are the benefits and services that the National Health Service (SSN) provide to all citizens, free or with a subscription fee (ticket), with public resources collected through general taxation (taxes)[33]. According to the State-Regions Agreement of October 5 2006, the "Health Pact", and to the Law 296 of December 27, 2006, the ELA (essential level of Assistance) were redefined by the Decree of the President of the Council of Ministers of 23 April 2008. The Essential Assistance Levels have been reformed with the Decree of the Prime Minister of the Council of Ministers (DPCM) of January 12, 2017 (published in OJ General Series No.65 of 18 March 2017 - Ordinary Supplement No. 15). The Decree provides for an annual update of the LEAs by the National Commission for the updating of LEAs and the promotion of the appropriateness of the National Health Service[34].

So, they are performance indicators and those used in our analysis take into account three important level of assistance:

- Collective assistance;
- Disctrict assistance;
- Hospital assistance.

All three areas in which the LEA are organized present news, including the updating of rare and chronic diseases lists for which specific support is provided and ticket exemption.

- The Collective Assistance includes all the activities and benefits to promote the health of the population, such as the protection of the community and for the individual against the risk of accidents related to working environments; protection against health risks related to environmental pollutions; Veterinary public health; control of Veterinary public health; nutritional monitoring and prevention; prophylaxis of infectious and parasitic diseases. With regard to

[33] Ministry of Health
[34] Wikipedia, free encyclopedia- LEA.

collective prevention and public health, the most important novelty is the introduction of human papilloma virus vaccine (Hpv)[35].

- The District Assistance includes health services, pharmaceutical assistance, specialist and outpatient diagnostics, provision of prostheses for disabled, home-based services for elderly and the serious illnesses. The news related to district assistance are the introduction of different performance for diagnosis or monitoring of rare diseases, more accurate specialist visits, novelties for home care[36].
- Hospital assistance includes the following services: first aid, ordinary hospitalization, day hospital (one-day medical examinations) and day surgery (one day surgery), long-term stay and rehabilitation[37]. In the field of hospital care, the main novelties are the stimulation of epidural analgesia during the labour and childbirth and the inclusion of neonatal diagnosis of congenital deafness and congenital cataracts. In addition, hospital care in regime "day-hospital" is increased from 43 to 108 days.

Problems related to financial statements can hinder the guarantee of the essential level of assistance. These services have an impact on the individual rights constitutionally guarantee (health, education and justice right) for all citizens.

In our observational analysis, the selection of the indicators reflects the distribution of resources of the national health service among the essential level (in addition to the major politics - government orientations). The methodology of the complete evaluation includes a system of weight that attribute to every indicator a reference weight and it assigns scores with respect to the reached level of regions compared to national standards[38].

Annually the set of indicators is subject to revision and updating from a group of experts. They evaluate the reliability, meaningfulness and the relevance of single indicators and receive from the Committee of LEA the eventual confirm, modification or replacement from one year to other. The yearly update of the indicators makes the grid flexible, in order to adapt to new politics orientation.

[35] Ministry of Health
[36] Ministry of Health
[37] Wikipedia free enciclopedia.
[38] Adempimento "mantenimento dell'erogazione dei LEA" attraverso gli indicatori della Griglia Lea Giugno 2016, p. 4

The LEA grid is a valid instrument able to individuate critical areas in which the proper delivery of essential level of assistance results compromised for the single regions and, in the other side, highlights the strengths of them, thus figuring how a good support instrument for politics institutions both for national level and regional and local ones.

It is important to remember that the LEA grid represents the principal instrument for the monitoring and the check of the effective delivery of services in the national territory, especially after the coming into force of the PDCM of November 29, 2001 that defined the essential level of assistance. The reference frame for data collection and health information in the monitoring activity is made up from the available information in the New Health Information System (NHIS) and from the methodologies for supporting data reading and understanding of health phenomena, within the National Health Check and Control System (NHCS)[39]. The available data are those of ordinary regions plus Sicily.

[39]Adempimento "mantenimento dell'erogazione dei LEA" attraverso gli indicatori della Griglia Lea Giugno 2016, p. 5.

2.3 The regional performance and their trend (2012-2014).

Figure 10: Average scores of the LEA grid (2010-2014).

Regions	2012	2013	2014	% 2013-2012	%2014-2013	% 2014-2012
Tuscany	193	214	217	10,88%	1,40%	12,44%
Emilia Romagna	210	204	204	-2,86%	0,00%	-2,86%
Piemonte	186	201	200	8,06%	-0,50%	7,53%
Liguria	176	187	194	6,25%	3,74%	10,23%
Lombardy	184	187	193	1,63%	3,21%	4,89%
Marche	165	191	192	15,76%	0,52%	16,36%
Umbria	171	179	190	4,68%	6,15%	11,11%
Veneto	193	190	189	-1,55%	-0,53%	-2,07%
Basilicata	169	146	177	-13,61%	21,23%	4,73%
Sicily	157	165	170	5,10%	3,03%	8,28%
Lazio	167	152	168	-8,98%	10,53%	0,60%
Abruzzo	145	152	163	4,83%	7,24%	12,41%
Puglia	140	134	162	-4,29%	20,90%	15,71%
Molise	146	140	159	-4,11%	13,57%	8,90%
Campania	117	136	139	16,24%	2,21%	18,80%
Calabria	133	136	137	2,26%	0,74%	3,01%

Data Source: Ministry of Health- General Management of Health planning- Office VI.

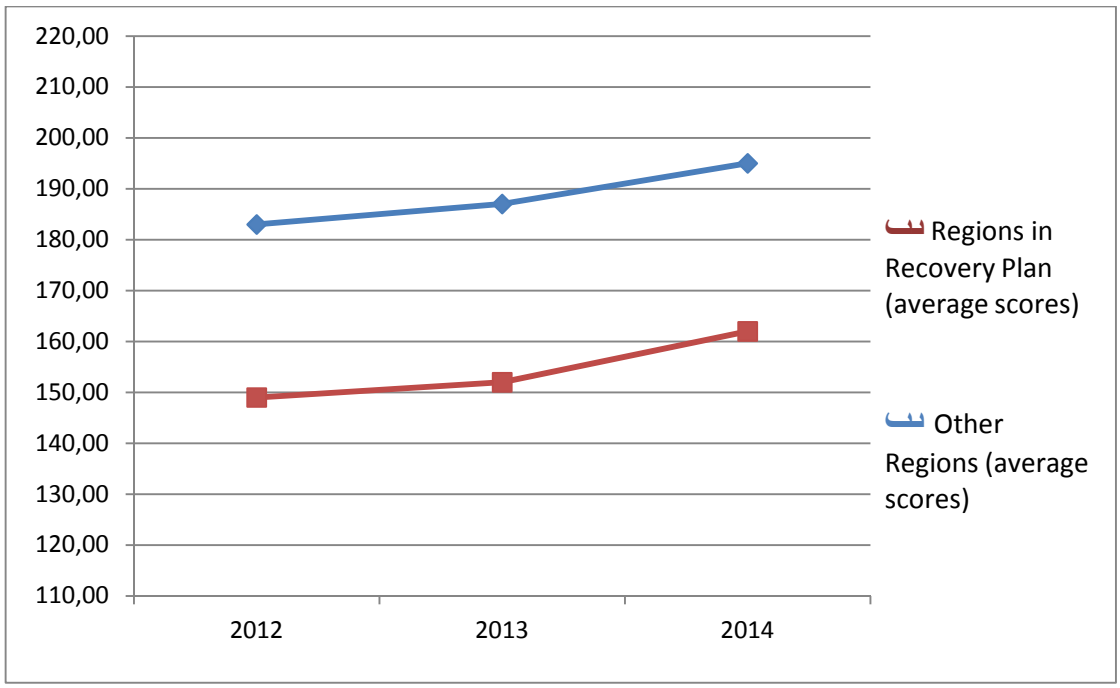
The grid highlights the performance trend of regions according to LEA indicators (the scores on the grid are the mean of all LEA indicators). The years taken into account are those for which the data were available. The different colours represent the evaluation given to the regions: the grey colour indicate that the region has been fulfilled, the yellow one indicates that the region has been fulfilled but with a major commitment to some indicators; the red colour suggest that the region has been defaulting from the point of view of all ELA indicators.

Next to the values for the years, there is another grid that help us to understand better the trend of each region, if there has been a deterioration or an improvement and if those have affect the position of the region.

Analysing the trend 2012-2014 we can observe that the number of fulfilled regions increases (they were 10 in 2012, 9 in 2013 and 13 in 2014) and none it is located in the defaulting class (with a score lower than 130). How grid shows, we can say that Tuscany, Emilia R., Piedmont, Liguria, Lombardy, Marche, Umbria and Veneto are those that have always been completely fulfilled, even if for some of them, i.e. for Veneto, Emilia R. and Piedmont the rating score is slightly decreased in the years. In the year 2014 even the regions of Basilicata, Sicily, Lazio, Abruzzo and Puglia have reported totally fulfilled scores respect to the previous years where resulted partially fulfilled. The only regions of Molise, Campania and Calabria present the same situation in the years and they are located in the class "fulfilling but with commitment". These regions will have to accomplish the commitments related to the improvement of some areas of assistance, especially those of vaccinations, screening, elders and disabled assistance, appropriate hospital care (i.e. caesarean birth).

For these regions is necessary carry out a monitoring process that is often incorporate into the goals expected by the recovery plans.

Figure 11: Regions in Recovery plan Vs. Other Regions. An average of LEA grid scores.



Data Source: Ministry of Health- General Management of Health planning- Office VI.

The graph shows the performance of LEA Grid scores for the three-year period considered, both for the group of regions in the Recovery Plan (Piedmont, Lazio, Abruzzo, Campania, Molise, Puglia, Calabria and Sicily) and those not in Recovery Plan. Among the regions in the Recovery Plan, only Piedmont reaches its score while Molise, Campania and Calabria stand below 160. Constant improving the scores of Sicily, Lazio, Abruzzo, Puglia, which, as already said, in 2014 are over the threshold of 160.

The regions not in the Recovery Plan reach the score regularly with the exception of Basilicata in the year 2013. Tendency increases the scores of Tuscany, Liguria, Lombardy, Umbria, Marche and Basilicata, while those are almost stable of Veneto and Emilia Romagna.

As highlighted in the last Censis report[40] on the country's social situation, the 83% of South region' residents consider their regional health service "inadequate". This percentage is much lower in the northern regions: in the northeast, the dissatisfied are in fact 35%, in the northwest they are less than 30%.

It is not surprising, then, that residents in the southern regions will be treated elsewhere, when it is possible. This phenomenon is known as health mobility: every year about half a million patients are hospitalized in a region other than the one in the home. Even on this front, the North-South imbalance is evident. Regions that are particularly attractive are Lombardy, Emilia-Romagna and Tuscany. From other regions, however, patients tend to flee: this is particularly the case in Calabria, Campania and Sicily. So, the comparison of the average scores of the two groups of regions allows to highlight a constant divergence between them, despite a progressive improvement in the values of both. Italian healthcare seems split into two parts: of course, in the South, there are also excellent professionals and some hospital facilities of excellence, but the overall health service in the South regions is worse and has an inferior quality. In drawing up their own strategies, regional governments tend to be influenced by choices already made in the past, by the most influential groups and, most often, by ideology. Each Region organizes its own healthcare system as it thinks best: it can have large or small local healthcare company; it can adopt the separate model or the integrated one; it can produce on its own or

[40] http://www.quotidianosanita.it/allegati/allegato2421529.pdf

outsourced to private individuals, as long as the service functions and the care provided to citizens is timely and with good quality. But at that point arise problems: individual regional healthcare systems have very dissimilar performances among themselves, and the gap between the North and South regions in terms of health is still too strong.

2.4 The relation between spending and performance.

Figure 11: The average LEA scores and numerical terms of per capita spending (2012-2014).

	LEA SCORES			PER CAPITA SPENDING		
Regions	**2012**	**2013**	**2014**	**2012**	**2013**	**2014**
Tuscany	193	214	217	€ 1.819,37	€ 1.992,68	€ 1.695,37
Emilia Romagna	210	204	204	€ 2.108,33	€ 2.074,41	€ 1.880,27
Piemonte	186	201	200	€ 1.837,15	€ 1.888,08	€ 1.734,12
Liguria	176	187	194	€ 1.872,77	€ 1.846,18	€ 1.668,79
Lombardy	184	187	193	€ 2.192,97	€ 2.245,61	€ 2.026,60
Marche	165	191	192	€ 1.827,47	€ 1.810,99	€ 1.622,29
Umbria	171	179	190	€ 1.906,30	€ 1.809,67	€ 1.644,66
Veneto	193	190	189	€ 1.829,41	€ 1.767,51	€ 1.593,50
Basilicata	169	146	177	€ 1.994,98	€ 1.875,21	€ 2.138,64
Sicily	157	165	170	€ 1.782,11	€ 1.833,38	€ 1.573,78
Lazio	167	152	168	€ 1.601,44	€ 1.866,31	€ 1.614,01
Abruzzo	145	152	163	€ 1.790,00	€ 1.779,55	€ 1.484,39
Puglia	140	134	162	€ 1.780,08	€ 1.766,82	€ 1.508,36
Molise	146	140	159	€ 1.695,98	€ 1.662,12	€ 1.534,75
Campania	117	136	139	€ 1.662,50	€ 1.741,83	€ 1.521,52
Calabria	133	136	137	€ 1.912,54	€ 1.705,15	€ 1.441,23

Data Source: Regional Public Account database and of Health- General Management of Health planning- Office VI.

Referring to the tables above, we are able to make some considerations recording that the minimum performance score is 160. Starting with Calabria, even if it is the last regions in the performance's classification, we can see that its score in the grid increase a bit (3,01% from 2012 to 2014) every year in the considered period, while the amount of per capita expense increases of 4,8% from 2012-2013 but it gradually decreases in the year 2014. Initially Campania (the second-last in the grid of performance) presents a not satisfactory value but subsequently its score increase meaning that its performance has improved on time, while from a financial point of view there is a progressively reduction of values.

It is useful consider that regions in recovery plans (Lazio, Abruzzo, Molise, Campania, Puglia, Calabria, Sicily, Piedmont) present higher levels of taxation: in particular, the highest regional Irpef regional average was recorded in Lazio and Campania, while, in the same regions, the effective Irap rate has reached its maximum value[41]. In many regions, there are many difficulties in enhancing territorial assistance. In particular, in home care, number of beds for residential care, handicapped assistance, vaccine covers, screening for colon cancer, breast and uterine cervix.

In general, regions in recovery plan, in particular the region of Campania, are those which, with a lower public spending, private spending and high taxation, give less guarantees to citizens in delivering essential levels of assistance[42].

Some regions, still too few, have been able to interpret federalism as a tool to respond to the needs of citizens; the challenge for the future of health federalism and the National Health Service is to bring the most critical regions to better levels and project all of them towards the improvement of services for citizens.

The first step to do this is going from approval to uniform implementation of the rules: Regions should have to act in substantial way than in formal one. Many rules are trying to give centrality and effectiveness to the Essential Level of Assistance but the monitoring and the guarantee of services remain still too formal.

In the LEA national monitoring system, for example, there are no treatment-drop rates, access to innovative therapies, and effective wait times.

[41] Il sole 24 ore.
[42] Il sole 24 ore.

To make an example, the region of Marche, which have a good LEA score and are among the rose of benchmark regions, have at the same time a high rate of renunciation of care[43]. This is paradoxical for citizens. It is evident that there is a need to update monitoring indicators such as optimizing existing information flows; ensuring LEA monitoring by introducing the citizen's viewpoint, considering the participation of citizens with representatives of them in the LEA National Commission. The other northern regions present high level of public spending and they are first on the performance grid, meaning that they have always been able to keep their accounts in order.

[43] Il sole 24 ore.

Conclusions:

The purpose of this work has been observed if the performance level of Italian regions is strictly related to their financial levels. After our observation, we can say that health regional performances don't directly depend how much a region spend in the healthcare sector over the analyzed period. For sure, regions where the level of public expenditure is high present high score of performance but spending more doesn't create a direct connection with the performance improvement.

Among all the LEA indicators, only a limited number are influenced by expenditure.[44] This suggests that the exogenous and macro-organizational variables at the national territorial level are more likely to affect performance, i.e. the design of the health system at national and regional level and the way health organizations are actually managed (Ham, 2008; Lega et al., 2013), including the managerial skills of the individuals managing these organizations (Vainieri et al., 2017)[45].

In fact, as already mentioned above, each region has different regional model and each government decide how many ASL have in the territory. Some regions prefer having more small size ASL: for example, the Veneto, which currently has about twenty ASLs, with an average population of 235,000. Other regions have instead decided to have fewer ASLs: in Campania, for example, the seven local health companies have an average population of around 837,000. The Marche have even established a single regional healthcare company, which takes care of over 1,500,000 residents. In this direction is also the recent reform of the Tuscany Region, which reduced the number of ASLs from 12 to 3, having an average population of about 1,250,000 inhabitants. Regions can even choose to leave hospitals under ASL management or transform them into autonomous hospitals.

At this point two models can be distinguished: the integrated and the separate one. In the integrated model, hospitals remain under the control of ASLs: this should encourage coordination between hospital and territorial care. In the separate model, hospitals are instead dislocated from their ASLs and transformed into autonomous

[44] Performance and Expenditure in Public Healthcare Organizations, papers presented to the AIDEA national conference, Rome 14-15 September, 2017.
[45] Performance and Expenditure in Public Healthcare Organizations, papers presented to the AIDEA national conference, Rome 14-15 September, 2017.

companies: this model, stimulating competition between the various hospital structures, more closely reflects the theoretical model of the "internal market".

In our country, only one region has adopted the separate model: Lombardy. All other Regions have an integrated system or a mixed system (as in Piedmont). Another strategic choice that regional governments have to deal with is the involvement of private healthcare. Each region is free to decide which part of the services provide with its own facilities and with its own staff, and instead which outsource to private providers (nursing homes, private clinics, non-SSN personnel). Some regions rely heavily on privates, others less: in general, southern regions rely to private providers than Central and Northern Regions.

The Regions enjoy wide discretion with many other relevant issues. Think, for example, of the tariffs by which suppliers (both public and private) are reimbursed: each region is free to fix it individually. Tickets also change from Region to Region. For example, consider the drug ticket: in some regions it is not foreseen, in others it is established from a fixed quota, in others it is modulated on the basis of income. How cited in the previous chapter, each Region has its own rules and organizational set-up and it is not simple evaluate if having, for example, more or less ASL in the territory or choose to outsource or not services means having an optimal (or bad) healthcare company. In both cases, the goal of each health system should be provided timely and of good quality cares to citizens. But how see on the previous chapter, individual regional health systems have very dissimilar performances among themselves and there is a clear gap between North and South of the country.

In chapter 1 we have seen that very few regions have been able to keep in order their accounts in the time: among these are Friuli-Venezia Giulia, Lombardy, Veneto, Emilia-Romagna and Umbria. Other regions, on the other hand, have systematically overspend their budget. At this point, it could be argued that the goodness of a healthcare system should not be measured in economic terms; it is necessary rather considered the health status of the population and the quality of the services offered. In fact, how we have already observed, most of the southern regions not only have no accounts in place but also offer low-quality health services. There are many studies that support this statement: for example, a study conducted by C.R.E.A. Health provides a multidimensional evaluation of the performance of individual regional

health systems pointing out the central-northern regions are all at the top of the list while the southern ones in the lower part. Even the National Program for National Outpatient Programs, organized by AGENAS (National Agency for Regional Health Services), or the "targets" of Sant'Anna of Pisa demonstrate the same things.

So, all the rankings agree that in Italy we have higher-quality healthcare services in the Centre-North and a lower quality healthcare, sometimes even much lower, in the Mezzogiorno.

Naturally, citizens are aware of it. As outlined in the last Censis Report on the Social Situation of the Country, 83% of residents in the Mezzogiorno consider their "inadequate" regional health service. This percentage is much lower in the Northern Regions: in the Northeast, the dissatisfied ones are in fact 35%, in the North West less than 30%. All of this justifies the phenomenon of the healthcare mobility and the most attractive regions are especially Lombardy, Emilia Romagna and Tuscany (how have shown tables above). The problem is clear, but the point is: Which are the future perspective for regions that have to improve their healthcare sector? Until now the principal tool has been the recovery plans. In fact, if we look only at the financial aspect, it seems that they have long effected. The latest financial years show that almost all the regions, apart few, have progressively regained their accounts, but from a performance point of view the quality of services have worsened. It is clear that it is necessary to change strategy in order to improve not only the financial situation of southern regions but also the quality of their services. In the healthcare field the change should start with a more coherent approach: ensuring that the regional allocation of resources is focused on quality and is linked to incentives and improvements of it; secondly, it is also better to strengthen the regional governance orientation and the provision of health care in the Country.
It will also be essential to reformulate governance as a whole, in order to give equal importance to improving quality and controlling financial resources[46].

[46] Studi dell'OCSE sulla qualità dell'assistenza sanitaria: ITALIA OECD 2016, pag.201

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