

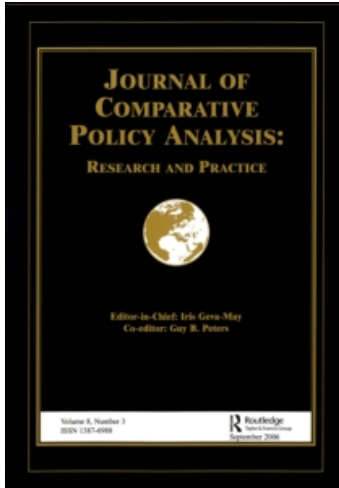
This article was downloaded by: [Mannheimer Zentrum Fuer Europaeische]

On: 26 March 2010

Access details: Access Details: [subscription number 917206524]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Journal of Comparative Policy Analysis: Research and Practice

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713672306>

Translating Monetary Inputs into Health Care Provision: A Comparative Analysis of the Impact of Different Modes of Public Policy

Claus Wendt ^a, Jürgen Kohl ^b

^a University of Mannheim, Germany ^b University of Heidelberg, Germany

Online publication date: 26 March 2010

To cite this Article Wendt, Claus and Kohl, Jürgen (2010) 'Translating Monetary Inputs into Health Care Provision: A Comparative Analysis of the Impact of Different Modes of Public Policy', *Journal of Comparative Policy Analysis: Research and Practice*, 12: 1, 11 – 31

To link to this Article: DOI: 10.1080/13876980903076161

URL: <http://dx.doi.org/10.1080/13876980903076161>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Translating Monetary Inputs into Health Care Provision: A Comparative Analysis of the Impact of Different Modes of Public Policy

CLAUS WENDT* and JÜRGEN KOHL**

*University of Mannheim, Germany; **University of Heidelberg, Germany

ABSTRACT *This article investigates different modes of public policy in health care and their impact on health care financing and health service provision. In order to investigate the relationship between health expenditure and health service provision, we construct an “index of health care providers”. The empirical analysis of expenditure and this index demonstrates that there is only a weak correspondence between the level of total health expenditure and the number of health service providers in OECD countries. Different modes of health policy can help to explain why some countries are more successful in translating monetary inputs into health care personnel than other countries. Our results indicate that policies which favor self-regulation by non-governmental actors (as in Germany) lead in general to high levels of health care providers at above OECD average health expenditure. Policies which favor direct state control (as in the United Kingdom), on the other hand, are characterized by lower levels of health care providers and below average health expenditure. Policies which favor market elements are more difficult to categorize. However, it is noteworthy that especially countries that give market mechanisms higher priority than other countries (as the United States) offer below average numbers of health care providers at comparatively high total health care costs.*

Dr Claus Wendt is a Sociologist and Political Scientist. He is Senior Research Fellow and Project Director at the Mannheim Center for European Social Research, Mannheim University, and from 2008 to 2009 J.F. Kennedy Fellow at the Center for European Studies, Harvard University. From 2003 to 2005 he was Senior Research Fellow in the project “The Changing Role of the State in OECD Health Care Systems” at the Collaborative Research Center “Transformations of the State”, University of Bremen. Areas of expertise include: comparative healthcare system research, welfare state comparison, and institutional theory.

Jürgen Kohl is Professor of Sociology at the University of Heidelberg, Germany, and teaches political sociology and social and public policy analysis. He has been DAAD Visiting Professor at the Department of Political Science at Northwestern University, Evanston, IL, Jean Monnet Research Fellow at the European University Institute in Florence, Italy, and research fellow at the Hanse Institute for Advanced Study, Bremen. His research interests are in the field of comparative social policy and welfare state research and cover a wide range of topics: from poverty research, pension policies, and health systems analysis to European social policy and public opinion on the welfare state.

Correspondence Address: Dr Claus Wendt, Mannheim Center for European Social Research, MZES, University of Mannheim, A5, 5, D-68159 Mannheim, Germany.

Email: claus.wendt@mzes.uni-mannheim.de

Introduction

Health care systems in advanced welfare states are facing major challenges. The most notable pressures are related to the processes of economic globalization, socio-demographic change, and persistent unemployment. More specifically, due to medical-technical innovations the scope for medical treatment has been expanding continuously while the financial resources have reached their limits to grow in most OECD countries. Reforms aiming at retrenchment or recalibration in health care systems have been widespread in recent years (Marmor *et al.* 2005).

In this paper, we analyze the impact of public policies on the level and structure of health care financing and service provision in OECD countries. While there are numerous cross-national studies of financing and expenditure (e.g. Culyer 1990, Schieber and Poullier 1990, Evans 1996, Jönsson and Musgrove 1997, Chinitz *et al.* 1998, Kanavos and McKee 1998), and of health service provision (e.g. McPherson 1990, Hsiao 1995, Freeman 2000, Figueras *et al.* 2004, Wendt and Thompson 2004), the comparative analysis of public policies is a more recent topic in health care system research.

Tuohy (2003), for instance, differentiates between “agency”, “contract”, and “networks” as modes of governance in the health care arena, and Rico *et al.* (2003) draw a distinction between “market”, “hierarchy”, and “networks”. Based on these and further concepts (see Marmor and Okma 1998, Moran 1999, 2000, Bamba 2005, Rothgang *et al.* 2005, Burau and Blank 2006), we suggest three (ideal) types of public policies with regard to health care:

- policies that favor direct public control of health care financing and service provision;
- policies that favor self-regulation by non-governmental actors;
- and policies that favor market mechanisms.

These policies have been discussed in a similar way by Giaimo and Manow (1999), who distinguish between a “state-led”, a “corporatist-governed”, and a “market-driven” health care system. There are also similarities to the components of the “institutional mix” (hierarchy, market and collegiality) in health care systems as defined by Tuohy (2009). The main difference between the three modes of public policy and Tuohy’s concept is our focus on self-regulation by non-governmental actors (including doctors) while Tuohy concentrates on collegiality between doctors and pays less attention to other non-governmental influences.

In line with Tuohy, however, we are aware that these types never exist in pure form, but that existing health care systems typically represent mixes of direct public control, self-regulation, and market elements. Grouping countries under the same category, therefore, only means that the respective mode of public policy is given higher priority than the two alternative ones. The more specific question of this paper is how the financing of health care systems and the provision of health care services is affected by the (dominant) mode of public policy.

The paper analyzes health expenditure and service provision in 25 OECD countries.¹ Within the limits of this paper, however, it is not possible to provide

detailed information on public policies in the “health care arena” (Tuohy 2003) for such a large number of countries. We therefore select three countries for closer scrutiny, each representing one of the three types of public policy. While the United Kingdom is still a good example of state hierarchy and Germany contains strong self-regulatory elements, cases that represent the mode of public policy that favors market mechanisms are more ambiguous. However, a wide range of authors agree that the US health care system is dominated by consumer choice and market competition to a higher degree than other OECD countries (Marmor *et al.* 1992, Hsiao 1995, Giaimo and Manow 1999, Hacker 2002, 2004, Tuohy 2003, Rothgang *et al.* 2005). Following their arguments, we take the US case not as an example for a pure “private market model” but for a mode of public policy that favors market solutions in the health care arena to a greater extent than alternative public policies. This “embedded design” offers us the opportunity to combine a quantitative analysis of health care financing and service provision in a larger number of countries with a more qualitative analysis of health reform processes in some “paradigmatic” cases: the UK, Germany, and the US.

After discussing recent policy developments in these three countries, we examine the financing of health care services in section three. Discussing both the respective mode of public policy and the method of financing, we explore how these factors may influence the development of total health expenditures. In section four, we investigate how the respective mode of public policy may influence the number of health care providers. Is the level of health employment related to the level and structure (the public/private mix) of health care financing? And which mode of public policy is more successful in translating monetary inputs into health care services? To analyze these questions, we construct an “index of health care providers” which provides us with more comprehensive information on the “input side” of health care systems than, for instance, the number of total health employment or the number of doctors.

Keeping in mind that health systems always incorporate a mix of public policy elements and that we only focus on the predominant one, our analysis is guided by the following hypotheses:

H1: Public policies that favor direct public control of health expenditure and service provision are in general more successful in keeping health care costs under control, a success, however, that might be achieved at the expense of the quality and quantity of health care services.

H2: Self-regulation, on the other hand, is likely to promote high volume and high quality health care – due to the direct involvement of service providers. In such a system, the state is responsible for the legislative framework, but has only limited direct means for stabilizing health expenditure.

H3: Market mechanisms also set incentives for suppliers to offer high-quality health care services. However, since the access to these services – at least partly – depends on the ability to pay for them, the health care services actually provided (and thus the number of providers) may be lower than in self-regulated systems. The capacity of the state to control health care costs, moreover, is particularly low.

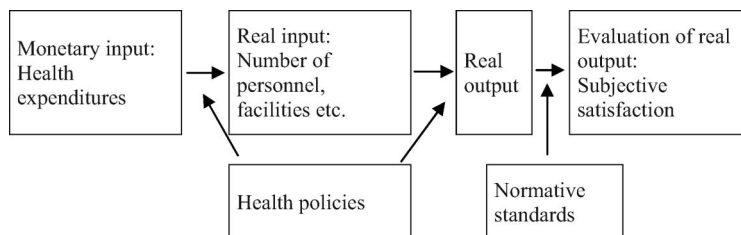
Modes of Public Policy in the Health Care Arena

The process of producing health care services can be conceptualized in the following way (see Figure 1): “Monetary inputs” (health expenditure) are transformed into “real inputs” (health care personnel, facilities), and these, in turn, are used to generate “real outputs” (number of doctor/patient contacts, medical treatments of various kinds). The variety of health services is then evaluated by the population which results in certain levels of subjective satisfaction. In the context of this paper, we concentrate on the question how “monetary inputs” are translated into “real inputs” (health service providers) as well as the potential impact of health policies on this process. Questions regarding the output side and the evaluation of the output (or other indicators for the quality of health care services) will not be dealt with in this essay.² While indicators of health care provision like the ones we use are sometimes considered as objective indicators of health care quality, we would like to insist upon the difference between “real inputs” and “real outputs”. In our view, the number of doctors and other medical personnel and the number of medical facilities are the “production factors” which may be combined in various ways to produce services which meet the needs and demands of the citizens.

In the following we discuss health policy measures by taking the examples of the US, the UK, and Germany where different modes of public policy are predominant. Thus, our country sample includes a hierarchical, a self-regulated, and a market-oriented health care system, even if we admit that our “ideal-typical” approach does not fit the empirical reality of these countries in all respects.

The British National Health Service (NHS) can be taken as an example of a mode of public policy where direct control over the health care system has for many years been concentrated at the national level. The central cost control system was even strengthened by the introduction of cash limits in 1980. From the early 1990s onwards, however, the establishment of “internal markets” reduced direct state control and increased competition between service providers for contracts with purchasers (Powell 2003). The purchaser/provider split and the set-up of GP (general practitioner) fundholding schemes, Hospital Trusts and, later, Primary Care Trusts (PCTs) (Ham 2004) strengthened not only the autonomy of smaller NHS units with regard to the allocation of resources but also their competencies in further areas of the British health care system. The central government, for instance, still controls the number and location of GPs, but state restrictions were eased by the introduction of

Figure 1. The “production process” of health care services



Source: Kohl and Wendt 2004: 326.

fundholding models and Primary Care Trusts. Within PCTs, today not only GPs but also specialists and further health personnel can be employed on a salary basis (Grimmeisen 2009). Responsibilities regarding the access of service providers to the “health care market” and the method of remuneration have therefore partly shifted from the central government level to local units. As Freeman and Moran (2000) argue, these and further changes accumulated to a process of devolution where Primary Care Trusts, Hospital Trusts and further units have been given a higher degree of responsibility and autonomy. PCTs, established in 2001, gained control over 75% of the NHS budget and, initially serving at average a population of about 200,000, are responsible for the full range of health care services for the respective population (Ham 2004, Grimmeisen 2009). Within these units co-operation between service providers is of major importance so that the utilization of market-style elements has lost ground. To put it in the words of Freeman and Moran (2000: 55):

Competition . . . perhaps the signal term in the international discourse of reform, may well turn out to have been one of the more transient. In the UK, where it was promoted most vigorously, and in Sweden, competition has turned relatively quickly into collaboration between larger units with more clearly defined functions of planning and providing care.

Processes of devolution have also taken place in other NHS systems as, for instance, in Denmark, Finland, Sweden or Spain. The reduction of direct control by national governments and the strengthening of responsibilities at the regional or local level seem to represent a more general trend in NHS systems.

Social Health Insurance (SHI) systems, on the other hand, can be characterized by a high level of self-regulation. In Germany, sickness funds and doctors’ associations traditionally negotiate on the budget and conditions for health care provision. These and further actors sought to be powerful veto players, what has been a major reason why structural reforms could successfully be blocked in Germany for many years (Wendt 2006). From the early 1990s onwards the self-regulatory core came under pressure from two sides, bringing a remarkably stable development (Tuohy 2009) to an end. The state has improved its capacity for direct intervention, and at the same time market mechanisms have been introduced, as some commentators argue, to bypass established veto positions (Giaimo and Manow 1999, Tuohy 1999, Giaimo 2002, Wendt 2006). These market elements were different from those implemented in NHS systems since in SHI systems a separation between purchasers and providers exists almost by definition (Freeman 2000). In contrast to NHS systems, this process also included the funding side, and in some SHI systems (e.g. Germany, Netherlands) competition between sickness funds has been extended in the belief that this would increase both efficiency and quality (Busse *et al.* 2004).

While in Germany for many years the overall budget was set by negotiations between associations of sickness funds and associations of panel doctors, sectoral budgets (for out-patient, in-patient, and pharmaceutical health care) have been introduced by the federal government in 1993. In 1997, free choice of sickness funds has been extended to almost the whole insured population. The launch of competition between sickness funds and the introduction of a corresponding risk-adjustment mechanism for the first time introduced competition as a co-ordinating

mechanism in its own right (Wendt *et al.* 2005). In this way, stronger state intervention has been complemented by a greater importance of market mechanisms. In other SHI systems, as for instance in Austria, direct state intervention is even stronger since social insurance contribution rates are set by the government and not, as in Germany, by the self-administration of sickness funds. Further examples for an increase of state intervention in the German SHI scheme are the introduction of a flat-rate component for the remuneration of GPs (traditionally paid on a fee-for-service basis), a tightening of the conditions for panel doctors to enter the health care market, and a strengthening of GPs' "gatekeeping role" by financial incentives. Other SHI schemes experienced similar changes. The French social health insurance, for instance, which is traditionally characterized by a high degree of centralization, experienced a further strengthening of the role of the state, especially with regard to the setting of global budgets (Hassenteufel and Palier 2007). Germany not only sought to increase macro-economic control over costs, but also improved possibilities to negotiate individual contracts between purchasers and providers and thereby increased competition between sickness funds. Until now, however, health units that are comparable to the British PCTs, e.g. local health clinics or doctors' networks, have not been established in great numbers in SHI schemes.

The US health care system gives more scope to markets than other OECD health care systems. However, far from being a pure "private market model" it combines social insurance elements (Medicare), means-tested programs (Medicaid), private insurance, and direct private out-of-pocket payments. Private health insurance, which is (often in the form of a company-based plan) for most Americans the first line of protection against the risk of medical costs and today provides collective coverage for about 70% of the US population is heavily regulated by the state. However, since the 1960s public programs such as Medicare and Medicaid have become increasingly important and today cover about 25% of the population. Since private insurance, too, is heavily tax subsidized, about half of total health expenditure is financed out of public funds (Moran 2000, Cacace 2009). Especially private out-of-pocket financing has been reduced from 48.5% of total health expenditure in 1960 to 13.2% in 2005 (OECD Health Data 2006). At the same time more than 17% of the US population below the age of 65 are today without coverage by private insurance or by public schemes in the case of sickness (White 2007).³ Thus, public policies with strong emphasis on private solutions leave room for the exclusion of larger groups of the society from access to health care (Hacker 2004), even if health care services are primarily financed out of the public purse.

While NHS and SHI systems introduced market elements, the US health care system experienced a stronger emphasis of hierarchical co-ordination within "managed care" plans, and particularly in Health Maintenance Organizations (HMOs). From the late 1980s and early 1990s onwards, the federal government has been actively encouraging Medicare beneficiaries to receive their health care through managed care organizations, and the states also started to shift Medicaid recipients into managed care plans (Patel and Rushefsky 1999). As a result of this process, physicians, traditionally paid on a fee-for-service basis, were confronted with new models of remuneration. Depending on the respective managed care scheme, primary care physicians and specialists may now either be paid on a salary basis, a capitation fee, or a (discounted) fee-for-service. Also, patients' choices of service

providers have been restricted in various ways. In managed care, the choice is generally limited to a pre-selected network of service providers. While in HMOs, enrollees have no choice of provider and receive access to specialists only through the primary care provider, in preferred provider organizations (PPOs), members may choose to opt out of the network of providers but at the cost of higher private co-payments. In case of point-of-service (POS) plans there is a primary care provider as gatekeeper, and members have also the freedom to opt out when choosing higher co-payments (Newbrander and Eichler 2001).

Since the late 1980s conventional indemnity coverage nearly disappeared from the field of private insurance. While in the beginning the more restrictive and hierarchical HMOs gained the largest market share, from the mid-1990s onwards the more flexible and less hierarchical PPOs grew more quickly. By 2005, about 61% of all privately insured persons were enrolled in PPO plans and only 21% in HMO plans (White 2007). Market forces thus generated not only “an explosive growth of complex contracting arrangements” (Tuohy 2009), but within this system less hierarchical managed care plans (PPOs) with fewer constraints on doctors and patients have gained greater market shares than more tightly regulated managed care plans (HMOs) (White 2007).

These examples from the three selected countries suggest that health policies are increasingly oriented towards adopting “best practices” even when the respective solutions are beyond the traditional paths of reform. Other comparative studies (Moran 1999, Freeman 2000, Giaimo 2002, Rico *et al.* 2003, Kangas 2004, Wendt *et al.* 2005) have also indicated a convergence of the way in which different health care systems are regulated. Despite these changes the three types have demonstrated remarkable stability, and health policy measures that have been adopted from other types of health care systems have been attenuated and adjusted to the overall institutional and structural characteristics of the “receiving” system (Tuohy 2009). Even if modes of public policy have become more similar in recent years, the UK, Germany, and the US therefore still represent three distinct types of health care systems. In the following sections, we analyze whether these modes of public policy are mirrored in levels of expenditure and service provision. By including further OECD countries we try to detect whether countries following similar public policies show similar patterns with regard to health expenditure and health care provision.

Health Expenditure and Health Care Financing

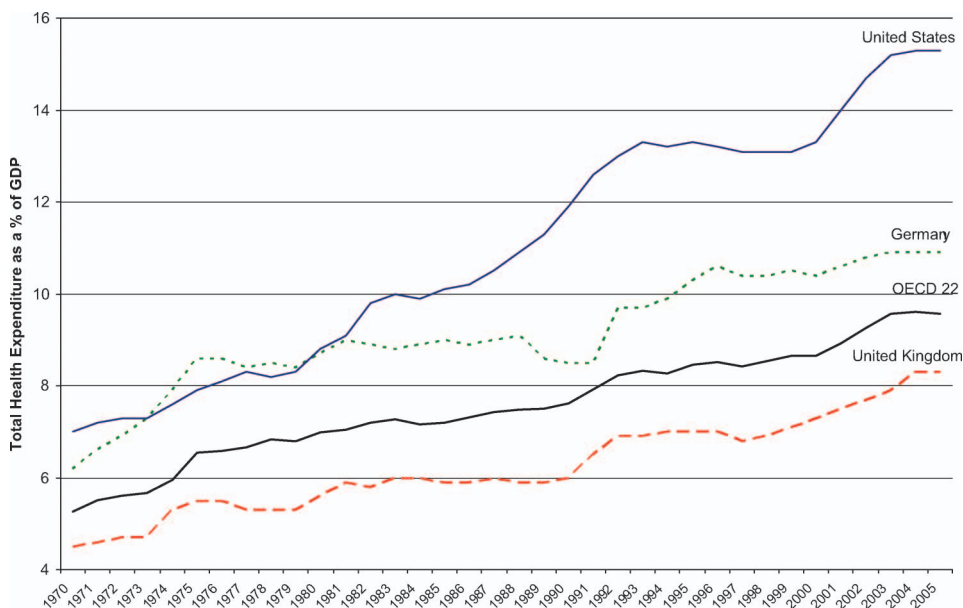
The control of health care expenditures seems to be a perennial problem in all types of health care systems (Jönsson and Musgrove 1997, Chinitz *et al.* 1998, Kanavos and McKee 1998, Marmor *et al.* 2005). There are both demand-side and supply-side reasons why health care expenditures are accounting for an ever growing share of GDP. On the demand side, these reasons include new diseases as HIV/AIDS (Steffen 2005), population aging (with more expensive health needs), and a growing demand for health services in affluent societies in general (“health” as a “superior good”). On the supply side, reasons include the labor-intensive character of health services which are not easily amenable to productivity gains, and medical and technological progress which leads to cost-intensive treatment of ever more diseases. However, while these factors are general trends affecting more or less all advanced health care

systems alike, it is an important policy question whether some health systems are better able to control health expenditure development than others.

In Figure 2, we see an average increase of total health expenditures in OECD countries from 5.3% of GDP in 1970 to 9.6% of GDP in 2005. That is, the share of health care expenditures in GDP has risen by more than 80% of its initial level during that period, thereby crowding out other expenditure items. This analysis shows that the British NHS has been the most successful in controlling health care costs. The German SHI scheme also managed to stabilize total health expenditure (in percentage of GDP) in the period after the oil price shocks of the 1970s. Following German unification in 1990, however, total health expenditure reached its highest level so far. Compared to the mainly publicly financed types, the market-oriented US health care system experienced a virtual explosion of health care costs – in contrast to the claim often made that market mechanisms would contribute to more competition among service providers and thereby exert more control on costs. Until 2005, total health financing has risen to more than 15% of GDP and thereby doubled its initial level in 1970. As a result of the much more pronounced expenditure increase in the US, a growing divergence between the three health care systems with regard to total expenditure development becomes apparent.

According to Alber (1988), in periods of welfare state expansion health expenditures increase in all types of health care systems. In periods of cost containment, however, NHS systems with higher interventionist power of the state

Figure 2. Total health care expenditure as a percentage of GDP, 1970–2005



Notes: Germany: data until 1990 are for West Germany and from 1992 onwards for United Germany. CEE countries have been excluded since data are only available from 1990 onwards.
Source: OECD 2006.

are in general more effective in controlling the increase of health care costs than either SHI systems or market-based systems.

The hypothesis that publicly financed systems have a greater potential for cost containment is supported when we correlate the share of public health financing⁴ with total health expenditure (in percentage of GDP) (see Table 1, Figures 3 and 4). While in 1970 there is almost no correlation, in 2003 we find a strong negative

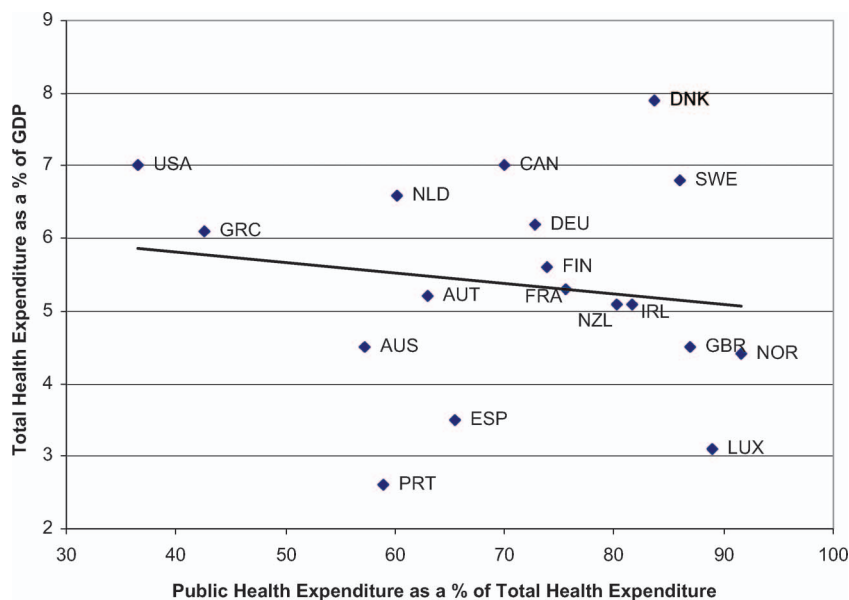
Table 1. Correlations of public health expenditure (PHE) and total health expenditure (THE)

	Pearson's R	N
Public Health Expenditure (in % of THE) and Total Health Expenditure (in % of GDP), 1970	-0.15	18
Public Health Expenditure (in % of THE) and Total Health Expenditure (in % of GDP), 2003	-0.67**	25
Public Health Expenditure (in % of THE) and Total Health Expenditure (in % of GDP), 2003 (only countries included for which 1970 data are available)	-0.66**	18

Notes: **p < 0.05, *p < 0.1.

Source: OECD 2006; own calculation.

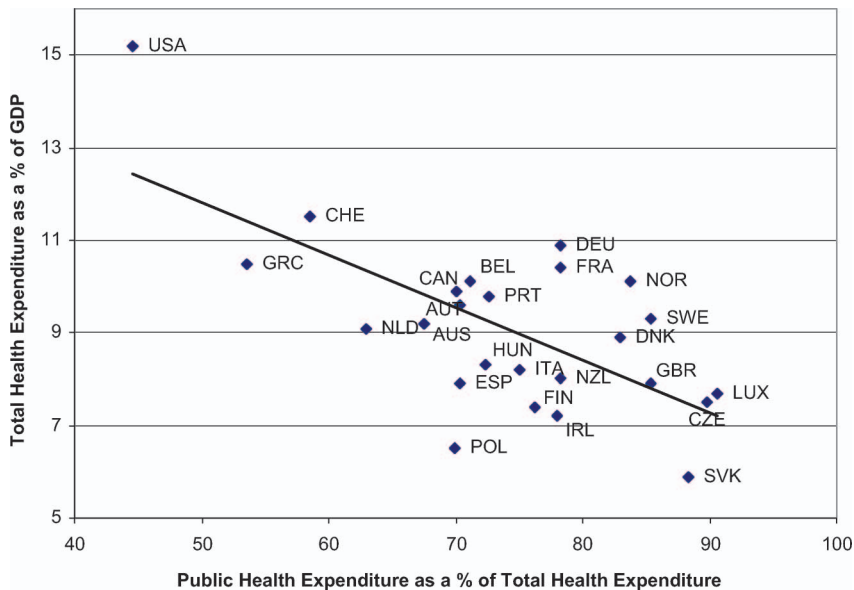
Figure 3. Total health care expenditure as a percentage of GDP and public share of total health expenditure, 1970



Notes: Abbreviations are as follows: AUS: Australia; AUT: Austria; BEL: Belgium; CAN: Canada; DNK: Denmark; FIN: Finland; FRA: France; DEU: Germany; GRC: Greece; IRL: Ireland; ITA: Italy; LUX: Luxembourg; NLD: Netherlands; NZL: New Zealand; NOR: Norway; PRT: Portugal; ESP: Spain; SWE: Sweden; CHE: Switzerland; GBR: United Kingdom; USA: United States. Data for Belgium, Italy, and Switzerland are missing.

Source: OECD 2006.

Figure 4. Total health expenditure as a percentage of GDP and public share of total health expenditure, 2003



Notes: For 2003, data for CEE countries have been included (abbreviations are: CZE: Czech Republic; HUN: Hungary; POL: Poland; SVK: Slovak Republic); the correlation ($r = -0.66$) is at a similar level when excluding CEE countries (see Table 1).

Source: OECD 2006.

correlation of $r = -0.67$ (even when excluding the US case, the correlation is at $r = -0.48$) (see as well Tuohy *et al.* 2004).

Therefore, the more a health care system is financed out of private sources, the higher is the *level* of total health care expenditure (in percentage of GDP) and also the *increase* in total health care spending (Rothgang *et al.* 2005). This indicates that public agencies – by regulation and/or as purchasers of health care services – can control health care costs more effectively than market forces. However, while state regulation may be able to slow down the increase of health expenditures, examples for a reduction of an already achieved level of health care costs are very rare (Wendt and Thompson 2004; Tuohy 2009).

Even if no clear country groups can be identified, “mature” NHS systems (Finland, New Zealand, UK, Denmark, and Sweden) are in general more successful in keeping health care costs under control than later developed NHS schemes (Greece, Portugal). Early developed social insurance systems (Germany, France, Belgium, and Austria), on the other hand, allow a higher share of private funding and consume in general a higher share of the GDP than NHS systems. The new social insurance systems in CEE countries are currently characterized by higher shares of public funding and lower levels of total health expenditure. Those health care systems where a large part of the health care budget is funded out of private sources (Switzerland and the US) also consume the largest share of GDP.

The brief discussion of health policies in the UK, Germany, and the US provides some first arguments for the different potential in keeping total health care costs under control. In the UK, for the whole period under consideration, total health expenditure as a share of GDP remained below the OECD average, a fact that can be considered to be highly related to the centralized planning and control system of the British NHS. With the introduction of internal markets into the British NHS, total health expenditure increased at a *higher* rate than in previous years. In the German SHI system, total health care costs are well above the OECD mean. In spite of the large number of cost control measures by the German government since the late 1970s, total health care expenditure (as a share of GDP) today is the third highest in the OECD world. The system of negotiations between sickness funds and service providers seems not to be able to establish effective cost control mechanisms, a deficit that became obvious in the years following German unification when health care costs increased from 8.5% of GDP in 1990 to 10.6% of GDP in 1996. In the 1990s, the federal government intervened directly in the corporatist self-regulating structure by introducing, among other things, a (partly) flat-rate payment system for family doctors and fixed budgets for drug prescriptions (Health Care Structure Act 1993). Furthermore, the ability of sickness funds to determine contribution rates autonomously was restricted by the same act and by further acts in 1997 and 2003. In the late 1990s, total health care financing remained more or less at the same level, indicating that direct state intervention has been (partly) effective. Other examples point in a similar direction. In the Austrian SHI system, for instance, contribution rates are set by state agencies (not by sickness funds as was the case in Germany until 2009!), leading to a level of total health expenditure below the OECD average.

The high level of total health expenditure in the US (more than 15% of GDP, nearly 6 percentage points above OECD average) provides strong arguments that a high share of private financing – in combination with a low level of state intervention – opens the door for disproportionate cost increases. In line with this proposition, we find the third highest share of private funding in Switzerland where health care expenditure ranks second in the OECD world. In the US system, the process of cost increase has only leveled off during the 1990s. In this period, managed care settings which allow for a higher degree of control towards providers (with respect to remuneration systems), such as HMOs, have become more and more important. However, this seems to have had only a temporary effect, for since 2000 total health expenditure is again surging. One possible reason for this development is that coverage by HMOs decreased while the market share of managed care plans with less restrictive cost control mechanisms (such as PPOs) increased. According to White (2007: 418), for a short period “managed care” has been successful in driving down prices by selective contracting but “failed when the providers developed sufficient market power to resist”.

Health Service Provision

While in most countries cost containment of health *expenditure* is the main focus of reforms, the production side of health *services* is often neglected in the health policy debate. Focusing exclusively on health expenditures, however, misses the point of what health policy is all about. Neither maximizing nor minimizing health

expenditures is a reasonable policy goal in itself. High levels of health expenditure only make sense under the assumption that these monetary inputs are efficiently converted into real inputs (such as medical facilities and personnel) and finally into real outputs. Likewise, containing or reducing health expenditure would not make much sense if it were tied to cuts in real resources and/or in the quality of services. It only makes sense under the opposite assumption that it is *not* accompanied by a proportionate reduction in the quantity and/or quality of services. The real challenge of health policy is, therefore, to make effective use of (monetary and real) resources in order to provide medical and social services meeting the needs and demands of citizens.

The neglect of service provision in comparative studies is probably related to the difficulties of measuring the level and/or quality of health services. Alber (1988), for example, used as indicators for the “quality of health care” the density of medical doctors and hospital beds in OECD countries. Compared with these input indicators, the “quality of health service index” developed by Kangas (1994), is more complex and takes into account the earnings replacement ratio of sickness benefits, the coverage rates of health care systems, the number of waiting days, and the length of the contribution period required for the access to benefits. However, while this index covers essential “social rights” elements of health (insurance) systems, it does not directly measure the availability and quality of health services. For a comparison of the *level* of health care provision further or, more precisely, different health care indicators have to be included.

In order to investigate the relationship between health care expenditure and health service provision, we constructed an “index of health care providers” (for an earlier version see Kohl and Wendt 2004: 323ff.).⁵ By using factor analysis (see note to Table 2) we selected two indicators for specialist health care (specialists and hospital nurses), one indicator for primary health care (general practitioners), and one indicator for pharmaceutical health care (pharmacists). We aggregated these indicators into an index of health care providers in the following way: first, the raw values for the various indicators, expressed per 1,000 of population, were standardized and recalculated as percentages of the OECD 25 average (=100). Our index was then calculated as the average value for all four health provider indicators. All indicators are weighted equally, thus giving in-patient health care (specialists and nurses) and out-patient health care (GPs and pharmacists) the same importance.

Comparing the index of health care providers with the level of health expenditure (in percent of GDP), we find only a weak correlation ($r=0.26$) with a wide dispersion (see Table 3 and Figure 5). Some countries, such as, for instance, Finland or Luxembourg are able to provide an above average level of health service providers with below average health care spending while in other countries, such as the US or Switzerland, the coverage by health service providers is only about the OECD average, despite high levels of health care spending.

Inasmuch as our index is an adequate measure of “real inputs” to the health care system, the former group of countries can be said to have more effectively transformed their monetary inputs into “real inputs” and thus to have achieved a superior policy path compared to the latter group of countries. Notably the US with by far the highest level of health expenditure barely reaches an average level with regard to our index of health care providers. Austria, on the other hand, only spends

Table 2. Indicators of health care providers (per 1,000 population), 2003

	Practicing specialists	Practicing nurses	General practitioners	Practicing pharmacists	Index of health care providers
Australia	1.2	10.4	1.4	0.8	117.0
Austria	2.0	9.4	1.4	0.6	118.7
Belgium	1.9	5.8	2.1	1.2	148.8
Canada	1.1	9.8	1.0	0.7	98.1
Czech Republic	2.8	8.0	0.7	0.5	100.9
Denmark	1.3	7.0	0.7	0.6	80.3
Finland	1.4	7.3	0.7	1.5	113.0
France	1.7	7.3	1.6	1.1	131.4
Germany	2.3	9.7	1.0	0.6	111.4
Greece	3.3	3.8	0.3	0.8	93.7
Hungary	2.0	8.6	0.7	0.5	91.4
Ireland	0.6	14.8	0.5	0.9	96.7
Italy	2.4	5.4	0.9	1.2	117.6
Luxembourg	1.8	12.3	0.9	0.8	115.5
Netherlands	0.9	13.9	0.5	0.2	74.7
New Zealand	0.7	9.1	0.7	0.8	84.6
Norway	1.9	14.4	0.7	0.4	103.2
Poland	2.1	4.9	0.1	0.7	70.4
Portugal	1.9	4.2	0.5	0.9	84.7
Slovak Republic	2.3	6.5	0.4	0.5	80.3
Spain	1.5	7.5	0.7	0.9	94.7
Sweden	1.8	10.3	0.6	0.7	97.1
Switzerland	2.5	10.7	0.5	0.5	98.3
United Kingdom	1.5	9.1	0.7	0.5	85.8
United States	1.4	7.9	1.0	0.7	96.9
OECD 25 Mean	1.77	8.72	0.81	0.74	100.0

Notes: In a first step we included all available OECD data on health care personnel in our analysis (specialists, nurses, GPs, dentists, pharmacists). The result of an unrotated principal component factor analysis was that two factors accounted for 64% of the variance of the included variables. However, the uniqueness of dentists turned out to be comparatively high. Therefore, we calculated a second model without dentists. In this model, two factors accounted for 75% of the variance. The first factor captures in-patient health care with a negative correlation between specialists and nurses. The second factor accounts for out-patient health care with a positive correlation between GPs and pharmacists. Based on the factor analysis we decided to use specialists, nurses, GPs, and pharmacists for the creation of the “Index of Health Service Providers”.

Sources: OECD 2006; own calculation.

about the OECD average for health care (i.e. 5% of GDP less than the US), but is able to achieve a higher ranking with regard to health care provision.

Our analysis of the financing dimension has shown that the level of total health care spending is negatively correlated with the share of public financing: the higher the share of public financing, the lower the level of total health expenditure. In the service dimension, however, no such relationship can be detected. The index of health care providers shows no correlation with the public share of health care financing (see Figure 6). We find, for instance, countries with a high public share of the health care budget that maintain a below average supply of health care providers

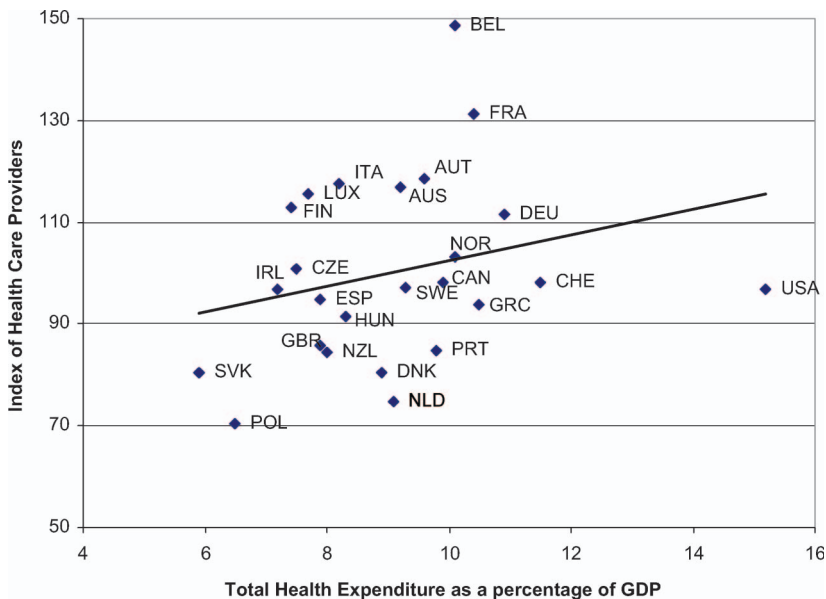
Table 3. Correlations between health expenditure and health service providers, 2003

	Pearson's R	N
Total health expenditure (as a % of GDP) and index of health care providers	0.26	25
Total health expenditure (in US\$ per capita) and index of health care providers	0.39*	25
Public share of total health expenditure and index of health care providers	0.04	25
Total health expenditure (as a % of GDP) and GPs per 1,000 population	0.35*	25
Total health expenditure (in US\$ per capita) and GPs per 1,000 population	0.40**	25
Public share of total health expenditure and GPs per 1,000 population	-0.03	25

Notes: **p < 0.05, *p < 0.1.

Since GPs are in general the first point of contact for patients and often decide on medical treatments provided by further health care providers we additionally calculated the effect of the level and structure (the public-private mix) of health care financing on the number of GPs. The correlation between total health expenditure and the number of GPs is slightly higher than with regard to the “index of health care providers”. However, the factor analysis has shown that GPs (together with pharmacists) are loading on another factor than specialists and nurses (see annotation in Table 2). This indicates that the number of GPs is not a sufficient predictor for the “real input” in health care systems and that, therefore, information on inpatient/specialist health care have to be added.

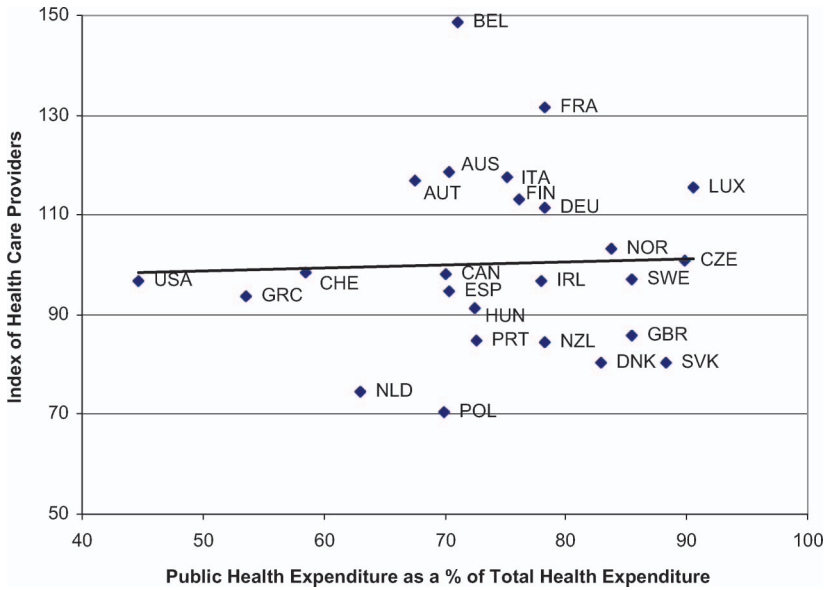
Sources: OECD 2006; own calculation.

Figure 5. Total health expenditure as a percentage of GDP and index of health care providers, 2003

Sources: OECD 2006; own calculation.

(like the UK, Ireland, or New Zealand) and also cases with above average numbers of health care providers (Luxembourg, Germany, or France). Some countries with a lower share of public financing are able to provide a health care package well above

Figure 6. Public share of total health expenditure and index of health care providers, 2003



Sources: OECD 2006; own calculation.

the OECD 25 mean (such as Belgium or Austria) while others offer a below average level of health care providers (Netherlands, Switzerland, Greece, United States).

This seemingly inconsistent pattern may be explained in the following way: total health expenditure is apparently more important in determining the level of health service providers than is the public share of health care financing. Since countries with a high public share of financing are better able to control overall health care spending (negative correlation), one would expect that lower expenditure levels in these countries might lead to lower employment in the health care sector. This, however, is not the case. Despite lower expenditure levels, a high share of public financing enables them to maintain numbers of health service providers which are, on average, similar to the level in countries with a low share of public financing (and a higher level of total expenditures).

When grouping OECD health care systems according to their level of total health expenditure and their level of health care providers (see Table 4) we find some support for our hypotheses H1–H3 introduced in the first section. The combination of both high levels of total health expenditure and health care providers is characteristic of SHI schemes. However, the NHS systems of Norway (with a level of health care providers close to the OECD average) and Australia (with health expenditure near the OECD average) are also placed in this field. The German case demonstrates that even if direct state intervention has increased and at the same time market mechanisms have been given greater emphasis (Giaimo and Manow 1999, Tuohy 1999, Giaimo 2002, Wendt 2006) the actors of the traditional self-regulatory system seem still to be able to assert a high level of health care providers at comparatively high costs.

Table 4. Relative level of health expenditures and index of health care providers, 2003

Relative level of health expenditures (in % of GDP)	Index of health care providers					
	Above average (>100)			Below average (<100)		
Above average (>9.08%)	Germany	10.9	111.4	United States	15.2	96.9
	France	10.4	131.4	Switzerland	11.5	98.3
	Belgium	10.1	148.8	Greece	10.5	93.7
	Norway	10.1	103.2	Canada	9.9	98.1
	Austria	9.6	118.7	Portugal	9.8	84.7
	Australia	9.2	117.0	Sweden	9.3	97.1
				Netherlands	9.1	74.7
Below average (<9.08%)	Italy	8.2	117.6	Denmark	8.9	80.3
	Luxembourg	7.7	115.5	Hungary	8.3	91.4
	Czech Republic	7.5	100.9	New Zealand	8.0	84.6
	Finland	7.4	113.0	Spain	7.9	94.7
				United Kingdom	7.9	85.8
				Ireland	7.2	96.7
				Poland	6.5	70.4
				Slovak Republic	5.9	80.3

Sources: OECD 2006; own calculation.

A lower level of health care providers at below average costs is, in line with our hypothesis H1, typical for NHS systems. Although market mechanisms have been introduced and health expenditure increased from the early 1990s onwards, neither the costs nor the level of health care providers in the United Kingdom have exceeded the OECD average. Not only NHS type countries but also SHI type countries of Central and Eastern Europe are represented in this cluster.

The unfavourable combination of high costs and low levels of service providers is shared by private health insurance schemes, some SHI schemes, and some NHS systems alike. It has to be emphasized, however, that especially countries with a high share of private health financing are characterized by this pattern. The Netherlands, Switzerland, and especially the United States rely to a large extent on private funding which in general restricts access to health care services. In particular patients in Greece and Portugal are charged a relatively high amount of private out-of-pocket payments, and therefore access to health care is more difficult for lower income groups or people with a poor health status in these countries. However, this does not apply for all countries of this group. Canada, for instance, has relatively low private co-payments and therefore the above average level of total health expenditure associated with the below average level of the health care provider index (which might be related to weaker self-regulatory capacities) needs some further investigation.

Above average health care costs with a comparatively low level of health employment may be partly explained by the price of health services or, more specifically, to the remuneration of health professionals. According to White (2007: 401), especially market oriented health care systems “should impose fewer institutional constraints on income maximization and also create fewer social

obstacles (such as norms of restraint) to that behavior". In line with this argument, the United States and the Netherlands are characterized by high income levels of (self-employed) general practitioners and specialists (OECD 2005). The favorable income position of health professionals in these countries indicates that health care systems where private health insurance is of great financial and structural importance also tend to support the market power of suppliers (Moran 2000, White 2007). High remuneration levels of service providers contribute to high health care costs but do not necessarily result in superior levels of health care providers. But cases like the Swedish one that exhibits a below average level of health service providers despite restricted income chances for doctors show that we need further information to fully understand the "production process" in health care systems and especially how high levels of health care providers can be achieved without dramatic cost increases in health care systems.

Finally, it should be emphasized that high levels of health care providers do not necessarily result in good quality health care nor in high levels of citizens' satisfaction with the health care system. There is a fair chance, however, that better health care services can be provided with a sufficient number of qualified health care personnel, and that better health care services will be reflected in higher levels of citizens' satisfaction (Kohl and Wendt 2004, Marmor *et al.* 2006, Tuohy 2009).

Discussion

As our empirical analysis has demonstrated, the mode of public policy matters above all with regard to health expenditure development. There can be no doubt that the market-oriented US system shows the highest level and the most dramatic increases of total health expenditures. The self-regulated German SHI scheme also faces major problems in stabilizing health care costs. The example of the Austrian health care system, however, demonstrates that a SHI system with a higher level of state intervention can also implement effective cost control mechanisms. Finally, the British NHS system proved to be most successful in keeping relative health expenditures (in percentage of GDP) in check. Overall, there is a fairly strong negative correlation between the public share of health care financing and total health expenditure in 2003 which can be taken as evidence that the stronger interventionist and regulatory powers of the state are more effective in controlling health care costs than competitive market mechanisms. As the US example demonstrates, cost control requires effective limits on prices and therefore on income chances. In this regard, selective contracting by multiple purchasers has turned out not to be effective (White 2007).

The main focus of this article, however, is not on cost control in general but on the relation between monetary inputs and levels of health care services. In order to measure the input of real resources to health care systems more accurately, we constructed an "index of health care providers". The correlation between relative health expenditure levels (in percentage of GDP) and the index of health care providers in 2003 turned out to be very low. This seemingly negative finding can be interpreted as evidence that high expenditures for health care do not necessarily translate into a better provision of services, but are mediated by public policies. The

more general observation is that the “high cost/high provider index” combination is typical for social health insurance schemes, including the German case. The “low cost/low provider index” combination is more prevalent in NHS, including the UK case. SHI systems of CEE countries are also grouped in this cluster which is possibly related not only to severe budgetary restrictions, but also to the still existing strength of the state and the weakness of the collective actors of the self-regulatory system in these countries. The unfavorable “high cost/low provider index” combination, finally, is represented especially by countries with high shares of private funding, including in particular the US case.

A closer analysis of changes in three countries representing the three modes of public policy (UK, Germany, and the US) leads to the conclusion that such distinctions become increasingly blurred when certain ideas and policy instruments are adopted from alternative health care systems. For instance, internal markets and thus competitive mechanisms have been implemented in the British NHS, and in the US health care system, market forces have been reduced by strengthening hierarchical control within managed care settings. In the German SHI system, besides direct state intervention (e.g. setting of sectoral budgets) competitive mechanisms were introduced by offering all members of sickness insurance funds the freedom of choice between different funds.

The quantitative empirical analysis, however, has shown that despite these policy changes, the US, Germany, and the UK still fall into different clusters with regard to health care financing and health service provision. Although the monetary resources for the British NHS have been increased at a high rate in recent years, both the level of monetary inputs and of health care providers are still below the OECD average. In Germany, the weakened position of actors within the self-regulatory system (especially of doctors’ associations) did not result in a reduction of health service providers or of health expenditure. It remains to be seen whether SHI systems of CEE countries will approximate the SHI schemes of Western Europe or whether they remain – with regard to expenditure and provider levels – closer to the group of NHS schemes. The example of the US health care system demonstrates that a large share of private funding paves the way for cost increases. The comparatively low level of service providers might be related to the fact that private (out-of-pocket) expenses make access to health care more difficult for lower income groups and people with a poor health status so that the demand for service providers by these groups is reduced.

Although more detailed studies are necessary to show how public policies influence health expenditure and numbers of health service providers in a given country, our comparative analysis demonstrates that changes in health policy have until now not resulted in a substantial convergence process with regard to health expenditure and health employment. The shift to collaboration in the British “internal market” (Freeman and Moran 2000) or the “triumph” of less hierarchical managed care plans in the US (White 2007) demonstrate that policy measures that are adopted from other types of health care systems have to be adapted to the overall institutional characteristics of the “receiving” system (Tuohy 2009). This lends support to the proposition derived from institutional theory that types of health care systems (see Freeman and Frisina in this issue) maintain their formative power even when certain characteristic elements are modified.

Acknowledgements

The authors gratefully acknowledge the helpful comments and criticism by Ted Marmor and the other members of the Yale workshop on comparative health policy analysis in 2007 as well as by Carolyn Tuohy, David Wilsford, Bernhard Ebbinghaus, Bruno Palier, and Olli Kangas. The research reported here has received financial support from the German Research Foundation (DFG). Claus Wendt would also like to thank Harvard's Minda de Gunzburg Center for European Studies for the time and intellectual community provided to him when working on the final draft of this article as a John F. Kennedy Memorial Fellow.

Notes

1. Due to lack of data, Japan, Korea, Mexico, and Turkey are not included in the analysis. Iceland with a population of about 289,000 has also been excluded. Hence, our study covers 25 of the currently 30 OECD countries (OECD 25). However, reliable data are not provided by the OECD for all time points, thus the analysis is partly based on less than 25 countries.
2. For the debate on the perception of health care systems see Mossialos 1997, Gelissen 2002, Kohl and Wendt 2004, Marmor *et al.* 2006.
3. Due to double counting the figures on coverage by private insurance, Medicaid, Medicare, and on those without coverage do not add up to 100%.
4. "Public health financing" here comprises financing by general tax revenues as well as by social security contributions.
5. Alternatively one could analyze the effect of different modes of public policy and/or of health care financing on the numbers of each health care provider type available in OECD Health Data. In this case, however, it would be difficult to estimate the relation between health expenditure and the overall level of health employment.

References

- Alber, Jens, 1988, Die Gesundheitssysteme der OECD-Länder im Vergleich, in: Manfred G. Schmidt (Ed) *Staatstätigkeit. International und historisch vergleichende Analysen* (Opladen: Westdeutscher Verlag), pp. 116–150.
- Bambra, Clare, 2005, Cash versus services: 'worlds of welfare' and the decommodification of cash benefits and health care services. *Journal of Social Policy*, 34(2), 195–213.
- Burau, Viola and Blank, Robert H., 2006, Comparing health policy: an assessment of typologies of health systems. *Journal of Comparative Policy Analysis*, 8(1), 63–76.
- Busse, Reinhard, Saltman, Richard B. and Dubois, Hans F.W., 2004, Organization and financing of social health insurance: current status and recent policy development, in: Richard B. Saltman, Reinhard Busse and Josep Figueras (Eds) *Social Health Insurance Systems in Western Europe* (Maidenhead: Open University Press), pp. 33–80.
- Cacace, Mirella, 2009, United States: the coexistence of market and hierarchy in the US healthcare system, in: Heinz Rothgang, Mirella Cacace, Simone Grimmeisen, Uwe Helmert and Claus Wendt (Eds) *The Changing Role of the State in OECD Health Care Systems* (London: Palgrave), forthcoming.
- Chinitz, David, Preker, Alex and Wasem, Jürgen, 1998, Balancing competition and solidarity in health care financing, in: Richard B. Saltman, Josep Figueras and Constantino Sakellarides (Eds) *Critical Challenges for Health Care Reform in Europe* (Buckingham: Open University Press), pp. 55–77.
- Culyer, Anthony J., 1990, Cost containment in Europe, in: OECD (Ed) *Health Care Systems in Transition. The Search for Efficiency* (Paris: OECD), pp. 29–40.
- Evans, Robert G., 1996, Marketing markets, regulating regulators: who gains? Who loses? What hopes? What scope?, in: OECD (Ed) *Health Care Reform. The Will to Change* (Paris: OECD), pp. 9–114.
- Figueras, Josep, Saltman, Richard B., Busse, Reinhard and Dubois, Hans F.W., 2004, Patterns and performance in social health insurance systems, in: Richard B. Saltman, Reinhard Busse and Josep Figueras (Eds) *Social Health Insurance Systems in Western Europe* (New York: Open University Press), pp. 81–140.

- Freeman, Richard, 2000, *The Politics of Health in Europe* (Manchester: Manchester University Press).
- Freeman, Richard and Moran, Michael, 2000, Reforming health care in Europe. *West European Politics*, **23**(2), 35–59.
- Gelissen, John, 2002, *Worlds of Welfare, Worlds of Consent? Public Opinion on the Welfare State* (Leiden: Brill).
- Giaimo, Susan, 2002, *Markets and Medicine. The Politics of Health Care Reform in Britain, Germany, and the United States* (Ann Arbor: University of Michigan Press).
- Giaimo, Susan and Manow, Philip, 1999, Adapting the welfare state – the case of health care reform in Britain, Germany, and the United States. *Comparative Political Studies*, **32**(8), 967–1000.
- Grimmeisen, Simone, 2009, The role of the state in the British health care system – between marketisation and statism, in: Heinz Rothgang, Mirella Cacace, Simone Grimmeisen, Uwe Helmert and Claus Wendt (Eds) *The Changing Role of the State in OECD Health Care Systems* (London: Palgrave), forthcoming.
- Hacker, Jacob S., 2002, *The Divided Welfare State: The Battle over Public and Private Social Benefits in the United States* (Cambridge: Cambridge University Press).
- Hacker, Jacob S., 2004, Privatizing risk without privatizing the welfare state: the hidden politics of social policy retrenchment in the United States. *American Political Science Review*, **98**(2), 243–260.
- Ham, Christopher, 2004, *Health Policy in Britain: The Politics of Organisation of the National Health Service* (London: Palgrave).
- Hassenteufel, Patrick and Palier, Bruno, 2007, Towards neo-Bismarckian health care states? Comparing health insurance reforms in Bismarckian welfare systems. *Social Policy and Administration*, **41**(6), 574–596.
- Hsiao, William C., 1995, A framework for assessing health financing strategies and the role of health insurance, in: David W. Dunlop and Jo M. Martins (Eds) *An International Assessment of Health Care Financing. Lessons for Developing Countries* (Washington DC: The World Bank), pp. 15–30.
- Jönsson, Bengt and Musgrove, Philip, 1997, *Government Financing of Health Care* (Washington DC: The World Bank).
- Kanavos, Panos and McKee, Martin, 1998, Macroeconomic constraints and health challenges facing European health systems, in: Richard B. Saltman, Josep Figueras and Constantino Sakellarides (Eds) *Critical Challenges for Health Care Reform in Europe* (Buckingham: Open University Press), pp. 23–52.
- Kangas, Olli, 1994, The politics of social security: on regressions, qualitative comparisons, and cluster analysis, in: Thomas Janoski and Alexander M. Hicks (Eds) *The Comparative Political Economy of the Welfare State* (Cambridge: Cambridge University Press), pp. 346–364.
- Kangas, Olli, 2004, Institutional development of sickness cash-benefit programmes in 18 OECD countries. *Social Policy & Administration*, **38**(2), 190–203.
- Kohl, Jürgen and Wendt, Claus, 2004, Satisfaction with health care systems. A comparison of EU countries, in: Wolfgang Glatzer, Susanne von Below and Mathias Stoffregen (Eds) *Challenges for Quality of Life in the Contemporary World* (Dordrecht: Kluwer Academic Publishers), pp. 311–331.
- Marmor, Theodore R. and Okma, Kieke G. H., 1998, Cautionary lessons from the west: what (not) to learn from other countries' experience in the financing and delivery of health care, in: Peter Flora, Philip de Jong, Julian Le Grand and Jun-Young Kim (Eds) *The State of Social Welfare, 1997. International Studies on Social Insurance and Retirement, Employment, Family Policy and Health Care* (Aldershot: Ashgate), pp. 327–350.
- Marmor, Theodore R., Mashaw, Jerry L. and Harvey, Philip L., 1992, *America's Misunderstood Welfare State. Persistent Myths, Enduring Realities* (New York: Basic Books).
- Marmor, Theodore R., Freeman, Richard and Okma, Kieke, 2005, Comparative perspectives and policy learning in the world of health care. *Journal of Comparative Policy Analysis*, **7**(4), 331–348.
- Marmor, Theodore R., Okma, Kieke G. H. and Latham, Stephen R., 2006, Values, institutions and health politics. Comparative perspectives, in: Claus Wendt and Christof Wolf (Eds) *Soziologie der Gesundheit* (Wiesbaden: VS Verlag), pp. 383–405.
- McPherson, Klim, 1990, International differences in medical care practices, in: OECD (Eds) *Health Care Systems in Transition. The Search for Efficiency* (Paris: OECD), pp. 17–28.
- Moran, Michael, 1999, *Governing the Health Care State. A Comparative Study of the United Kingdom, the United States and Germany* (Manchester: Manchester University Press).
- Moran, Michael, 2000, Understanding the welfare state: the case of health care. *British Journal of Politics and International Relations*, **2**(2), 135–160.

- Mossialos, Elias, 1997, Citizens' views on health care systems in the 15 member states of the European Union. *Health Economics*, **6**, 109–116.
- Newbrander, W. and Eichler, R., 2001, Managed care in the United States: its history, forms, and future, in: Aviva Ron and Xenia Scheil-Adlung (Eds) *Recent Health Policy Innovations in Social Security* (New Brunswick: Transaction Publishers), pp. 83–106.
- OECD, 2005, *Health at a Glance. OECD Indicators 2005* (Paris: OECD Publishing).
- OECD, 2006, *OECD Health Data 2006. A Comparative Analysis of 30 Countries* (Paris: OECD Publishing).
- Patel, Kant and Rushefsky, Mark E., 1999, *Health Care Politics and Policy in America* (Armonk, NY: M.E. Sharpe).
- Powell, Martin, 2003, Quasi-markets in British health policy: a longue durée perspective. *Social Policy & Administration*, **37**(7), 725–741.
- Rico, Ana, Saltman, Richard B. and Boerma, Wienke G.W., 2003, Organizational restructuring in European health systems: the role of primary care. *Social Policy & Administration*, **37**(6), 592–608.
- Rothgang, Heinz, Cacace, Mirella, Grimmeisen, Simone and Wendt, Claus, 2005, The changing role of the state in health care systems. *European Review*, **13**, Supp. No. 1, 187–212.
- Schieber, George J. and Poullier, Jean-Pierre, 1990, Overview of international comparisons of health care expenditure, in: OECD (Ed) *Health Care Systems in Transition. The Search for Efficiency* (Paris: OECD), pp. 9–15.
- Steffen, Monika, 2005, Comparing complex policies: lessons from a public health case. *Journal of Comparative Policy Analysis*, **7**(4), 267–290.
- Tuohy, Carolyn Hughes, 1999, *Accidental Logics. The Dynamics of Change in the Health Care System in the United States, Britain, and Canada* (New York: Oxford University Press).
- Tuohy, Carolyn Hughes, 2003, Agency, contract, and governance: shifting shapes of accountability in the health care arena. *Journal of Health Politics, Policy and Law*, **28**(2–3), 195–215.
- Tuohy, Carolyn Hughes, 2009, Health care reform, health care policy: Canada in comparative perspective, in: Theodore R. Marmor, Richard Freeman and Kieke G.H. Okma (Eds) *Comparative Studies and the Politics of Modern Medical Care* (Yale: Yale University Press), 61–87.
- Tuohy, Carolyn Hughes, Flood, Colleen M. and Stabile, Mark, 2004, How does private finance affect public health care systems? Marshalling the evidence from OECD nations. *Journal of Health Politics, Policy and Law*, **29**(3), 359–396.
- Wendt, Claus, 2006, Der Gesundheitssystemvergleich: Konzepte und Perspektiven, in: Claus Wendt and Christof Wolf (Eds) *Soziologie der Gesundheit. Sonderheft 46 der Kölner Zeitschrift für Soziologie und Sozialpsychologie* (Wiesbaden: VS-Verlag), pp. 270–297.
- Wendt, Claus, Grimmeisen, Simone and Rothgang, Heinz, 2005, Convergence or divergence in OECD health care systems?, in: Bea Cantillon and Ive Marx (Eds) *International Cooperation in Social Security. How to Cope with Globalisation* (Antwerpen: Intersentia), pp. 15–14.
- Wendt, Claus and Thompson, Theresa, 2004, Social austerity versus structural reform in European health systems: a four-country comparison of health reforms. *International Journal of Health Services*, **34**(3), 415–433.
- White, Joseph, 2007, Markets and medical care: the United States, 1993–2005. *The Milbank Quarterly*, **85**(3), 395–448.