The Changing Role of the State in the Italian Healthcare System

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ABSTRACT

The present study describes and explains the changing role of the state in the Italian healthcare system since the beginning of the 1970s, with a particular focus on developments following 1978 when the healthcare system was transformed from a social insurance system into a national health service. In order to address these changes in a systematic way, we track healthcare system development along three dimensions: regulation, financing, and service provision. With regard to regulation, we observe a relative retreat of the state due to decentralization processes and internal market mechanisms. Quantitative measures for the financing and service provision dimension also indicate a modest relative retreat of the state. Taking regional data into account, we identify a clear North-South-divide in the public/private mix of financing and service provision. Although the focus of the paper is to describe the changing role of the state in the Italian healthcare system, we also offer preliminary explanations. We seek to identify the role of exogenous shocks such as economic crises versus endogenous stressors specific to the healthcare system itself (i.e. inherent inefficiencies) on healthcare system change. Therefore, the paper aims to provide a tentative, yet dynamic account of healthcare system change that is both descriptive and explanatory.
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1 INTRODUCTION

The Italian National Health Service (NHS) represents a healthcare system in flux. Since its inception in 1978, many changes have been made to the NHS’s regulatory structures that have substantially altered the role of the state in healthcare policy, particularly in areas of financing and service provision. Mainly, changes have culminated in the decentralization of powers away from the state to the regions where issues of financing and the organization of services are concerned. Such developments have direct implications for the equity and overall performance of the healthcare system. While a study of the latter is beyond the scope of this paper, the present study makes a first step at describing and explaining changes in the Italian NHS along three key dimensions of healthcare activity: regulation, financing, and service provision. In doing so, we also ask whether these changes are the result of endogenous or exogenous factors in order to understand the driving forces and underlying logic for healthcare reforms in Italy.

This study therefore speaks to the larger body of welfare state literature that theorizes change. This includes studies observing the relationship between economic and social developments (Castles 2000; Pierson 2001) as well as the timing of reforms (Bonoli 2007; Kingdon 1984). We also address approaches emphasizing the role of institutions in order to explain healthcare system change (Bonoli and Palier 2000; Schmid et al. 2010). In this respect, Hacker’s description of health policy in advanced industrial countries as ‘reform without change and change without reform’ (Hacker 2004: 693) plays an important role. His comparative work points out that highly visible market reforms lagged far behind their rhetoric while crucial institutional change took place as conversion and drift (see Streeck and Thelen 2005).

The paper is organized in three empirical parts: first, we examine changes taking place in the regulation of the NHS. Not only descriptive, this section will provide an explanatory account of change that asks, are changes in regulation responses to exogenous pressures such as global economic crises or demographic change, or, are they rather rooted in endogenous problems specific to the healthcare system itself such as inherent sources of inefficiency (as defined by Cacace et al. 2008). Once developments in regulation are defined and explained, we then proceed to discuss changes in financing and service provision. In these latter empirical sections, we will identify the main trends to be observed over the past four decades at both the national and regional level, where data is available. Whereas our discussion of regulation and financing takes off the early 1970s, we begin our study of service provision only in 1988 due to data limitations. The object of our analysis will be to identify changes in the role of the state, while also linking trends to reforms discussed in the section on regulation. In a final section, we conclude on our findings for changes in the role of state in regulation, financing, and service provision, as well as the explanatory factors underpinning these changes.
2 Changes in Regulation

In order to capture changes in the regulation of Italian healthcare system, we divide our observation period into four formative periods: (1) prior to the introduction of the NHS in 1978, (2) the establishment and expansion of the NHS between 1978 and 1992, (3) decentralization and market reforms between 1992 and 2001, and (4) the new attempts at regulative recentralization (since 2001).

2.1 Prior to the introduction of the NHS (until 1978)

Prior to the establishment of the Italian NHS in 1978, the Italian healthcare system was characterized by principles of selective coverage, according to which citizens were insured on the basis of occupation, mainly agrarian versus industrial, but also in terms of geographic area, with Center-Northern regions as well as urban areas entertaining better access to primary and hospital care than their Southern and suburban counterparts (Fargion 2006). Within this system of social insurance, several sickness funds offered coverage that varied widely; and the provision of services rested informally with the family and formally with solidaristic networks of a secular, religious, or professional kind (Ferrera 1993, 1998; Vicarelli 1997; Paci 1989; Fargion 2006). This left little space for state involvement in healthcare, and immense disparities between demographic groups quickly ensued leaving some seven percent of the population uninsured (Lo Scalzo et al. 2009: 19). These inequalities, coupled with a social insurance system that had essentially gone bankrupt by the mid-1970s, growing public dissatisfaction, as well as strong social and political support for change, induced policy makers to search for radically new solutions outside the healthcare system (Neri 2009). Amongst other factors, the ideological preferences of the political left that favored equality in healthcare met with the economic concerns of the political right that viewed the Italian healthcare system as a financial burden (Brown 1984). By virtue of its highly centralized and universalistic nature, as well as its relative success at cost containment, the NHS model represented the most viable alternative both financially and politically for both parties.

2.2 Establishment and expansion of the NHS (1978-92)

Following the English model, the Italian NHS established universality, equality, and uniformity of services that were free upon point of delivery (France 2006). By turning to an English-style NHS, not only could Italy solve the problem of selective coverage by introducing universalism, it was also argued that a centralized system of financing would allow the government to retain better control of spending. However, unlike in England, the setting of budgets in the Italian context would not prove to be effective, as regions were not held accountable for overspending. Where regions exceeded their limits, the central government covered the deficit; thereby creating negative incentives for both regions and providers to exceed their budgets. As such, NHS spending quickly es-
calated since the mid-1980s making a second round of reforms during the early 1990s necessary.

As will soon become evident in tracking the developments for this case, regulatory activity in Italy has been mainly targeted at meeting the challenges brought on by problems associated with the controlling of regional spending and overall financing in healthcare – a rather atypical feature for an NHS system (see Schmid et al. 2010). However, the problem of expenditure in the Italian case is very much related to the challenge of controlling provider (but also regional) behavior, which is typical for NHS systems. The central government’s response to these challenges has been manifold; however, due to limitations in space, we wish to highlight two of the main trends affecting regulation that began during the 1990s: (1) the progressive decentralization of healthcare financing; and (2) the introduction of the internal market. It is particularly the latter development that has had profound implications for provider behavior.

As a first step at understanding why and what changes were made to the financing of this healthcare system, one must begin by looking at provisions set up in the originally established NHS in 1978. These included a three tier structure involving the national government, the regions, and local health authorities (currently the Aziende sanitarie locali, ASL), the latter of which were organized by local governments in order to reflect the balance of power existing between locally elected political parties. Whereas the central government was tasked with setting ceilings on spending by regions, as well as redistributing tax financing through the National Health Fund which favored the poorer South, it was the ASL that ultimately decided on how funding would be spent within the regions. Indeed, as Fargion (1992, 2006) reports, this policy did initially succeed: whereas in 1977 regional health expenditure varied from 36 percentage points above the national average in the Center-North and expenditure in the South fell 28 percentage points below the national average in the South, by 1987 this variation had been successfully halved.

Despite the success of reducing interregional disparities, the decoupling of centralized financing and decentralized spending, together with poor oversight and monitoring on the part of the central government led to gross fiscal irresponsibility during the 1980s (France 2006; 2005) and ceilings set by the Treasury were regularly exceeded by the regions’ ASL. In part, this was due to the fact that these ceilings were systematically set low by the Treasury, thereby making it necessary for regions to spend beyond their means. Consequently, budget deficits became the norm. These financing problems met with a highly instable economic climate in which despite constant annual GDP growth, extraordinarily high public household deficits and increasing unemployment rates marked the entire period of the 1980s and early 1990s in Italy.
2.3 Decentralization and internal market reforms (1992-2001)

At the beginning of the 1990s high public deficits became a hot political issue as they jeopardized Italy’s admission into the European Monetary Union. The Maastricht criteria, established in 1992, permitted annual deficits up to three percent of the GDP – only a quarter of the additional funds the Italian state had to borrow the previous year. Italy had to radically reduce public spending in order to member the Eurozone. At the same time, the traditional party system collapsed due to a series of scandals linked to corruption and fraud. Many well established politicians had to finish their career making room for technocratic caretakers to take over. Hence, tremendous financial problems were met by policy makers set on finding solutions (Natali 2004).

As a result, two laws were passed under the center-left Giuliano Amato and Carlo A. Ciampi cabinets in 1992 and 1993 (Legislative Decrees 502 and 517, respectively) that gave regions greater responsibility in covering deficit spending for any costs not associated with centralized standards for care, the latter of which became the main focus of the central government. The rationale behind the two laws rested on the notion that by allocating financial responsibility for healthcare at a more local, or in this case, intermediary level, the healthcare needs of regional populations would be better served, as regions – not the central government – would have a clearer understanding of the strengths and weaknesses of their local system of services and could better sustain economies of scale (Maino 2010; Neri 2009). Thus, decentralization would contain costs and enhance efficiency.

Not only setting in motion what would become a lengthy and ongoing process of decentralization, the 1992/3 laws also introduced the opportunity for a radically new model of governance to emerge within Italian healthcare. More specifically, greater financial responsibilities for regions were coupled with greater authority to organize and administer healthcare services locally (Petretto et al. 2003). This was largely due to the introduction of a new governance model that allowed for three inter-related changes in regulation: (1) regions were given the freedom of infusing greater competition into their regional healthcare services; (2) this meant the possible introduction of a purchaser-provider split; and (3) it also implied a change in administrative style and orientation, away from traditional top-down decision making that disadvantaged regions, to the principles of the New Public Management which favored business-style management practices that would be instituted at the regional level.

Accordingly, Italian regulatory developments mimicked those seen in England just two years earlier, however, unlike in England where the internal market had been uniformly introduced, in Italy regions were given the liberty of deciding how and in what manner they would adopt this new form of regulation and significant interregional differences have since emerged: Whereas Lombardy has actively embraced the internal
market principles advanced by the 1992/3 reforms, the remaining regions have largely engaged in one of two types of alternative governance models. The one, prevalent amongst regions of the Center-North and North-East, has elsewhere been referred to as a governance model of ‘cooperation and integration’ that sees regional health services as forming a network in which each provider – whether public or private – is an irreplaceable node that complements rather than competes with other providers in the system; the second model, prevalent amongst regions of the South, has been referred to as a governance model of ‘residual-incrementalism’ that is defined by an absence of a clear regulatory style and is characterized by a tendency to waver between integration and cooperation as governance tools (Neri 2006, 2008).

Despite this variation in governance models, the introduction of the internal market has had a significant impact on service providers in Italy, as it has meant a greater influx of private providers in many regions, as well as a significant redefinition of remuneration and accreditation practices (Neri 2009). Taken together, the new emphasis on competition and market principles in the Italian NHS represents a significant break in regulatory style and ideology. Interestingly, the first proposals for such changes can be traced back to as early as 1984 in Italy, however, it was not until the early 1990s when similar developments across Europe were taking place and when public dissatisfaction with the healthcare system in Italy had reached 88 percent that the 1992/3 reforms would be realized (Neri 2009; Mossialos 1997). Accordingly, the confluence of system-specific deficits, public pressure, and an international policy zeitgeist significantly contributed to, if not determined, the timing of the Italian reforms, whereas the surrounding economic climate only helped to highlight their urgency.

While reform efforts to introduce a new model of competition-based governance within the Italian NHS did not have the dramatic impact they had promised, the process of decentralizing healthcare financing that the 1992/3 laws set in place would not be contained. Recall that in holding regions financially responsible for deficits, the reforms aimed at reducing NHS spending. However, the ongoing under-funding and poor monitoring of regions resulted in little change in spending. Moreover, as Italy approached the prospects of having to meet the Maastricht criteria in the late 1990s, an additional round of healthcare reforms would soon be deemed necessary in order to contain costs (France 2009). Indeed, the pressure of qualifying for the European Monetary Union detracted from what was otherwise a period of economic upturn in Italy starting in 1997.

Interestingly, despite what had hitherto been an unsuccessful attempt at reigning in NHS spending, the central government continued on its path of decentralizing healthcare in the late 1990s. This development can be explained along two lines, both defined politically. First, after a short governmental interlude, the center-left regained office under the leadership of Romano Prodi (years 1996-1998), followed by Massimo D’Alema
(years 1998-2000), who was then succeeded by Giuliano Amato (years 2000-2001) who had first held office during the very passing of Legislative Decree 517 in 1993. Given this consistency in political leadership, it is therefore altogether unsurprising to see at this time a continuation of decentralization as a policy solution for reigning in the perennial problem of uncontrollable healthcare spending. However, national electoral politics alone do not tell the whole story; rather developments also taking place at the regional level in the form of the political mobilization of the (far) right also play an important role in explaining the advancement of decentralization in healthcare during the late 1990s. These are elsewhere discussed at length (Fargion 2006) and will be summarized here briefly by stating that the emergence of the political party Lega Nord was a source of great political pressure such that regional empowerment in many areas of social policy including healthcare was granted by the central government as a means of quelling political unrest and separationist tendencies in the North. Decentralization was therefore a kind of panacea: an important policy legacy for the center-left to return to as it grappled with the ongoing financing woes of the NHS, as well as the political interests of what had become a very vocal opposition.

But how exactly was decentralization furthered in the reforms of the late 1990s? Mainly, changes during this period surmounted in the total regionalization of financing with the establishment of a regional tax (IRAP) in 1998 (Legislative Decree 446 in 1997) and a system of revenue sharing between regions based on value added tax (VAT) and an increased share in excise duties on oil products and, to a lesser extent, income tax (Legislative Decree Number 56 in 2000). This radically new system of financing did away with the earmarked funding coming from the central government’s National Health Fund, which was instead replaced by an Equalization Fund that was created to redistribute financing to regions on the basis of geographic and population size, healthcare needs of the population, and fiscal capacity.

The rationale behind these reforms was to better couple economic trends with healthcare expenditure (Bordignon and Giarda 2004). Given the climate of economic growth that Italy experienced at the end of the 1990s up until 2001, such reasoning was well received as a step forward in better financing the NHS. However, the regionalization of financing was also intended to hold regions more accountable for their spending by giving them various sources of financing to draw from. These sources were expanded when, in August 2000, the central government gave regions the green light on various other means of revenue raising for any costs exceeding regional thresholds. This has meant the increase of co-payments, the introduction of a regional addition to personal income tax, and the possibility of further increases to IRAP (Fargion 2006).

As the Amato cabinet gave way to the center-right party led by Silvio Berlusconi in 2001, the regulation of healthcare financing saw further changes in the way of a height-
ened emphasis on privatization and the passing of a constitutional amendment in March 2001 (Title V) that re-emphasized both the responsibilities of the regions in organizing and delivering healthcare services, as well as the rights of Italian residents to care that is free at the point of delivery. This placed greater pressure on regions to assure their populations’ coverage in line with positive and negative lists of services defined by the central government. By most accounts, the constitutional amendment of 2001 represents an important first step by the central government at trying to counter the centrifugal forces of healthcare decentralization that had been taking place within a larger context of political devolution within Italy (France 2009).

2.4 Regulative recentralization (2001 to present)

As the past decade unfolded, the central government went on to place greater emphasis on monitoring regional performance in healthcare. Within this context, it is important to note the role that the ‘State and Regional Accords’ – established in the Conference of the State and Regions – have played in defining regulatory policy during this period. Of particular importance were those meetings of August 2001 which aimed at controlling healthcare spending, as well as that of March 23, 2005, which established the ‘Pact for Health’ between the state and the regions (France 2007). Amongst other things, the pact defines a greater role for the state in financially supporting the regions, which, in turn, are to be held highly accountable for the efficient usage of funds granted by the state and the balancing of regional budgets. One driving force for this renewed effort to control healthcare spending concerns the ongoing pressure on the Italian government to meet its financial obligations to the EU regarding aggregate levels of public expenditure and public debt. These obligations have been aggravated by the economic instability brought on by the global financial crisis that began in 2001, which has caused Italy to experience acute economic downturn in years 2005, and 2008 to the present.

Despite a small interlude of the central government’s reassertion in healthcare, Italy’s current economic circumstances have led to even greater decentralization in healthcare, with the passing of the most recent reform on fiscal federalism in May 2009 (Legislative Decree 42). Much in the spirit of its predecessors, this reform grants the regions greater revenue raising powers in order to better match their spending powers in social policy. This is especially relevant where healthcare is concerned, as regions currently dedicate 70 percent of their budgets to health services and manage 90 percent of public expenditure on healthcare. To be introduced over the mid-term, the rationale behind the 2009 law mimics that of all pre-existing efforts at decentralizing healthcare in Italy: by granting the regions more financial autonomy, they can be expected to better live within their means and spend more responsibly. In other words, the policy solution to the perennial problem of healthcare financing remains the same even some twenty years after its first emergence in 1992 –namely, continued decentralization.
3 Changes in Financing

In the financing dimension we start our observation with the development of total expenditure on health since 1970. Subsequently, the level and share of public spending is explored in order to address the changing role of the state in health financing. Furthermore, a detailed picture of the public/private-mix is provided by an intersectoral comparison of the three most important healthcare sectors. We finish this section with an interregional perspective on the public/private-mix in healthcare financing. Concerning the intersectoral and the interregional analysis we can only capture the second but, yet far more interesting half of our period of observation due to data limitations.

3.1 Changes in the level of financing

Analogous to the general OECD trend, total expenditure on health exceeded the GDP growth in Italy after the first oil crisis. Between 1972 and 2009 total healthcare costs as a share of the GDP rose from 5.4 to 9.5 percent. Deflated in GDP prices of 2000, the real health expenditure increased from 556 to 1,948 Euros per capita. Both cost indicators grew unsteadily during this time period (see figure 1). With regard to the total health expenditure as share of GDP, phases of strong cost increases (1970-75, 1977-80, 1986-92, 1995-2006, and 2007-09) were interrupted by intermissions (1976-77, 1981-86, 1992-1995, and 2007) with slight decreases. This pattern leads to a stepwise growth of total health expenditure as a share of the GDP.

Figure 1 Development of total health expenditure in absolute and relative terms

As the temporary climaxes fall closely together with the final years of economic recession, the subsequent intermissions arouse suspicion of being merely a denominator ef-
fect (see note [1]). But the declines in expenditure during intermissions were not only caused by the rather external effect of economic recovery. Taking the real health expenditure per capita into account, we see that the growth rate of this indicator significantly drops during the intermission phases. This indicates rather internal measures to contain costs. These phases of spending cutbacks were mostly limited to one year. Only in the early 1990s was strict cost-containment followed over a three year period in order to meet the Maastricht criteria (Lo Scalzo et al. 2009). In part, cost-containment measures at this time might be seen as a by-product of the 1992/3 reforms, which decentralized healthcare financing with an interest in cutting expenditure. However, given the sudden drop in financing and that cost-containment went well beyond the scope of the reforms, the trend observed here is rather linked to entrance into the European Monetary Union. Thus, the decreases of total health expenditures as a share of GDP in the intermissions can be explained by two cumulative factors: the external acceleration of GDP growth and the internal deceleration of per capita costs. In comparison to 23 OECD countries (see note [2]) Italian total health expenditure grew modestly during our observation period. Between 1970 and the early 1990s, Italy spent almost the OECD average of their GDP for healthcare. Due to strict cost-containment, however, total health expenditure fell in the mid-1990s significantly below the OECD average and Italy entered the lowest tertil of our country sample. Although Italian health expenditure continuously increased between 1995 and 2006, growth rates remained in line with the OECD average. Interestingly, seen in relation to other Western economies, Italy’s expenditure cannot be viewed as exuberant, despite the repeated grounds for reform to curb regional spending especially in the South.

3.2 Changes in the financing structure

With regard to the role of the state in healthcare financing we observe the development of public health expenditure. Compared to other OECD countries, on the eve of the first oil crisis Italy had a relatively high public financing share. In 1970, public sources covered 83.7 percent of health expenditure representing the fifth highest share of our country sample. The remainder was paid by private households out-of-pocket. The strong growth of healthcare spending in the early 1970s was mainly covered by public sources. Between 1970 and 1973 public health expenditure increased from 4.5 to 5.3 percent of GDP (see figure 2). As private sources remained relatively constant, the public share peaked with 86.5 percent. Ironically, this historic maximum occurred during the phase when Italy still belonged to the social health insurance countries and left around seven percent of the population uninsured (Lo Scalzo et al. 2009: 19).

With the beginning of the first oil crisis in autumn 1973, the expansion of public financing came to a halt. In the following four years public expenditure steadily decreased to 4.9 percent of GDP. In contrast to this, private sources gained ground and
therefore the public financing share dropped to 83.6 percent. The introduction of the NHS in 1978 led to a new expansion phase. Until 1980, public expenditure rose to 5.5 percent of GDP when the second oil crisis hit the Italian economy. The government made several attempts to impose tight budgets and new co-payments in order to save taxes. The former were opposed by providers, the latter by trade unions which led to an uneven development during this second cost-containment phase from 1981 to 1986. In the end, public spending slightly decreased 0.3 percentage points while private out-of-pocket payments increased by the same amount. The public financing share fell down to 76.8 percent. Fueled by a strong economic growth and a continued generous household policy, Italy returned in 1987 to the expansion path. Within five years, public expenditure skyrocketed to 6.3 percent of the GDP – an entire point more than in 1986. Private sources also grew but to a smaller extent. This led to a recovery of the public financing share which accounted 79.3 percent in 1991.

**Figure 2 Development of public and private current health expenditure**

![Graph showing development of public and private current health expenditure](source: OECD (2010))

The Treaty of Maastricht opened in 1992 a new chapter in Italian welfare policy. While the expansion of expensive programs such as healthcare and pensions ran on high household deficits, the government had to switch to austerity policy in order to meet the criteria for the European Monetary Union. The most ambitious target was the upper level for public deficits of three percent per year. Italian fiscal policy had become dependent on annual deficits above ten percent of GDP for over an entire decade. Therefore, the government axed industrial subsidies, sold state-companies, and did not refrain from major cutbacks on welfare programs. Between 1991 and 1998 public spending on
health shrank from 6.3 to 5.2 percent of GDP. These savings were partly replaced by out-of-pocket payments which accounted at the beginning of the retrenchment period for around a sixth of health expenditure and at the end over a quarter. The public financing share finally reached its historic minimum of 70.4 percent – nearly three percentage points below the OECD-23 average. In 1999, the European Council permitted Italy to enter the Eurozone as a founding member. This allowed the Italian government to slacken the reins again. Except for a short-term cutback in 2007, public spending on health has constantly grown since the late 1990s. In 2009, public health expenditure accounted for 7.3 percent of the GDP – almost two points more than at the end of the 1990s. As private sources remained constantly on a level of about 2.1 percent of the GDP, the public financing share increased to 77.3 percent.

**Summing up**, over our entire observation period we observe a relative retreat of the state in healthcare financing. Although public expenditure on health as a percentage of the GDP increased from 4.5 to 7.3 percent, its financing share decreased from 83.7 to 77.3 percent. The latter was mainly driven by a strong growth of private out-of-pocket payments. Despite the decrease of the public financing share, with the introduction of the NHS public sources changed qualitatively in favor of the state as earmarked social health insurance contributions were replaced by taxes allowing the government a more flexible budget allocation. Also the economic interlinks changed. While spending cutbacks in the 1970s and 1980s were related to economic crises, the retrenchment of the 1990s was dedicated to the Eurozone membership. In the 2000s, neither the splash of the dotcom-bubble nor the recent financial crisis has thus far had a major impact on public expenditure. With regard to changes in financing in relation to the previously discussed regulatory changes, trends observed here can be said to be somewhat detached from regulatory developments: while on the one hand one sees a relative retreat of the state in regulation and in financing, the latter – as indicated above – has been affected to a much greater extent by membership in the European Monetary Union. The decentralization of healthcare financing does not appear to have had a great impact on national trends in expenditure. However, we now turn to intersectoral and interregional comparisons for other potential developments.

### 3.3 Intersectoral comparison

In order to investigate the trends described above in greater depth, we observe the role of public spending in three healthcare sectors: inpatient care, outpatient care, and medical goods. The OECD provides data on the public/private-mix within these sectors since 1988. This period makes it possible to observe any effects of regional reforms taking off in 1992/3 and/or entry into the European Monetary Union.

The overview indicates the usual pattern in OECD countries. The role of public spending is most prominent in the inpatient sector followed by outpatient care (see
Medical goods have the least share of public financing. The strong role of public financing in inpatient care remained relatively stable. In 1988, public spending covered 92.1 percent of inpatient expenditure. During the retrenchment policy of the 1990s this value slightly decreased to 88.1 percent in 1995. Since then public financing recovered again accounting for 92.8 percent of inpatient expenditure in 2009. We observe the same back-and-forth development in the outpatient sector although to a higher magnitude. In 1988, around 78.2 percent of outpatient expenditure was paid by public sources. After a short-term drop in the subsequent year public spending peaked in 1991 when it covered 78.9 percent of outpatient expenditure. During the following retrenchment period, the government extended the role of co-payments which could be justified by two arguments. On the one hand, Italy had to tackle public deficits in order to meet the Maastricht criteria. On the other hand, this measure was in line with the dominating New Public Management ideas promoted in the 1992/3 reforms, as it fostered cost-containment on the demand-side. The role of public spending in the outpatient sector shrank to 66.9 percent in 1998 – twelve percentage points less than 1991. When Italy was permitted to enter the Eurozone in 1999 the public financing share grew again. In 2009, public sources covered 76.7 percent of outpatient expenditure.

Figure 3  Public financing share in three personal healthcare sectors

In contrast to this, the role of public spending on medical goods reflects a different pattern. At the beginning, pharmaceuticals and therapeutic appliances were predominantly financed by public sources accounting 61.5 percent in 1988. As medical goods are typically subjected to out-of-pocket payments by introducing co-payments or delisting sev-
eral drugs from the public benefit package, the retrenchment policy of the 1990s had a large impact on the public-private-mix. The public financing share dropped below the 50 percent level indicating a mainly privately financed sector and hit the ground in 1996. At that time, public sources covered merely 38.3 percent of expenditure on medical goods. Up to 2001, the public financing share quickly recovered to 53.9 percent. In contrast to the inpatient and outpatient sectors this trend did not continue during the 2000s. Public financing fell again below the 50 percent level accounting 45.8 percent of expenditure on medical goods in 2009. Hence, we find a clear privatization trend with regard to medical goods since the late 1980s. Concerning inpatient and outpatient care, the public financing share remained relatively during the last two decades.

3.4 Interregional comparison

Finally, we observe the changing role of the state in healthcare financing from a regional perspective. For this purpose we take the WHO database “Health for All, Italy 2010” into account. It provides data for the 20 Italian regions which are responsible for the organization and administration of health services, relying especially on the aforementioned national VAT and the regional IRAP tax for financing. With regard to public health expenditure, the WHO database includes figures from 1990 on. This period includes the entire decentralization process. It is worth noting that the Italian regions differ extremely with regard to their population size and economic condition. While the most-populous region of Lombardy has around 9.7 million inhabitants, only 127,000 people live in Valle d’Aosta. On the other hand the latter is the richest Italian region with a GDP per capita of over 34,000 euro – twice as much as the level of Calabria in Southern Italy. The coefficient of variation indicates with 0.24 remarkable level of heterogeneity with respect to GDP per capita. In terms of population size the indicator reflects with 0.82 an extreme heterogeneity between the regions.

At first sight, we observe a north-south-divide with regard to the role of public spending (see figure 4). Northern regions have the least share of public financing, central Italy takes a middle position, and the highest public financing shares can be found in Southern regions. This pattern already existed in the beginning of the 1990s but the regions increasingly diverged in the following years. The difference between the economically strong North and the relatively poor South accounted in 1990 for merely 3.1 percentage points, while in 2007 the gap had widened to 8.5 points. This development reflects differences in the national redistribution of value added tax and the ability of well-off Northern households to pay for additional services out-of-pocket.

Having a closer look at the level and change, we observe that between 1990 and 2007 the public financing share strongly declined in nearly all Northern regions except for Trentino-Alto Adige. The latter can be explained by the fact that the region consists of two prosperous provinces with special autonomy rights which allow them to retain a
high share of taxes. The Italian government granted these privileges to the region in order to pacify the domestic and bilateral struggles with the German-speaking majority of South Tyrol. The central Italian regions show no clear pattern. They rather appear to be subdivided into two parts alongside the north-south-divide. While the Northern part of central Italy, represented by the regions Umbria and Marche, also faced a strong decline in the public financing share, the Southern part with Abruzzo and the capital region Lazio had only modest cutbacks. With regard to Southern Italy, we observe only a small decline of public financing. The role of public sources even gained importance in Calabria and Basilicata. In 2007, the latter region also had the highest public financing share of Italian regions accounting for 85 percent of total health expenditure.

![Figure 4](image)

**Figure 4  Public financing share on health in the 20 Italian regions**

<table>
<thead>
<tr>
<th>Public financing share on health in %</th>
<th>1990</th>
<th>2007</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>81.4</td>
<td>74.9</td>
<td>−6.5</td>
</tr>
<tr>
<td>Center</td>
<td>82.9</td>
<td>78.4</td>
<td>−4.5</td>
</tr>
<tr>
<td>South</td>
<td>84.5</td>
<td>82.4</td>
<td>−2.1</td>
</tr>
</tbody>
</table>

Therefore, the figures indicate an increased redistribution of taxes from the North to the South despite increased regionalization of healthcare policy. This can be attributed to the role of the aforementioned Equalization Fund which compensates for interregional differences in population size and economy. However, it also reflects the continued financial backing the state has afforded to the South despite insisting that the latter absorb the costs of regional deficits in healthcare spending (see section 2). It bears mentioning once again that the sole Northern region with a high public financing share consists of provinces with special rights allowing them to shelter their taxes from redistribution.
4 CHANGES IN SERVICE PROVISION

In order to measure the changing role of the state in service provision, information on input resources are combined with data on output resources. Input resources indicate the flow of financial funds into healthcare sectors and therefore capture their size. Output data such as number of hospital beds are used to describe changes in the public/private-mix of these healthcare sectors on the national and regional level. We take three personal healthcare sectors into account which cover around 95 percent of total health expenditure: inpatient care, outpatient care, and medical goods. Mental care, collective healthcare, and unclassified providers are excluded. Finally, we combine input and output indicators to estimate the development of public and private service provision in the Italian healthcare system. As coherent data on the relative size of the three main healthcare sectors is only available from 1988 on, the public service provision index is limited to the second half of our observation period.

4.1 Changes in the service provision structure

Hospitals play the key role in the Italian healthcare system. They provide inpatient care with at least one overnight stay and specialist outpatient care. In 1988 inpatient care absorbed the lion’s share of input resources reflected by 47.1 percent of personal health expenditure. Since then, the role of the inpatient sector remained relatively stable accounting for 47.9 percent in 2009 (see figure 5).

Figure 5  Share of input resource flows in all personal healthcare sectors

![Figure 5](source: OECD (2010))

The outpatient sector including primary, specialist, and dental care underwent a more pronounced development. In 1988, outpatient services represented 29.6 percent of ex-
penditure on personal health. The outpatient sector jumped above the 30-percent bar and peaked with 32.6 percent of all input resources. In the following decade, the role of the outpatient sector slightly decreased but remained steadily above the 30-percent-level. Since 1999, the relative size of the outpatient sector grew again accounting for 32.8 percent of expenditure on personal health in 2009. Medical goods reflect the smallest sector of the Italian healthcare system. Pharmaceuticals as well as therapeutic appliances absorbed in 1988 only 23.3 percent of the input resources. In the following years the government increased co-payments on medical goods which affected the number of prescriptions (OECD 2010). Therefore, the role of medical goods decreased to 20.6 percent of expenditure on personal healthcare in 1994. Up to 2001, the sector’s share recovered to 23.8 percent. Since then, the role of pharmaceuticals and therapeutical appliances fell again even below the 20 percent-level. In 2009, medical goods allocated only 19.3 percent of all input resources – the lowest value observed.

To sum up, throughout our observation period inpatient care remains the dominating healthcare sector with a relatively stable expenditure share. Outpatient care gained slight importance at the expense of medical goods which were the main target of the cost-containment policy by means such as direct price control and increased copayments.

4.2 The public/private mix in the healthcare sectors

As we have gathered information on the size of the respective sectors and changes over time, the next step is to describe the changing public/private mix within each sector. Again, we take the three most important sectors into account: inpatient care, outpatient care, and medical goods.

Starting with the inpatient sector we distinguish on the basis of ownership between public and private hospitals beds. In order to provide a long time series we choose total hospital beds including curative, rehabilitative, and long-term beds within hospital facilities (but not nursing homes). Non-accredited and day clinics are excluded. The classification based on WHO data is not comparable to the new OECD concept of beds in publicly owned hospitals (data only available for 2003-07) but provides consistent results over the observation period.

At the beginning of our observation period Italy had a remarkably dense inpatient infrastructure with 10.6 beds per 1000 inhabitants (see figure 6). Most of them – more specific 83.4 percent in 1970 – were installed in public hospitals. In the following years, the share of public beds steadily increased. It peaked on an 86-percent-level in 1978 when the NHS was introduced. During the 1980s the government closed down a lot of hospitals and the number of beds decreased to 7.1 per 1000 inhabitants in 1989. As public hospitals were especially affected, the public share accounted at that time only 80.3 percent. In 1990, the number of hospital beds increased for the first time in 15 years. This was only driven by an increase of private hospital beds while public beds dropped
again resulting in the lowest public share during our observation period of 76.5 percent. Up to 1997, the number of public hospital beds remained relatively stable while private beds faced a strong decline. Hence, the public share recovered to 82.1 percent. But since the late 1990s, the number of hospital beds continued to drop and again public ones decreased at a higher pace. In 2006, only 3.9 beds per 1000 inhabitants remained representing a value below the OECD-23 average. The number of public hospital beds shrank to around one third compared to the early 1970s, whereas private beds halved. Therefore, the public share accounted for 78.7 percent in 2006 – 7.3 points less than at the introduction of the NHS in 1978.

Figure 6  Hospital ownership in number of beds per 1000 inhabitants

Outpatient care is mainly provided by private providers. GPs and dentists work as self-employed physicians in their own practices. Only medical specialists perform outpatient services either as independent entrepreneurs or salaried public employees. As the revenues of salaried physicians are part of hospital revenue, we can only identify the revenues of private providers within the outpatient sector measured by the sector’s expenditure share. Finally, we measure the public-private mix in the provision of medical goods by taking the share of public pharmacies into account. Italy belongs to the few OECD countries with a significant share of pharmacies owned by municipalities. Since the early 1990s, this share stayed at an eight-percent-level (see note [5])

Summing up, private care dominates two of the three healthcare sectors, but plays only a minor role in the in the most important inpatient sector. Hospitals are traditionally public but rigid closure of entire facilities led to a relative privatization trend over the entire observation period as well as the recent years. In contrast to this, the role of
public pharmacies remained stable although the dispersal of medical goods is mainly in the hands of private providers. Although the state has a regulatory influence on the provision of outpatient services, physicians work mainly as accredited but independent entrepreneurs with volume- or capitation-based fees. Even publicly employed medical specialists are allowed to perform outpatient services autonomously. Hence, public provision plays no role in the outpatient sector measured with OECD data.

4.3 Interregional perspective

In addition to the intersectional perspective on the public/private mix in healthcare provision, we now have a closer look at disparities between regions. We focus on sectors with public providers and take therefore hospitals as well as pharmacies into account. Our observation captures only recent changes as regional statistics on the public-private-mix of hospitals and pharmacies are only available for a few years, (hospitals: 1996-2006; pharmacies: 2005-2010).

**Figure 7  Public hospital beds in the 20 Italian regions**

<table>
<thead>
<tr>
<th>Level and change of public acute hospital beds in %</th>
<th>1996</th>
<th>2006</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>88.3</td>
<td>87.7</td>
<td>-0.6</td>
</tr>
<tr>
<td>Center</td>
<td>85.3</td>
<td>84.4</td>
<td>-0.9</td>
</tr>
<tr>
<td>South</td>
<td>83.3</td>
<td>77.9</td>
<td>-5.3</td>
</tr>
</tbody>
</table>

Starting with the interregional perspective on public hospital infrastructure, we identify a general North-South-gap with some exceptions (see figure 7). In 1996, the gap between North and South concerning the share of public hospital beds accounted for five percentage points. Since then, the share of public hospital beds only slightly decreased...
in the Center-North whereas it underwent a strong decline in the South. Due to this, the difference between Northern and Southern regions nearly doubled to 9.8 points leading to the contradictory picture that the heavily publicly financed Southern regions rely on the most privatized inpatient sectors. Therefore, the majority of services provided in private clinics are paid by public funds. The heavy presence of private providers in the South has been attributed, among other things, to the regions’ administrative and political inefficiencies and weaknesses which fail to provide for the basic social protection of its people (France and Taroni 2005; Neri 2009).

We also find some regions which do not fit in their cluster. Firstly, Lombardy sticks out from the Northern cluster as it faced a strong decrease of public hospital beds from a rather modest level. This led to what is by far the lowest share of public hospital beds in the Northern cluster and can be explained by their regional health policy. As the industrial heart of Italy and stronghold of the political center-right parties, the Lombard region made use of the new opportunities for internal markets granted by the 1992/3 reforms (Frisina Doetter and Götze 2011). The regional government in Milan introduced the most pronounced purchaser-provider-split, also known as the ‘Lombard model’ and accredited a number of private hospitals. Meanwhile, in the Southern cluster Basilicata, which belongs to the least populated regions, is again an exception as it has a very high share of public hospital beds compared to its regional peers.

Figure 8  Public pharmacies in the 20 Italian regions

![Public pharmacies in the 20 Italian regions](image)

<table>
<thead>
<tr>
<th>Region</th>
<th>2005</th>
<th>2010</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>11.4</td>
<td>12.4</td>
<td>+1.0</td>
</tr>
<tr>
<td>Center</td>
<td>9.0</td>
<td>10.0</td>
<td>+1.0</td>
</tr>
<tr>
<td>South</td>
<td>1.2</td>
<td>1.8</td>
<td>+0.6</td>
</tr>
</tbody>
</table>

Legend
- Share of public pharmacies in % (year: 2010)
- > 15.0
- 10.0–14.9
- 5.0–9.9
- 1.0–4.9
- < 1.0

Italics indicate change between 2005-2010 in percentage points

Source: Federfarma

Own depiction based on the NUTS-2 map of Europe; for further explanation of the region clusters see note [3]
With regard to public pharmacies, we find an even more pronounced gap between North and South (see figure 8). While Northern and central regions have a significant share of public pharmacies accounting for around ten percent, this kind of public provision is nearly non-existent in the South. Recent trends indicate an increase of public pharmacies but no catch-up in the South. Rather the North-South gap widens further. The individual regions mainly fit into their cluster. Again Trentino-Alto Adige is an interesting case, as the share of public pharmacies decreased from a relatively low share compared to other Northern regions. As already mentioned this region consists of two different autonomous provinces which are in fact responsible for the organization of their health services. While the Italian-speaking province Trentino has one of the highest shares of public pharmacies accounting for 16.4 percent, there is no public pharmacy in the German-speaking province South Tyrol. The latter can be explained that this reflects the institutional heritage of the Austrian healthcare system which had no tradition of public pharmacies. Hence, the regional data reflects only the average of two completely opposite organized provinces in terms of public pharmacies.

Summing up, general speaking we identify again a North-South-gap with regard to public service provision in hospital and pharmaceutical care. Interestingly the difference is inverse to the findings in the financing dimension – the Northern regions have the highest shares of public provision but the lowest share of public financing. As the general level of public provision is mostly related to big regional clusters (North vs. South) we suspect economic as well as cultural reasons as the main explanation. In contrast to this, some regions show a distinct development compared to their cluster, indicating the effects of regional health policy. Especially the strict purchaser-provider split in Lombardy led to a pronounced privatization trend in the hospital sector compared to other (more leftist governed) Northern regions. The varied results observed here across Italy’s regions can be linked to the freedom granted to regions in the 1992/3 reforms to introduce internal market mechanisms at their discretion.

4.4 The changing role of the state in service provision

In order to assess the changing role of the state in service provision it is necessary to combine the sector specific data by generating a formula for an assessment of the role of the state over all healthcare sectors. For this purpose, we suggest a Public Provision Index (PPI), which results by multiplying the share of resources allocated to each sector with its respective public/private-mix of service provision (see Rothgang et al. 2008). The PPI ranges from zero (no public provision) to one hundred, meaning all hospitals and pharmacies are owned by the state or municipalities as well as all physicians work as public employees. By doing this over a period of several years, we obtain one condensed indicator for the role of the state over all sectors and its change over time. As we
only have coherent data for all necessary indicators between 1988 and 2006, we can only capture the second half of our observation period.

Starting with 1988, inpatient services consumed 47.1 percent of personal healthcare resources. Multiplied by the share of public hospital beds which was at that time 82.8 percent, the inpatient sector contributed 39 points to the PPI. In addition, medical goods (23.3 percent of input resources) were also dispensed by public providers as eight percent of the pharmacies were owned by municipalities. This contributes an additional 1.9 points to the PPI. Hence, the PPI accounted for 40.9 points in 1988 which reflected nearly the average of the OECD world but a relatively low value within the NHS sub-group (Rothgang et al. 2010: 67).

**Figure 9  Public provision index in percent**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PPI</td>
<td>40.9</td>
<td>36.8</td>
<td>39.0</td>
<td>39.7</td>
<td>39.5</td>
<td>39.6</td>
<td>39.3</td>
<td>38.4</td>
<td>38.7</td>
<td>39.0</td>
</tr>
</tbody>
</table>

Own calculation, weighted public/private mix of three personal healthcare sectors

Within two years the PPI dropped 4.1 points accounting for 36.8 in 1990 (see figure 9). This is an effect of a twofold development. On the one hand, an implicit privatization as the private outpatient sector gained importance at the expense of the inpatient sector. On the other hand, an explicit privatization as the number of private hospital beds strongly increased in 1990 while public ones continued to decline. This leads to the contradictory observation that the role of the inpatient sector declined in the same year when the total number of inpatient beds grew for the first time since 1974. By taking the following years into account, the year 1990 appears even more exceptional as the PPI immediately bounced back to 39 points. The PPI oscillated around this level up to 2006. Therefore, we observe a slight privatization trend between 1988 and 2006 as the PPI fell 1.9 points.

*Summing up*, the role of the state as a provider of healthcare services was strong in the inpatient sector throughout our entire period of observation. In contrast to this, the other healthcare sectors were dominated by private providers. Although the introduction of the NHS in 1978 led to a peak of public hospital beds’ share, it did not affect private provision in the outpatient sector. The independent status of physicians in terms of outpatient care prevailed as a kind of heritage from the former social insurance system. This contributed to a comparatively low public provision index of around 40 percent for a NHS country. As the aforementioned healthcare reforms allowed the regions greater freedom to enter into contracts with private providers, we observe a continued privatization trend in the hospital sector. Therefore, the role of the state as provider of health services is expected to decline further in the future.
5 CONCLUSION

Since its inception in 1978, the Italian NHS has undergone a significant transformation in the way of decentralization and the introduction of internal market principles. These changes in regulation have been direct responses both to problems commonly shared by NHS systems, but also the particular failings of the Italian healthcare system in controlling regional spending. Within this context, exogenous shocks such as economic crises have served to stress the need for reforms, without actually driving them. Of greater significance in explaining changes in regulation for this case has been the interaction between endogenous or system-specific problems and institutional factors lodged especially within the regions such as political-administrative culture, political interests, as well as levels of corruption. These factors, coupled with the significant role of policy ideas in shaping policy solutions, as well as pressure wrought on by public dissatisfaction with the healthcare system have determined the content and timing of reforms. Interestingly, despite the persistence of system-specific problems over our period of observation, the Italian government has responded with great consistency in its reform measures, both in periods of acute economic crisis and that of relative stability –namely, decentralization or the regionalization of healthcare financing and a (varied) reliance on the internal market. This has culminated in a relative retreat of the state in healthcare.

Findings for financing also demonstrate a relative retreat of the state, with a strong growth in private out-of-pocket payments leading to a decline in the public share of financing from 83.7 to 77.3 percent over our period of observation. Interestingly, while spending cutbacks in the 1970s and 1980s were related to economic crises, the retrenchment of the 1990s was dedicated to the Eurozone membership and findings for the 2000s demonstrate that neither the splash of the dotcom-bubble nor the recent financial crisis has thus far had a major impact on public expenditure. Therefore, unlike in the case of regulation where endogenous factors play a greater role in determining changes, here exogenous factors, particularly Europeanization, have steered changes in financing. Meanwhile the decentralization of financing – the major regulatory development observed in Italy – appears to have done little to influence trends in financing. This absence of effect is most likely due to the ongoing role that redistribution and state backing play despite the regionalization of healthcare financing.

Finally, results for service provision also show a relative retreat of the state. Whereas the role of the state as a provider of healthcare services remained quite strong in the inpatient sector over our entire period of observation, increasing privatization of the hospital sector can nevertheless be observed. Moreover, other healthcare sectors, particularly in the outpatient sector, have been dominated by private providers. This has contributed to a comparatively low public provision index of around 40 percent, which is unusual for an NHS country. Mainly, the decline in public provision can be attributed to
the 1992/3 regulatory reforms that introduced greater freedoms for regions to enter into contracts with private providers. As we have concluded that these reforms are rooted in endogenous explanatory factors, we can also derive that changes in service provision are to be linked with system-specific deficiencies that have increasingly looked to private market arrangements for solutions to perennial problems. Taken together, we find that the role of the state in Italian healthcare policy has indeed declined. However, the nature of change underpinning this decline varies according to the dimension at hand thereby leading to a complex picture of change.

Our findings therefore point to the significance of using multi-theoretical or holistic approaches to understanding change (see also Schmid et al. 2010), as we find evidence for the role of institutions (Bonoli and Palier 2000), particularly in the form of endogenous sources of inefficiency lodged within institutions (Cacace et al. 2008; Schmid et al. 2010) but also normative institutions as in the form of ideas, as well as economic and social developments (Castles 2000; Pierson 2001). Moreover, the issue of timing (Bonoli 2007; Kingdon 1984) also comes to the fore when explaining change in the Italian healthcare system, as we have observed that periods of economic crisis have created windows of opportunity for reforms without actually dictating their content or purpose. As concerns the thesis, 'reform without change and change without reform' (Hacker 2004: 693), the Italian case demonstrates strong support for the former development: despite ongoing decentralization and a weakening role of the state in healthcare policy, the perennial problem of regional spending has not yet been solved. However, what has emerged from the reform process is the rather novel phenomenon of a highly regionalized National Health Service.
NOTES

[1] The identification of recessions relies on the development of seasonally adjusted GDP data in constant prices taken from the OECD Quarterly National Accounts (OECD 2011). **Dating:** Recessions are defined as periods starting with a GDP decline (i.e. growth below zero) in two consecutive quarters and ending when the GDP surpasses the pre-recession level. **Duration:** Number of quarters within the duration period. The short recovery period in double-dip recessions (occurs in Italy only the dot-com bubble) is not included in the duration. **Depth:** Comparison of the lowest quarterly GDP level during a recession with the pre-recession level measured in percent.

<table>
<thead>
<tr>
<th></th>
<th>First oil crisis</th>
<th>Mid-1970s recession</th>
<th>Second oil crisis</th>
<th>Early 1990s recession</th>
<th>Dot-com bubble</th>
<th>Financial crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dating</strong></td>
<td>Q4/74–Q4/75</td>
<td>Q2/77–Q4/77</td>
<td>Q1/82–Q2/83</td>
<td>Q2/92–Q1/94</td>
<td>Q2/02–Q3/03</td>
<td>since Q4/07</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>5 quarters</td>
<td>3 quarters</td>
<td>6 quarters</td>
<td>8 quarters</td>
<td>7 quarters</td>
<td>&gt;14 quarters</td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>−3.8%</td>
<td>−1.5%</td>
<td>−0.7%</td>
<td>−1.9%</td>
<td>−0.6%</td>
<td>−6.8%</td>
</tr>
</tbody>
</table>

[2] The sample **OECD-23** includes all countries which joined the OECD before the beginning of the first oil crisis (reference date: October 17, 1973): Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States. Due to its outlier position Turkey was excluded.

[3] Regions clustered according to their NUTS-2 code. **North** represents the macroregions ITC and ITC including the regions Piemonte, Valle d’Aosta, Lombardia, Trentino, Veneto, Friuli, Liguria, and Emilia Romagna. **Center** represents the macroregion ITE including the regions Toscana, Umbria, Marche, Lazio, and Abruzzo. **South** represents the macroregions ITF and ITG including the regions Molise, Campania, Puglia, Basilicata, Calabria, Sicilia, and Sardegna.


[5] Data for the **share of public pharmacies** taken from the comparative statistics provided by the European Union of Social Pharmacies. The Indicator takes the **number of public and private pharmacies** into account but not their size (e.g. employees, dispensed drugs, or revenue).
REFERENCES


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