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ARTICLE

Changing roles of health insurers in France, Germany, and the Netherlands: any lessons to learn from Bismarckian systems?

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Abstract
Bismarckian health systems are mainly governed by social health insurers, but their role, status, and power vary across countries and over time. We compare the role of health insurers in three distinct social health insurance systems in improving health systems' efficiency. In France, insurers work together as a single payer within a highly regulated context. Although this gives insurers substantial bargaining power, collective negotiations with providers are highly political and do not provide appropriate incentives for efficiency. Both Germany and the Netherlands have introduced competition among insurers to foster efficiency. However, the rationale of insurer competition in Germany is unclear because contracts are mostly concluded at a collective level and individual insurers have little power to influence health system efficiency. In the Netherlands, insurer competition is substantially more effective, but primarily focused on price and cost containment. In all three countries, the role of insurers has been transforming slowly to respond to common challenges of assuring care quality and continuity for an ageing population. To assure sustainability, they need to ensure that care providers cooperate with the same quality and efficiency objectives, but their capacity to do so has been limited by insufficient support to enforce public information on provider quality.

Keywords: Social Health Insurance; quality of care; volume of services; pricing; health care reforms

1. Introduction

In 1883, the first social health insurance scheme was established in Germany by the Chancellor Otto von Bismarck. Since then, the German example was followed by many countries, and the health care systems of these countries are often labelled as Bismarckian systems. The distinguishing feature of Bismarckian systems is that health care is primarily financed through Social Health Insurance (SHI), which is characterised by (1) mandatory participation for the entire or the majority of the population, (2) income-related (or community rated) contributions (i.e., contributions are largely independent of need and dependent on ability to pay) which can only be spend on health care, (3) legal entitlements to care included in the basic benefits package of SHI, and (4) a separation of functions of purchaser and provider (purchaser–provider split), effectuated by individual or collective contracts between (associations of) insurers and providers. Despite these common elements, there is a wide variation across countries in the way SHI has been organised, carried out, and reformed over time. This raises the question for which problems SHI was meant to be a solution and how this affects the efficiency of the health care system.

1.1 Role of SHI in an historical context

In an analysis of the evolution of health care systems of seven major OECD countries (G7) during the past century, Cutler (2002) distinguished a common pattern of three consecutive waves of health care reform. During the first wave (roughly until the 1970s), the main (societal) problem was to guarantee universal access. In Bismarckian systems, this was primarily achieved by introducing mandatory SHI in which health insurers were transformed from independent insurance funds into passive public payers (administrative offices) without financial risk, assigned with checking entitlements, claims, and the legitimacy of (reimbursement of) care delivered. During the second wave (roughly from the 1970s till the mid-1990s), the main problem shifted towards cost containment (while maintaining universal access). This problem emerged because the combination of universal access, open-ended reimbursement and a rapidly expanding health care sector resulted in rapidly rising public health expenditure. This was counteracted by increasingly restrictive supply and price regulation. Health insurers were made collectively responsible for negotiating prices and budgets with providers or provider associations within these regulatory constraints. During the 1990s, the prolonged top-down supply and price regulation, however, resulted in a perceived misallocation of resources due to a lack of incentives for efficiency and innovation, which in some countries (e.g., the Netherlands) led to growing waiting lists. This resulted in the third wave of reforms (roughly since 2000), in which the main problem was to improve efficiency while maintaining universal access and cost containment. During the first two waves, the role of SHI and its carriers was quite similar in France, Germany, and the Netherlands (Barroy *et al.*, 2014; Busse *et al.*, 2017; Bertens and Vonk, 2020). However, during the third wave, the role assigned to health insurers in addressing the problem how to increase the efficiency of health care provision substantially diverged across the three countries. In France, the state reinforced its leading role, particularly in the hospital sector, while health insurers were made collectively responsible (acting as a single payer) for assuring the efficiency and quality of care provided by self-employed professionals in the ambulatory care sector. In Germany, competition among health insurers was introduced to provide them with incentives for efficiency, but both at the provider and insurer side the corporatist model of collective negotiations between provider and insurer associations was predominantly maintained. In the Netherlands, competition was introduced both at the insurer (demand) side and the provider (supply) side. Health insurers were incentivised to become prudent buyers of care by making them compete for customers and by creating room to selectively negotiate contracts with individual providers. In sum, particularly during the third wave, the three Bismarckian SHI systems began to diverge.

In this paper, we compare three distinct Bismarckian healthcare systems – in Germany, France, and the Netherlands – by analysing the differences in the role played by SHI and its carriers during the past two decades in improving efficiency and discussing the impact that these differences may have had on health system performance. Ultimately, we aim to understand the challenges faced by SHI schemes for improving system efficiency in these countries and draw lessons from the various ways in which they were organised and adapted.

2. Methodological approach

Health system efficiency is about maximising the value (quality and outcomes) for money within constraint budgets. SHI can affect health system efficiency by controlling or negotiating prices paid for services as well as the quantity and quality of these services. Hence, we developed a common framework depicting the role of health insurers in setting prices, gearing care consumption (volumes) and supply, and assuring quality of care provision across the ambulatory, hospital, and pharmaceutical sector (an overview of the descriptive results in a tabular form is available in an online Appendix). The comparative approach is built on country specific literature and data on trends in health system developments regarding the role of insurers in different sectors.

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While the three Bismarckian systems are facing similar challenges (increasing health care expenditure, population ageing, expensive new medical technology etc.), the institutional and political contexts are different. Accordingly, insurers are confronted with different (institutional) rigidities and challenges in terms of setting prices and volumes, and in ensuring quality and efficiency of care. Therefore, we used a contextualised approach (Locke and Thelen, 1995) to complement the traditional comparative analysis with greater attention to starting points and particular (political) practice of respective national settings. This provides a deeper understanding of the role of insurers in countries investigated.

3. Role of SHI carriers in the three countries

3.1 France: a Beveridge system in disguise?

Of the three Bismarck systems, France is the most centralised. Since 1945, the social health insurance system has been stepwise expanded to achieve universal coverage in 2000 (Barroy *et al.*, 2014). Since mid-2000s, statutory health insurance funds work together like a single payer for regulating prices and developing strategies for cost-containment. Over the same period, the central government's power for gearing health expenditure has steadily increased, limiting the margins for manoeuvre for SHI.

Enrolment to a SHI scheme is mandatory and determined by the employment status. While patients are free to choose their care from a wide range of options in a competitive provider market, there is no competition in the SHI market. Three SHI schemes cover almost the entire French population and are federated into a National Union of Health Insurance Funds (UNCAM) for the purpose of negotiating with health care providers. All schemes provide the same broad benefit basket (Or *et al.*, 2023).

Initially, the SHI system was almost entirely funded from wage-based contributions from employers and employees. Considering the high rate of unemployment in France and the rapid ageing of the population, to assure financial sustainability, sources of funding have been broadened in the past two decades by including a broader range of income beyond payroll contributions. Gradually, the share of employee payroll contributions to health funding was reduced while earmarked tax contributions increased. Since 2018/19, employee contributions were totally suppressed, and in 2021, only about a third of revenues of the SHI came from payroll contributions (HCFi-PS, 2021).

This shift in funding sources of SHI was accompanied by an increasing intervention of the central government in steering health expenditure. Until 1996, the French government has not played a proactive role in managing health care spending and independently operated SHI funds, responsible for managing their own spending, were constantly in deficit. In 1996, there was a significant break from this tradition with a reassertion of the government's control of health care spending through the introduction of expenditure targets for healthcare, known as the National Objective for Health Insurance Spending (*Objectif National de Dépenses de l'Assurance Maladie*, ONDAM). Since then, the French Parliament sets the fiscal parameters within which the SHI funds are asked to maintain spending. Since 2010, SHI funds have the responsibility to develop targeted policies for respecting spending targets. Nevertheless, they have limited power to control the total health spending since the management of healthcare providers is shared with the state (through Ministry of Health mainly). Historically, SHI funds play the main role in defining the benefit basket, the levels of co-payment, and in regulating the prices of procedures and services. This mainly concerns the ambulatory sector, where most health professionals are paid on a Fee-for-service (FFS) basis and tariffs are set through collective negotiations with professionals' unions, while the Ministry of Health regulates the salaries, and care quality in hospital and long-term care facilities.

This fragmented dual governance of health care has been reinforced over time by the strict budgetary process induced by ONDAM since spending targets are set separately for ambulatory care providers, hospitals, and long-term care facilities. This design of funding ignores the fact that

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the expenditure in one sector has consequences on the others, reinforces the division of healthcare supply at the local level, and reduces the capacity to improve the coordination and integration of service delivery (HCAAM, 2021). This also means that the main lever available to SHI funds for containing expenditure is price reductions with, to lesser extent, adjustment of the benefit basket (mainly excluding some medications from reimbursement).

In the hospital sector where a prospective DRG (diagnosis-related groups) based funding model has been used since 2005, to respect spending targets, a volume-price control mechanism has been introduced at the macro-level. If the actual growth in total hospital volume exceeds the target, DRG prices go down the following year. The growth of activity is monitored at an aggregate level, and prices have been adjusted (uniformly for all hospitals) downwards regularly since 2006 as the hospital volumes have been increasing. This mechanism meant that, in the absence of clear price signals and lack of cost and quality data for benchmarking, providers have been concerned with balancing their accounts, by increasing their volume, rather than increasing efficiency by quality improvements. In the ambulatory sector as well, low prices negotiated by the SHI funds seem to have a limited impact on health expenditure growth. Healthcare providers tend to compensate price reductions by increasing the volume of services they provide (Or and Gandré, 2021). While healthcare prices in France are below the OECD average (−23%), it is the third country with the highest healthcare volume per capita in the OECD area, 50% above the average (OECD, 2021). Uncoordinated care coupled with the high degree of independence and choice for both providers and patients appear to be a key driver of healthcare costs. The fact that health professionals' income is determined by their level of activity creates an unfavourable environment for collaboration and task shifting since 'sharing patients' and 'delegating tasks' may present a financial risk.

Therefore, recent policies have been supporting local coordination between healthcare providers through regional/local care networks incorporating hospital and primary care physicians, nurses, and other professionals. Since 2019, the SHI, with a dedicated budget voted by the parliament has been encouraging new care models based on new funding modes. It waives regulatory barriers for testing innovations in care organisation and payment, encouraging bottom-up proposals. The idea is to remove financial barriers to innovation to promote efficiency, prevention, and care coordination at the local level. However, it is complicated to push this type of organisational changes in care delivery in a very fragmented institutional setting.

Overall, France has the inspirations of a Beveridge system with a high emphasis on universal coverage and on regulation to control health expenditure without having a real health budget nor an integrated management of health care delivery. SHI funds act as a single payer for gearing health expenditure without having the tools nor the power to negotiate with all care providers for improving efficiency.

3.2 Germany: weak rationale of choice between health insurers?

Germany is the cradle of social health insurance. Since its introduction in 1883, health insurance coverage has been gradually expanded and became universal in 2009 by making health insurance mandatory for the entire population (Blümel and Busse, 2020). Health insurance is provided by two subsystems: SHI (2020: 87% of the population), consisting of competing, not-for-profit, non-governmental sickness funds, and private health insurance (PHI; 2020: 11% of the population), offered by private health insurers. Individuals with a gross annual income below an annually defined threshold are mandatorily covered by SHI, while higher-income individuals and certain professional groups can enroll in PHI for substitutive full coverage. SHI is mainly financed through compulsory income-related contributions levied as a percentage of gross wages, equally shared by the employer and employees. Sickness funds can levy a supplementary, income-dependent contribution (Blümel *et al.*, 2020).

Since the early 2000s, there has been a shift from a structurally conservative cost containment policy to a structurally transformative policy. With the introduction of free choice of sickness

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funds in 1997, competition within SHI was constituted. The contribution rate became the decisive parameter in the competition for members. Between 2000 and 2022, the number of sickness funds decreased from 420 to 97. Against the backdrop of free choice of sickness funds for the insured and the simultaneous obligation of sickness funds not to refuse anyone, a risk equalisation scheme was gradually developed to enable fair competition between the sickness funds by balancing the financing risks resulting from differences in the risk profile of the insured. Initially, competitive advantages were primarily gained though risk selection. Since 2009, all SHI contributions and a tax subsidy have been pooled centrally and reallocated to individual sickness funds according to a risk-adjusted capitation formula, which was substantially improved and accounts, inter alia, for morbidity based on all diseases (Wasem *et al.*, 2018; GKV-FKG, 2020).

Decision making in the German SHI system is characterised by self-governance of corporatist organisations, both on the payer and provider side. While rights and values of SHI are defined in the core legislation, details for planning, the provision of services and payment are negotiated and defined at the federal state and corporatist level. State governments are responsible for hospital planning and public health services, while the corporatist bodies – associations of sickness funds and providers – meet in the Federal Joint Committee (FJC) to set out regulations and define uniform rules for access to and distribution of health care, benefits package, co-ordination of care across sectors, quality, and efficiency (Busse *et al.*, 2017). Collective contracting on prices, volumes, quality measures, and payments is the predominant method of purchasing services (Blümel *et al.*, 2020).

In outpatient care, the regional associations of SHI physicians must guarantee that ambulatory services are available to insured. They negotiate a prospective morbidity-based health budget with the sickness funds operating in the state. Sickness funds then make total payments to the regional associations of physicians for remunerating all SHI physicians, while regional associations of physicians distribute those payments among SHI physicians according to a national Uniform Value Scale and the fee allocation scales agreed at the regional level with the sickness funds. Around 70% of the physicians' remuneration is subject to volume ceilings, while some services are reimbursed extrabudgetary with fixed prices (30% of the physicians' remuneration). Beyond these ceilings, payments are adjusted downwards. Several attempts have been made to gradually remove restrictions regarding competition for service provision in terms of individual selective contracts between sickness funds and providers. Individual sickness funds have been enabled and incentivised to set up integrated care programs with providers, e.g., by removing the barrier of mandatory agreements with the regional associations of SHI physicians. Nevertheless, the utilisation by sickness funds remained low for a variety of reasons, including complex adjustments to existing collective contracts. Further policy instruments, such as pilot projects and an innovation fund were set up in 2008 and 2015 to facilitate cross-sectoral forms of care and new delivery and payment models. Since 2002, sickness funds also have been able to set up disease management programs (DMPs) for currently ten chronic diseases (Busse *et al.*, 2017; Blümel *et al.*, 2020), but evaluations of the programme's effectiveness, e.g., for diabetes type 2, yielded inconsistent findings (Fuchs *et al.*, 2014).

In the hospital sector, sickness funds play a limited role as planning and regulation of hospitals are carried out by the ministries of health of the states and the sickness funds are subject to a contracting obligation. Even though hospitals contract individually with representatives of the sickness funds at the regional level, conditions regarding the number and scope of services and the remuneration rates are the same for all sickness funds. Funding of hospitals is based on a dual approach with investments being financed by the states and operating costs by the health insurers through the German DRG system (Blümel and Busse, 2020). Although there is a strong incentive of DRG-based payments to increase the case volumes at the expense of health care quality, sickness funds only have a minor role in regulating quality of hospital care, e.g., by reporting outcomes of mandatory hospital quality indicators to support patients in choosing hospitals, rejecting reimbursement for hospitals that were not permitted to provide procedures which

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are part of the minimum volume regulation (see Table A1, online appendix). Since 2017, sickness funds can conclude temporary quality contracts to test whether the quality of inpatient treatment, i.e., the achievement of predefined outcomes, can be further improved by using non-monetary or monetary incentives such as P4P measures.

Regarding the pharmaceutical sector, the benefit basket of SHI usually includes all licensed prescription pharmaceuticals (Panteli *et al.*, 2016). Several reforms targeted effectiveness and efficiency in pharmaceutical care, also strengthening the role in price setting of sickness funds and their Federal Association. Since 2003, sickness funds can negotiate discounts with drug companies, primarily focusing on generics. While the market share of generics was already at a high level in terms of volume and slightly grew over the past decade, it declined in terms of value, considering the price component (Busse *et al.*, 2022). However, cost-containment and quality incentives have been overlooked for new, often expensive, and clinically unproven drugs. This changed in 2011 with the introduction of an early benefit assessment for newly licensed drugs and respective price negotiations between the Federal Association of Sickness Funds and the manufacturer in the case of an additional benefit (Henschke *et al.*, 2013). Nevertheless, Germany remains a high-price country especially regarding new, patent-protected drugs (Busse *et al.*, 2022) and pharmaceutical spending per capita is amongst the highest in Europe (Table 1). However, the number of contracts based on P4P, which are usually set up for very expensive new drugs, increased from 58 in 2019 to 85 in 2021 (BAS, 2022), implying that financial risk on high priced drugs for individual sickness funds is increasingly shared with the drug companies.

The implementation of choice among sickness funds introduced elements of competition. Nevertheless, health care provision and financing are predominantly based on collective contracting. Although innovations in providing health care and new payment models are supported by policy, it is challenging for individual sickness funds to push these organisational changes in care delivery due to sectoral boundaries in organisational and financial structures and the highly corporatist structures that are at the same time partly responsible for not addressing the oversupply of pharmaceuticals and inpatient care (Busse *et al.*, 2017). Nevertheless, there is a gradual shift from regulating only health care expenditures to quality-oriented approaches.

3.3 Netherlands: health insurers acting as prudent buyers of care?

In the Netherlands, the health insurance system was profoundly reformed in 2006 by the introduction of the Health Insurance Act (HIA), which established a national social health insurance scheme carried out by private competing health insurers (Jeurissen and Maarse, 2021). The HIA replaced and integrated both the former social health insurance scheme for low- and middle-income groups and the former private health insurance scheme for higher income groups (Helderman *et al.*, 2005; Vonk and Schut, 2019).

Dutch SHI is carried out by 10 private health insurers (almost all not-for-profit) that compete for enrolees on a national level. Health insurers are partly financed through compulsory income-related contributions, which must cover 50% of total healthcare expenditure. These contributions are centrally pooled and reallocated to individual health insurers in the form of risk-adjusted capitation payments, which are determined by a system of risk equalisation that uses individual data from several sources on many administrative and morbidity indicators to predict individual health care cost (Van Kleef *et al.*, 2018). Health insurers are allowed to charge all adults a flat-rate premium to cover the remaining healthcare expenses, which may also include a markup for administration, marketing, financial reserves, and profit. Hence, like in Germany, Dutch health insurers can compete on price to attract enrolees. Although insurers are free to set the flat rate premium, they are not allowed to differentiate these premiums according to risk or any other personal characteristics. The system of risk equalisation should remove the resulting incentives for risk selection and create a level playing field for fair competition among insurers.

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Table 1. Key statistics on health expenditure, utilisation and outcomes for France, Germany, and the Netherlands in 2020 (or latest available year)

	France	Germany	Netherlands
Health care expenditure as % GDP	12.2%	12.8%	11.1%
Share in financing health care expenditures (%)			
Social Health Insurance (SHI)	72%	76%[a]	74%
Government	6%	9%	11%
Private complementary/supplementary health insurance	13%[b]	1%	4%
Out-of-pocket payments (OOP)	9%	12%	9%
Quality indicators[c]			
Preventable cases of mortality (age-standardised rate per 100,000 population)	130	150	124
Treatable cases of mortality (age-standardised rate per 100,000 population)	62	82	61
Mortality 30 days after hospital admission (age-sex standardised rates per 100 admissions aged 45+) for:			
• Acute myocardial infarction (AMI)	5.6	8.3	2.9
– Ischaemic stroke	7.1	6.2	5.0
Avoidable hospital admissions (age-sex standardised rates per 100,000 population) for:			
– Asthma/COPD	150	281	208
– Congestive heart failure	266	394	137
– Diabetes	151	206	52
Hospital capacity and use			
Hospital beds per 1000 population	5.7	7.8	2.9
Hospital discharges per 1000 population[c]	184	253	89
Pharmaceutical spending and use			
Expenditure on retail pharmaceuticals per capita (€ PPP)	506	660	297
Overall volume of antibiotics prescribed (DDD per 1000 population per day)	19	9	8

[a]Compulsory health insurance, including private health insurance offering substitutive coverage for high-income groups, among others.
[b]Covering both individual and collective complementary health insurance, partly funded by the employers for wage earners (DREES, 2022).
[c]Data from 2019.
Source: OECD/EU (2022).

The central idea behind the 2006 reform was to motivate and equip competing health insurers to act as prudent buyers of care on behalf of their enrolees. At the end of each year, all people are allowed to switch to another health insurer (or another health plan offered by an insurer) during a period of six weeks, and insurers are obliged to accept all applicants. This should motivate competing insurers to contract good providers at a fair price. To be able to act as prudent buyer, health insurers were allowed to selectively contract with health care providers about price and quality of care, while price regulations and regulatory supply restrictions were gradually liberalised (see online Appendix). However, the bargaining power of insurers is restricted by the legal obligation to reimburse most of the costs (typically at least 75%) of non-contracted providers.

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In the ambulatory care sector, prices were gradually liberalised and health insurers negotiate about price and other contractual conditions with individual providers. GPs are remunerated by a mix of capitation and FFS, while most other ambulatory care providers are paid on an FFS basis (i.e., per visit, consultation or per hour). However, for several providers (e.g., those offering district nursing and mental healthcare) insurers typically restrict FFS payments by setting an expenditure cap per provider (organisation). In addition, insurers negotiate about P4P elements in payments for GPs (e.g., about prescription behaviour and innovative treatments) and physical therapists. Furthermore, since 2010 insurers negotiate with multidisciplinary ambulatory care groups about bundled payments for chronic diseases, like diabetes, COPD and vascular problems.

Since 2005 hospitals are paid per Diagnosis Treatment Combination (DTC). Initially, almost all DTC prices were regulated but over time the room for free price negotiations was expanded by increasing the share of freely negotiable DTCs from 10% to on average 70% of total hospital revenues. In 2015, the remuneration of medical specialists was integrated in the DTC prices. This implied that since then hospital boards have to negotiate the remuneration per DTC with the self-employed medical specialists, which are usually united in a 'medical specialist firm' per hospital. Instead of negotiating about prices per hospital product (DTC), however, hospitals and insurers primarily negotiated about global budgets or expenditure caps (Gajadien *et al.*, 2022). An important reason for this was that since 2012 national agreements about limiting hospital spending growth were concluded between the government and the national associations of hospitals, medical specialists, and health insurers. To enforce these annual growth limits, the government created a 'macro control instrument', which made it legally possible reclaim any overrun of the agreed upon growth limit by imposing a levy on each hospital in proportion to its revenues. Taking the annual national growth limits as a focal point for the contract negotiations, health insurers started to negotiate global budgets and expenditure caps. If the budget or expenditure cap is exceeded, DTC prices of additional care will be reduced to zero or to a lower price, depending on the contract (Douven *et al.*, 2020; Gajadien *et al.*, 2022). The contractual agreements about global budgets and expenditure caps were quite successful in containing hospital expenditure growth, even though the government never used its macro cost control instrument (Gajadien *et al.*, 2022).

In the pharmaceutical sector, in 2008, health insurers started competitive tendering for off-patent drugs with generic substitutes, which proved to be very successful in driving down prices of popular prescription drugs, resulting in substantial savings on drug spending (Boonen *et al.*, 2010).

Although health insurers were quite effective in containing hospital and pharmaceutical expenses, to date, they play a limited role in promoting and rewarding better quality and coordination of care (Stolper *et al.*, 2019, 2021). Despite the aim of the government to stimulate outcome-based payment and contracting, performance-based payment models are still hardly being used in hospital-insurer contracts (Gajadien *et al.*, 2022). One of the reasons for this is the limited public availability of standardised reliable case-mix adjusted quality indicators. Moreover, effective coordination of care is frustrated by a lack of integrated payments across primary, secondary, and tertiary care. Although insurer competition has been effective in providing incentives for efficiency, it may also obstruct integrated care initiatives because it is raising transaction costs and creating free-rider problems. To date, however, cooperation among insurers in overcoming these problems is limited and controversial as it may harm competition (Stolper *et al.*, 2021). Furthermore, the envisioned role of health insurers as prudent buyer of care is hampered because the political and societal trust in health insurers is fragile. Therefore, insurers are reluctant to engage in selective contracting with limited provider networks as this may easily damage their reputation.

4. Cross-country comparison of the role of SHI

When comparing relevant performance indicators across the three Bismarckian healthcare systems, the Dutch system seems to outperform the French and German ones, both in terms of

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overall expenditure and overall quality (Table 1). Germany, on the other hand, has the highest preventable and treatable mortality rates and high healthcare spending, while France stands somewhere in between.

An important, but difficult to answer question is whether these differences in performance can be plausibly related to the (re)organisation of the SHI systems in these countries. What can we learn from a comparison of (re)organisation of the three distinct Bismarck systems? How do these systems affect the price, expenditure, and quality of care? Based on our findings, we discuss below some important lessons about the role health insurers in setting prices, regulating volume and supply, and managing quality of care.

4.1 Traditional focus on price setting is maintained but changing

In all three countries, the SHI carriers continue playing a major role in negotiating prices with care providers. Nevertheless, the stakeholders involved in negotiations, criteria for negotiation and the capacity of SHI carriers to contract selectively with providers vary across countries. In France, where there is no competition between insurers, SHI funds working together as a single payer have more power than multiple competing insurers in controlling prices. However, SHI funds cannot contract selectively, and the collective negotiations are highly political since physicians are well represented in parliament and the Ministry of Health is involved in the bargaining process. Hence, health insurers have limited command to act as a prudent buyer on behalf of the French population and to push for efficiency. Price regulation is seen as the major lever for containing health spending. Moreover, the segmented management of healthcare, shared between the SHI and the state means that the SHI has limited influence on hospital performance despite being responsible for spending. French hospitals are facing a prisoner's dilemma due to the current regulatory model to contain hospital spending growth. Since DRG-prices are uniformly reduced if sectoral spending targets are exceeded, individual hospitals have an incentive to increase volume to prevent losing revenue when prices are going down.

In Germany, individual sickness funds are allowed and incentivised to compete for customers, but due to collective bargaining with provider associations they have limited possibilities to distinguish themselves as prudent buyers of care. To date, attempts to expand the room for individual selective contracting in the ambulatory and hospital sector had only limited effect because these attempts were impeded by the dominating self-governing corporatist structures. Like France, Germany also has budget targets, but these are set at regional level. After the introduction of DRGs in hospital sector, there was a sharp rise in inpatient volumes in German hospitals, which only ended around 10 years later. Still, sickness funds appear to have little margin for setting hospital prices, although some price negotiations, e.g., for new diagnostic and treatment methods, are possible with individual hospitals.

In the Netherlands, on the other hand, health insurers have been quite successful in containing the growth of hospital expenditure, effectively backed by national agreements about sectoral spending targets. Competition among health insurers has been primarily focused on price. As prices for both ambulatory and hospital services have been gradually liberalised, price competition increasingly motivated insurers to focus on negotiating lower prices and containing costs. Since 2012, insurer contracting with individual hospitals has been based on meeting overall spending targets. This resulted in keeping total hospital expenses largely within the agreed upon growth limits and contributed to curve overall health expenditure. Although the government has the legal instrument to enforce sectoral overall spending targets, to date this instrument has never been used. This is partly because in most of the years overall hospital spending targets were not exceeded and partly because the government wants to avoid the perverse incentives that may be generated by enforcing these spending targets (i.e., the prisoners' dilemma faced by the French hospitals). Both in France and the Netherlands SHI carriers were particularly successful in negotiating lower prices of prescription drugs. In the Netherlands, this is mainly concerning

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generic drugs. In France and Germany SHI carriers also managed to reduce generic prices but with a simultaneous increase in the volume of prescriptions, although. In Germany initial price levels were higher than in the other two countries. Moreover, despite the high share of generics in the total volume of drug prescriptions, its impact on total pharmaceutical expenditure is limited since the expenditure share of generics is low compared to that of patented drugs, including the newly approved drugs, of which prices continue to rise.

Finally, in all three countries, SHI carriers are increasingly experimenting with integrated and outcome-based payment methods since they face similar challenges of improving care for an ageing population with increasing number of chronic and multiple diseases. There is a common understanding that volume-based payments, such as FFS and DRGs, can limit care coordination and integration. However, these experiments are facing similar obstacles across countries, such as a lack of reliable information about provider quality and resistance from vested interests.

4.2 Varying role of SHI in controlling volumes and supply

Among the three countries, France is the only one where the SHI funds have almost no negotiation power to control the volume of services. Ambulatory providers paid on an FFS basis have no incentive for controlling the volume of their services. The SHI funds do not have many tools for containing expenditure other than price cuts and/or excluding some medications from reimbursement. In Germany, while the sickness funds do not directly control the amount of care provided, they may indirectly influence this through the regional associations of SHI physicians. Since payments to individual providers are made via regional budgets, regional associations of SHI physicians to some extent control the volume of ambulatory care and they tend to reinforce the status quo in terms of care volumes. In the hospital sector, individual hospitals contract sickness funds collectively regarding the number and scope of services. Still, sickness funds can hardly control the volume of hospital care via contracts, as hospital planning is a state responsibility and reducing hospital capacity is politically difficult. In the Netherlands, health insurers negotiate budgets or expenditure caps with individual hospitals and several ambulatory care providers, and are effectively backed by overall sectoral macro-budgets set by the government. In this way, health insurers can control volume, because if providers exceed the agreed upon budget or expenditure cap, the additional services are not, or only partially reimbursed. Moreover, since hospital capital costs have gradually been fully phased in the prices of hospital products (from 2008 to 2017), health insurers also have a say in investments in hospital capacity.

4.3 Shifting attention to managing quality

While health insurers traditionally focused on controlling prices and expenditure, they recently have been attempting to integrate quality objectives in provider payments, albeit to different degrees across the three countries. The success of SHI in improving efficiency via better quality is directly linked to the quality and the strength of the institutions supporting quality measurement and management and the public provision of comparable and reliable quality information at the provider level. France has been particularly backward in monitoring and reporting publicly the quality of care across providers despite the existence of relevant health data, thanks to a unique nationwide claims database. While SHI funds use these data for monitoring expenditure and consumption patterns, mainly in ambulatory sector, it is not used for tracking provider quality. In hospital sector, important indicators such as 30-day readmission rates, mortality, and adverse events are not monitored regularly across providers or across regions/territories. Overall, benchmarking of efficiency and quality of care providers is not popular in France even when data are available. Moreover, the SHI funds are not allowed to conclude quality

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contracts with individual hospitals since hospital quality is monitored by the regional state agencies. While small payments for quality (P4Q) are allowed both in the ambulatory and in the hospital sector, these remain very modest and had little impact (Lalloué *et al*., 2017).

In Germany, hospitals must provide annual quality reports that document structural, process, and outcome indicators for around 30 tracer diagnoses and procedures. Indicators include, for instance, compliance rates and risk-adjusted readmission and mortality rates (Pross *et al*., 2017). Individual hospital quality reports are publicly available. Nevertheless, mandatory public reporting over the past decade has not led to overall quality improvements, although it provides a benchmark on quality and should prevent the provision of low-quality health care services (Bayindir and Schreyögg, 2023). Besides this mandatory national public reporting, measurement initiatives by sickness funds also provide quality information for patients. In addition, since 2017, sickness funds and hospitals are allowed to conclude selective quality contracts in specified areas to test whether the quality of inpatient treatment can be improved using incentive systems. However, these contracts were only started in 2019 and have yet to be evaluated. Although insurers have given more room for selective contracting and performance-based payment, in practice, these are hampered by a lack of information on health care quality and costs at the individual provider level.

In the Netherlands, since 2014 providers annually must deliver specific information about several quality indicators to National Health Care Institute (ZIN) which can be accessed by the public on the website www.zorginzicht.nl, together with quality information from other sources (e.g., delivered by patient organisations).[1] In 2018, the program 'outcome-based care' (*Uitkomstgerichte zorg*) was launched, in which the government and associations of providers, patients and insurers agreed to jointly develop meaningful outcome indicators for 59 conditions. By the end of 2022 indicator sets for three conditions have been established. However, there is still a long way to go before these outcome indicators will be widely available to the public in the form of reliable and understandable quality information at the individual provider (organisation) level. Moreover, long-term institutional support for this program is uncertain. In addition, insurers have limited incentives to invest in improving care for people with chronic conditions because these are still undercompensated by the system of risk equalisation despite major improvements (Van Kleef and van Vliet, 2022). Hence, health insurers primarily compete on price to attract healthy enrolees, while the main driver for investing in better quality of care is their perceived social mission (Stolper *et al*., 2019, 2022). Currently, new methods are being explored (e.g., constrained regression, high-risk pooling, and machine learning) to improve or augment the system of risk equalisation to solve the problem of undercompensating people with (multiple) chronic conditions (Van Kleef and van Vliet, 2022). Finally, the increasing need for integrated care due to the increasing number of people with multiple chronic conditions, reinforced by workforce shortages, requires more collaboration among insurers and providers, which may result in a new balance between competition and cooperation. This is because competition among health insurers may hinder agreements about integrated outcome-related payment and quality improvement if such agreements only apply to a limited share of providers' patient populations. In a recently concluded Integral Care Agreement (IZA) the government and almost all stakeholder associations agreed to allow 'unidirectional' contracting to realise 'impactful transformations' (Ministry of Health, Welfare and Sport, 2022).[2] This implies that providers and health insurers will be allowed signing contracts that could

[1]For instance, patients can compare hospitals on patient satisfaction ratings, readmission rates, unexpected long hospital stay, complication rates, medication control, malnutrition (elderly care), hospital standardised mortality rates (HSMRs), pain registration, and waiting times.

[2]Transformations are defined as being 'impactful' if they have a major impact on health care utilisation, employment of personnel, the regional distribution of resources and/or the size of real estate.

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be a violation of the Dutch Competition Act,[3] for instance by jointly negotiating and supporting agreements about integrated care delivery. Furthermore, to improve regional coordination of care, parties agreed to develop 'regional visions' and regional plans for each of the 32 Dutch health care regions. To date, however, it is still unclear how these proposed changes will affect the purchasing role of health insurers in the Dutch healthcare system.

5. Conclusion: which lessons can be learned?

Although health care systems of all three countries are based on the Bismarckian SHI system they are markedly different from each other. Which overarching lessons can be learned from the experiences with the different role of SHI in these countries?

A first major difference between the three countries is the role and structuring of competition between insurers. It is well known that an unregulated competitive medical market has fundamental problems, resulting in negative welfare effects due to adverse selection and moral hazard (Arrow, 1963). The adverse selection problem has typically been quite effectively addressed by establishing SHI systems with mandatory participation and cross-subsidies, and no choice of insurer. However, the moral hazard problem proved to be much more difficult to solve. In SHI systems, moral hazard has been traditionally counteracted by cost sharing, and by price and supply regulation. Originally, SHI carriers had limited incentives to counteract moral hazard as they were not at risk for the health care expenses of their enrolees. However, this changed in Germany and the Netherlands where health insurers were made financially accountable for health care expenses by the introduction of prospective risk equalisation and price competition. The downside of the introduction of this regulated or managed competition, however, is that in case of imperfect risk equalisation the problem of (adverse or preferred) risk selection re-emerges. In contrast to the Netherlands and Germany, French citizens were not given a choice between health insurers. While this resolves the problem of adverse selection, insureds have no direct instrument to hold insurers accountable, for example, by switching insurers. In Germany, however, the rationale of insurer competition is unclear, since contracts are largely concluded at a collective level between corporatist bodies and the room for individual contracting is small. By contrast in the Netherlands, insurer competition is more effective, but primarily focused on price due to a lack of reliable public information on quality of contracted providers and inadequate incentives to invest in improving quality for patients with chronic conditions. Moreover, due to the increasing need for integrated care a new balance between competition and cooperation may be required.

A second major difference appears to be the level of corporatism in healthcare decision making. In Germany, the dominance of corporatist bodies limits the negotiation power of individual sickness funds and can be a barrier to change. In France, the centralisation of SHI funds under one umbrella gives them significantly more power for regulating the system, but the involvement of the parliament in the process, where medical associations are well represented, reduces their negotiation power. The French experience shows that organising an appropriate incentive structure at a centralised level as a single SHI payer may be complicated, since this system is rigid and susceptible of being dominated by special interests. In addition, strong regulatory constraints often do not provide appropriate incentives for health care provision to be efficient. In the Netherlands, the competitive environment in which insurers negotiate with individual providers appears to give more incentives to insurers to look for efficiency margins, but former corporatist bodies (i.e., provider and insurer associations) are gaining momentum due to increasing pressure for regional cooperation.

[3]The Ministry of Health stated that both the Dutch competition authority (ACM) and the Healthcare Authority (NZa) will be requested to create as much room as possible within the current legislation to facilitate the necessary coordination for these transformations, referring to the existing rules and guidelines by ACM to enable collaborative agreements about 'the right care in the right place'.

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Finally, the role of institutions and prevailing mores supporting data collection and measurement of provider quality is essential. Both the German and Dutch experience show that designing an appropriate incentive structure for providers in a competitive social health insurance market requires an adequate system of risk equalisation, and adequate quality measures as well as evaluation of introduced concepts. This is complex and requires solid data and indicators which should be accessible to insurers and the general public. While data and methods for adequate risk equalisation have been substantially improved in both countries, adequate public information on provider quality is still in its infancy. In contrast to the health insurance market, institutional structures that can support and enforce the collection and dissemination of relevant information about provider quality in all three countries are rather weak. Among these countries, the Netherlands appears to have the longest tradition for quality measurement, but meaningful publicly available quality information at the provider level is still limited. In Germany, beyond mandatory quality reports of hospitals that include structural, process, and outcome indicators, since 2017 sickness funds can conclude temporary quality contracts for specified indications or service areas, which in practice is challenging due to a lack of information on health care quality and costs at the individual provider level. Finally, in France the reluctance for benchmarking care providers effectively blocks the provision of comparable information on provider quality and therefore reduces the capacity of SHI funds to promote better care practices.

When looking at the overall performance of the three systems in terms of expenditure and quality (Table 1) the Dutch health care system scores better in the recent period than the French and German systems. Germany in particular has notably high levels of service activity in all sectors. The number of hospital discharges and avoidable hospitalisations, and the expenditures on pharmaceuticals are the highest within three countries and the EU. This probably reflects the difficulty of changing care organisation (volumes) in a system that is primarily based on self-governing corporatist structures with limited state control of the health system. Hence, collective agreements are increasingly being supplemented, but rarely replaced, by selective contractual arrangements. However, the power and resources of smaller sickness funds are limited at this point. Therefore, a further concentration in the market of sickness funds is to be expected, which may also change the balance of power vis-à-vis care providers. As a contrast, the SHI market is very concentrated in France, where SHI funds have been acting like a single payer as in a Beveridge system to control health expenditure, but mainly with regulation of prices. The highly centralised and fragmented management of the system means that SHI funds have limited capacity for negotiating with individual care providers and to motivate change in care delivery for better quality and integration. Recently, more integrated payment models have been tested at local level as a lever for change, but SHI funds do not have contractual power for negotiating with individual providers nor the appropriate information on quality of care across providers. In the Netherlands, competitive incentives for insurers backed by collective agreements between the government and provider and insurer associations, appear to have been relatively effective in achieving efficiency in terms of overall cost, hospital utilisation and quality. What is clear from our comparative analysis, however, is that competitive incentives may only help to improve system performance if incentives are structured appropriately. For this there is a need to strengthen institutions supporting (meaningful information about) quality of care from patients' point of view. Furthermore, SHI carriers need to ensure that care providers are working together with the same quality and efficiency objectives in a collaborative way. This requires an integrated approach where SHI carriers should have a global view (across sectors in a region). Too much insurer competition may hinder this, but French experience shows that lack of competition is not forcibly the solution.

Faced with an increasing demand from an ageing population, rapid changes in medical care and technology, the three SHI system face similar challenges for encouraging continuous efficiency improvements to guarantee the availability of good quality care at affordable cost for the entire population. The traditional approach to regulating prices and volumes will not suffice

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for assuring sustainability of healthcare delivery. Designing an appropriate incentive structure for improving integrated care provision and strengthening care in the community is all but straightforward neither for competing insurers nor in a single payer system. None of the three Bismarck countries has found the holy grail yet.

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