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Privately Owned Hospitals – 2015

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Preface

The privatisation of hospitals, i.e. a change in their type of ownership from the municipal[1] and private non-profit type[2] to the private profit-oriented type, has been the subject of heated debate ever since this development began back in the early 1990s. To objectivise this debate, the Fact Books "Significance of Privately Owned Hospitals" were prepared in 2009 and 2012 using data from 2006 and 2009, respectively. The aim was to provide a sound and reasoned assessment of hospital privatisation in Germany by presenting and evaluating relevant key ratios relating to the hospital market, differentiated by type of ownership.

The present Fact Book, now in its third edition, has set out to update the analyses performed in 2006 and 2009 to the current data basis from 2012/13. A further aim is to address current debates relating to emergency care and the use of nurses in hospitals. Lastly, the authors wish in particular to shed light on the hospital reform slated for 2015, including both the problem of sustainable investment financing for hospitals and the subject of quality in the hospital.

The basis for the data used in the Fact Book is hospitals with a care mandate invoicing in accordance with DRGs. University hospitals are not included as they pursue research and teaching in addition to hospital care. That means that their key figures do not lend themselves to any direct comparison with the those of non-university hospitals. Likewise, purely psychiatric or psychotherapeutic (to the extent they invoice exclusively according to the Federal Hospital Rate Ordinance (*Bundespflegesatzverordnung* – BPflV)) as well as purely day-care and night-care clinics are excluded from the analysis. The Study confines itself to empirically observable values.

We would like to thank Corinna Hentschker for her valuable assistance in the Study's preparation. Our thanks also goes to the Research Institute of the AOK (WIdO) for providing the data on emergency care. We furthermore thank the German Federal Statistical Office and Dr. Urban Janisch from the Research Data Centre (FDZ) Kamenz for providing official data and Anette Hermanowski, Claudia Lohkamp, Lutz Morgenroth and Bärbel Rispler for their organisational assistance. The authors alone are responsible for the Study's content and any errors.

1 *The terms "municipal" and "public" are hereinafter used synonymously.*

2 *Hereinafter referred to as non-profit.*

Privately Owned Hospitals – 2015

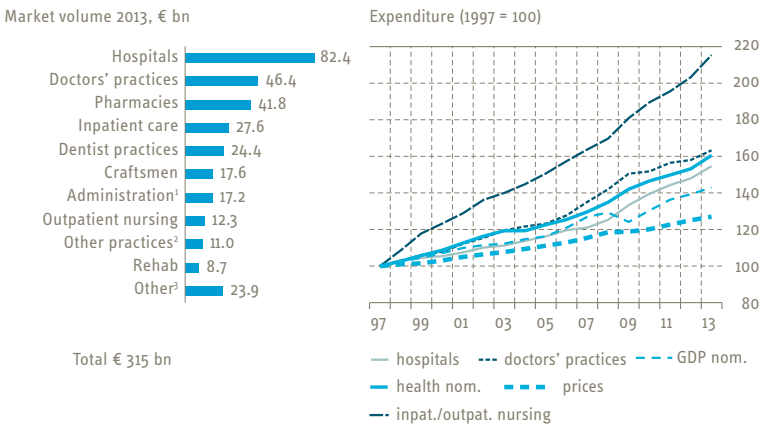
1. Introduction

The prominent social and economic role played by the healthcare and hospital market is routinely emphasised, with reference being made to the huge importance for society of providing the population with high-quality and generalised medical services. Moreover, the healthcare sector, in its economic dimension, is noted for its major importance for job creation (Beivers and Minartz 2011b). In 2013, the German healthcare market reached a volume of roughly € 315 billion (Diagram). This translates into growth of € 14.5 billion or 4.8% compared with 2012. What is noteworthy is that the growth rate has nearly doubled compared with previous years. At the same time, gross domestic product, after plunging from 2009 following the financial crisis, has since recovered. As a result, the share in healthcare spending in 2013 stabilised at 11.2% – up from 11.0% in the previous year (Augurzky et al. 2015). The hospital sector alone accounted for the biggest portion of all sectors within the healthcare system with a volume of some € 82 billion or a share of 26.2% in the aggregate healthcare market. When it is also considered that roughly 1.2 million persons are employed in German hospitals (Federal Statistical Office 2015: Basic Data), the huge importance for employment policy becomes obvious as well.

Diagram 1

Market volume and changes

2013 (in € bn); 1997-2013; 1997 = 100

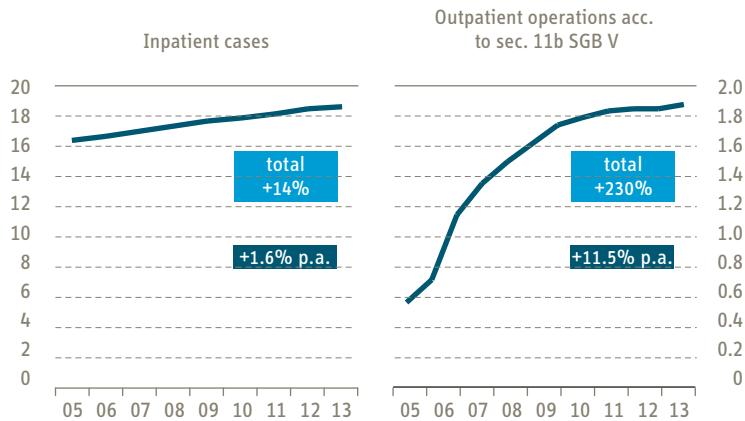


Source: RWI, Federal Statistical Office (2011, 2012ff, 2015a, 2015b). – Note: Total costs excluding costs for abroad. – [1]Of which particularly overheads of the health insurance funds – [2]Practices of other medical professions: physiotherapy, speech therapy, ergotherapy, music therapy, massage and midwife practices, as well as alternative practitioners or medical chiropodists. – [3]Investments (gov't grants for hospitals, funds for nursing homes i.a.), health protection, emergency services, other facilities and private households. Total costs excluding costs for abroad; expenditures for inpatient nursing in 2013 are adjusted for the share of investment costs (13.8%).

Diagram 2

Number of inpatient cases and outpatient operations

2005 to 2013; in m



Source: RWI, Federal Statistical Office (basic data).

Market volume is reflected most impressively in the hospitals' service volumes. The number of inpatient cases increased by 14% between 2005 and 2013, from 16.5 million to 18.8 million (Diagram 2). In addition to full inpatient service volumes, the number of outpatient operations pursuant to section 115b of the German Social Insurance Code V (Sozialgesetzbuch V, SGB V) witnessed a particularly sharp rise: by 38% since 2005, and even by 230% since 2002 (Augurzky et al. 2015).

As a result of demographic change and the increasing shortage of public funding, however, the German hospital landscape is facing a sweeping changes. According to a White Paper by the Healthcare Reform Working Group (Arbeitsgruppe Krankenhausreform) (BMG 2015) presented to the public in early December 2014, the "hospital of the future" has to be "good, safe and easy to reach", thus helping to press ahead with the restructuring of the hospitals landscape based on needs. A key demand being voiced in the reform debate is securing the quality level of medical care in hospitals on a sustainable basis. Ensuring quality in hospitals is said to be linked to a hospital planning approach aimed at making facilities easier to reach, thus particularly addressing the issue of emergency care. Among the key instruments cited in achieving this goal are enshrining quality in legislation as an additional criterion in the hospital planning schemes of the federal states and

granting surcharges to hospitals for ensuring emergency care in rural regions. In addition to this, quality-oriented remuneration as well as financing the reduction of existing overcapacities locally are to be achieved either by closing hospitals or by re-dedicating them as non-acute-care facilities.

Furthermore, healthcare policymakers want to see hospitals hire more staff for "bedside nursing care". For that purpose, the Federal Government and the federal states want to make available € 660 million under a programme to fund nursing positions. At the same time, a panel of experts based with the German Health Ministry is to decide by the end of 2017 at the latest whether nursing needs in the hospitals are "expediently covered" under the DRG system or by additional fees. Depending on the finding, proposals on any changes to financing are to be submitted.

The current debate on the hospital reform also reflects a trend already presented in the last two Fact Books: the German hospital market is undergoing a process of sweeping changes to which there is currently no end in sight. For example, the number of hospitals (reported institution identification codes) declined by roughly 17% from 1991 to 2013. An even stronger decline can be observed with the number of beds (-25%) and duration of stay (-46%) (Federal Statistical Office 2015: basic data). By contrast, there was a smart rise in the number of full inpatient cases (+29%). These changes have been reinforced by the introduction of case-flat-rate remuneration in hospitals based on diagnosis-related groups (DRGs). From the outset of this transformation process, an increasing switch in the ownership of hospitals in favour of private, profit-oriented companies has also been observed.

This development is being gauged in different ways by the individual players of the healthcare system. Time and again, fears of a possible trade-off between private hospital owners' intention of generating profits on the one hand and ensuring high-quality and generalised hospital care on the other are voiced. The key purpose of the present Fact Book is to provide detailed analyses to examine whether such fears are justified.

In that regard, different issues from the current debate on hospital reform will be looked at. It will first of all be examined to what extent private hospitals are involved in emergency care. Secondly, key figures on nursing in private hospitals are to be analysed to determine whether cost-cutting in private hospitals comes at the expense of "bedside nursing". Thirdly, key figures on investment financing are to be examined and interpreted. Lastly, the authors in particular elucidate the subject of quality in hospitals and analyse it on an ownership-specific basis.

2. Special features of privately owned hospitals

Essentially, privately owned hospitals are distinguished from municipal and non-profit facilities by the fact that private equity capital is employed in the company.[3] This results in advantages and disadvantages compared with other hospitals. On the one hand, use of such private funds is not free. This is a well-known feature of debt capital, for which interest is charged. The use of private equity capital also comes at a cost in the form of dividends paid out each year to those that provide capital. This on the one hand deprives the hospital of capacity to invest, but on the other has the advantage of allowing the hospital to tap the capital markets for funds. That in turn increases investment capacity considerably because it is only by paying out part of their profits that hospitals become attractive for external providers of capital. It is thus a give-and-take process. For the German economy as a whole, it is an advantage for private capital to be invested in the healthcare system. Non-profit-oriented hospitals do not have this option. They can only resort to scarce government grants and debt capital.[4] Without sufficient investment, though, it is difficult for a hospital to optimise its clinical processes.

The facility's profit-generating intention is thus justified by the capital cost of privately invested equity capital. But at the same time, profits are not guaranteed. Losses are also possible. Providers of capital thus take an entrepreneurial risk. The customary rate of return on capital thus also includes a risk premium; the greater the likelihood of a loss being generated on the capital employed, the higher the risk premium is.

A further important advantage of hospitals with private owners is that they frequently have a professional supervisory body that works together with the management as a team. The supervisory body per se is more homogenous and its members pursue similar interests, above all efficient provision of the hospital's services and ongoing improvement in its own competitive position. Going hand in hand with this is an interest in high-quality services to successfully vie for patients in competition with other hospitals. In particular, the supervisory body as a rule does not pursue any other objectives that might be to the detriment of efficiency and quality.

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3 By contrast, private debt capital is used by hospitals of any ownership type.

4 Note, here, that debt capital, frequently in the form of loans from banks, is also subject to an interest charge. This also deprives the hospital of funds. Funds are also removed from the hospital as a result of remuneration of the hospital's staff. However, this is a normal part of a production process. Factors of production, notably labour and capital, are employed to produce the desired product or service. It is a matter of course that in such production process costs are incurred by the factors of production.

2. Special features of privately owned hospitals

In this connection it has to be assumed that supervisory bodies of privately owned entities place much greater emphasis on a performance-oriented executive body that manages the fate of the company under its own responsibility and is measured by its achievement of the company's targets. Here, such supervisory body does not interfere in the day-to-day business of the company but rather is concerned with the long-term corporate strategy. Its greater independence from decisions by local levels of government makes it easier for the management of private but also many non-profit hospitals not only to identify rationalisation potential but also to actually exploit such potential.

Just how important private capital is for the German hospital system is seen in the dearth of government grants having led to a noticeable investment backlog over the past years. Germany has what is referred to as a dual hospital finance system. Under the Hospitals Financing Act (Krankenhausfinanzierungsgesetz – KHG) (section 9 (1) KHG), the federal states bear the costs of investment out of tax funds (Beivers and Minartz 2011a; Neubauer 2007). Under the KHG, the hospitals, at least in principle, have a claim against the federal states to funding of their investment costs. The precondition for this is that the facility has been admitted to the state hospital requirement plan. Current operating costs, however, are accounted for with the patients or health insurance funds via DRGs, supplementary remuneration and daily nursing rates. Consequently, remuneration does not include any investment cost components.

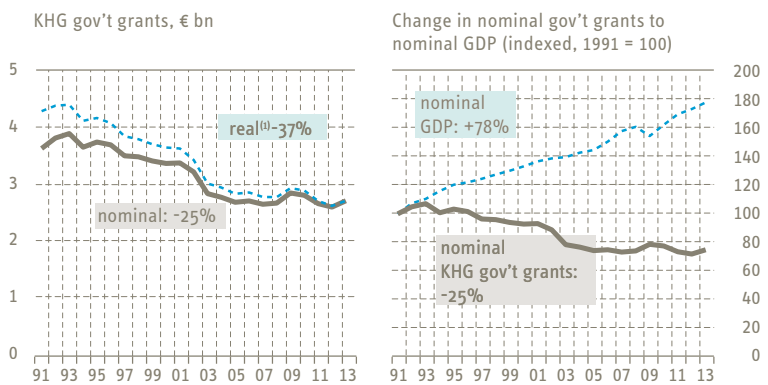
This results in two management systems based on two different regulatory policies being used side by side, which is something that naturally leads to conflicts (these can also actually be observed in Germany). This results among other things from the fact that the design of the remuneration system is subject to the prerogative of the German Parliament, and hospital planning to that of the federal states (cf. Neubauer 2007). The area of investment financing is thus running into difficulties with the noticeable reduction in government grants seen for several years now (Diagram 3).

Taking as a basis appropriate depreciation ratios depending on the type of the hospitals' tangible fixed assets, and assuming that the fixed asset base is to be preserved, this results in an annual investment requirement of all hospitals (excluding university hospitals) is € 5.3 billion (Augurzky et al. 2015). Of this, the federal states contributed € 2.7 billion in 2013. To a certain extent, the hospitals close this annual investment gap from own funds. But since they do not succeed in

closing it completely, there is a gradual erosion of assets which becomes noticeable, among other things, by a decrease in tangible fixed assets relative to hospital revenues.

Assuming on the basis of benchmarking analyses that hospitals on average are to employ 75 cents of tangible fixed assets for each euro of revenues, that extrapolates to a cumulative investment backlog of nearly € 12 billion. In this context it has to be noted that the benchmark of 75 cents for each euro of revenues represents book values, i.e. to some extent impaired assets. Usually, however, capital goods can be acquired in an as-new condition (at procurement and production cost), which means that the investment requirement to remove the backlog even has to be in excess of € 12 billion.

Diagram 3
Gov't grants under the KHG
1991 to 2013; € m

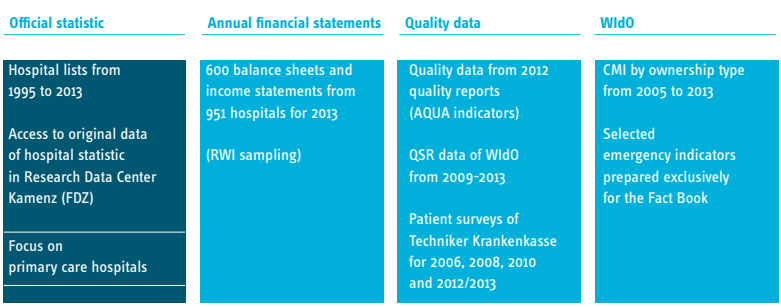


Source: RWI, DKG (2014), Federal Statistical Office (2015c). – [1]Deflated by consumer goods price index.

3. Data basis

The basis for the data of this Fact Book is taken from the official hospital data of the Federal Statistical Office (Diagram 4). The data used were the (i) basic data on inpatient service volumes from 1996 to 2013 (Federal Statistical Office: basic data). On the cost side, the (ii) cost statement of the hospitals provides comparable data on personnel and material costs for the years 2002 to 2013 (Federal Statistical Office: cost statements). These data are publicly available in aggregated form. In section 5, we resort to such data to show longer time series. In this regard, we always confine ourselves to general hospitals[5], i.e. exclude purely psychiatric or psychotherapeutic hospitals or purely day- and night-care clinics because it is not possible to measure their outcome in case-mix points. Moreover, we exclude university hospitals because, in addition to care delivery, they also conduct research and teaching and it is likewise not possible to measure their overall outcome in case-mix points.[6] For 2013, data of 1,633 general hospitals are available, 575 under private ownership as well as 591 under non-profit and 467 under public ownership.

Diagram 4
Data basis of empirical studies



Source: RWI.

5 General hospitals are those having beds available in full inpatient departments, with such beds not being kept available exclusively for psychiatric, psychotherapeutic and neurology patients. Purely day and night facilities are excluded (Federal Statistical Office 2015: basic data).

6 However, university hospitals can be removed only approximately from the aggregated data because since 2006 it has no longer been the case that all university hospitals are under public ownership (which made it possible to simply deduct their figures from those of all public hospitals). Hence, part of that has to be deducted from the figures of the private hospitals after 2006 with the aid of a key.

That said, the drawback of using publicly accessible aggregated data is that such data do not allow for any further refinements in the analyses. For example, hospitals without a care mandate, which are not the subject matter of the Fact Book, are not eliminated. These include many small private hospitals, for example. However, the data basis can be adjusted for all non-relevant hospitals by using the original data available from the research data centres of the State Statistical Offices. We have refined the selection algorithm compared with the last Fact Book and take into account hospitals that invoice exclusively according to DRGs and those that account both according to DRGs and according to the BPflV. The latter are psychiatric-neurological clinics which invoice a portion of their services according to DRGs. Overall, approved hospitals[7], those with a care mandate[8] and other hospitals which invoice in part using DRGs[9] are included in our data basis. They are referred to hereinafter as "primary care hospitals"[10]. In the main part (Section 4), we confine ourselves completely to these hospitals. The drawback in this regard is that the analyses are much more complex and involved and that key ratios can be provided only for 2005, 2009 and for the currently available year 2012. They do not allow for any time series analyses. Given the changes in the selection algorithm, the results from the analyses for 2005 and 2009 differ slightly compared with the previous Fact Book.

7 *Approved hospitals are hospitals that are admitted to a federal state's hospital requirement plan (cf. section 6 (1) KHG); in 2012 there were 1392 general approved hospitals, compared with 1,377 in 2013 (Federal Statistical Office: basic data).*

8 *Hospitals with a care mandate pursuant to section 108 no. 3 SGB V are authorised to provide hospital treatment to insured members based on a care mandate with the state associations of health insurance funds and the associations of other substitute funds; in 2012 there were 79 general hospitals with a care mandate, compared with 76 in 2013 (Federal Statistical Office: basic data).*

9 *That was a total of 16 facilities in 2012. Own calculation on based on basic data of the Federal Statistical Office.*

10 *By analogy to the general hospitals, we remove the purely psychiatric and psychosomatic hospitals from the primary care hospitals. The detailed data basis of the FDZ makes it possible to measure psychiatric-neurological clinics separately, with the result that we added these in the group of primary care hospitals. That explains why the number of municipal primary care hospitals in Table 1 is larger than the number of general hospitals.*

3. Data basis

In keeping with this selection, data from a total of 1,487 primary care hospitals, of which 391 under private, 607 under non-profit and 489 under public ownership, are available to us for 2012. For 2009 and 2005, data of 1 570 and 1 627 hospitals, respectively, are available. Table 1 shows how the general pool changes as a result of the selection of contract hospitals for 2005, 2009 and 2012. Particularly on a comparison of private general hospitals and private primary care hospitals, a very noticeable difference in the general pool emerges. The difference is attributable to the fact that hospitals without a care mandate[11] pursuant to section 108 no. 3 SGB V are included amongst the general hospitals, whereas we exclude this type of hospitals from the primary care hospitals. Particularly very small private specialist hospitals with approximately 30 beds on average do not have a care mandate and are accordingly not included in the selection of primary care hospitals.[12]

11 These hospitals are not authorised to provide hospital care to insured members.

12 Hospitals without a care mandate include several private hospitals of Helios (e.g. Berlin-Buch, Bad Saarow), several private clinics for plastic-aesthetic surgery (e.g. Nürnberger Klinik für Ästhetisch-Plastische Chirurgie, Klinik am Stadtgarten für Ästhetisch-Plastische Chirurgie in Karlsruhe), specialised ophthalmology or dental clinics (Augenklinik Garmisch-Partenkirchen, Zahnklinik MEDECO) and clinics offering alternative therapies (e.g. Klinik am Steigerwald Zentrum für chinesische Medizin und biologische Heilverfahren in Gerolzhofen).

Table 1

Change in general pool as a result of selection of primary care hospitals

Hospitals	Private (excl. univ.)	Other n.-profit	Municipal (excl. univ.)	Univ. hospitals	Total
2005					
General pool	568	818	719	34	2139
Selection "general hospitals"	485	712	615	34	1846
Selection "primary care hospitals"	308	699	620	-	1627
2009					
General pool	665	769	616	34	2084
Selection "general hospitals"	563	661	522	34	1780
Selection "primary care hospitals"	377	657	536	-	1570
2012					
General pool	695	719	569	34	2017
Selection "general hospitals"	577	603	478	34	1692
Selection "primary care hospitals"	391	607	489	-	1487

Source: RWI, FDZ (2015), Federal Statistical Office (basic data). – Note: Unlike the general pool of general hospitals, psychiatric-neurological clinics are again attributed to the primary care hospitals provided that they invoice according to DRGs. The difference versus the general pool of all hospitals results in the other hospitals exclusively made up of psychiatric, psychotherapeutic or psychiatric, psychotherapeutic and neurological beds as well as purely day- and night-care clinics.

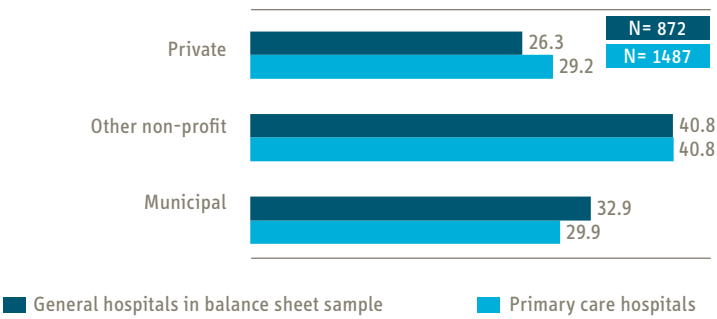
For some analyses based on economic key ratios, the (iii) RWI annual financial statement data are used. This sampling includes almost 557 annual financial statements of general hospitals from 2012 and 2013. They cover 872 general hospitals and allow for analyses of the hospitals' financial situation by ownership type. The ownership structure is reflected well by the available annual financial statements, with private hospitals being slightly underrepresented and municipal hospitals slightly overrepresented (Diagram 5). To weight the number of cases, the (iv) case-mix indices (CMIs) per hospital provided by the WIdO were also used. In this way, it is possible using the case mix to reflect a hospital's outcome much better than merely using the number of cases. Furthermore, data (v) provided by the WIdO on emergency indicators allow for an adequate representation of current

emergency care. For the analysis of patient satisfaction, (vi) patient surveys of the health insurance fund Techniker Krankenkasse from 2006, 2008 and 2010 as well as 2012/2013 were used.

Diagram 5

Comparison of sample and selection of primary care hospitals

2012; share as % of all hospitals



Source: RWI, FDZ (2015).

For examining the owner-specific quality of the services provided, the (vii) AQUA indicators of the structured quality reports pursuant to section 137 (3) SGB V from 2012 were used. All approved hospitals and hospitals with a care mandate, which are authorised for statutory health insurance pursuant to section 108 SGB V, are required to publish their quality reports. The structured quality reports allow us to make representative assessments thanks to an extensive sampling of 2 007 sites of 1 615 hospitals (institution identification codes). For the analyses, we were able to use the AQUA assessments of 157 individual indicators. These can be used in different ways: each individually, grouped into three categories (process, indication and results quality) or grouped into one category.

To accurately reflect the quality of the hospital, we selected from a host of all individual indicators three key indicators which are available for numerous service areas: rate of post-operative wound infections, rate of mortalities in the hospital and rate of patients with stage 1 to 4 decubitus ulcers on discharge.[13] For all three indicators, we use the risk-adjusted rates. Risk adjustment takes into account risk factors such as age or concomitant conditions.

For the evaluations, we proceed as follows: We first classify the individual indictors to the category "Qualitatively conspicuous" by condensing the "Classification of the finding" performed by the Joint Federal Committee (Gemeinsamer Bundesausschuss, G-BA) to this category (G-BA 2014). The findings for all indicators were classified by the G-BA into different categories. We consolidate the two categories "Facility informed of notionally conspicuous finding" and "Evaluation after structured dialogue as qualitatively conspicuous" into "Qualitatively conspicuous". In a second step, we aggregate the conspicuous indicators over all service areas for each institution identification code and site and from that calculate the share of conspicuous indicators. The objective is to assign each hospital site to the two groups "Conspicuous facility" and "Inconspicuous facility". When the share of conspicuities is over 5%, we classify the facility as conspicuous. If the share of conspicuities is below 5%, the facility is classified as inconspicuous. Finally, we calculate the share of conspicuous facilities for each group of owners.

Lastly, we use (viii) QSR indicators of the WIdO, which also allow statements regarding quality. QSR stands for "Qualitätssicherung mit Routinedaten" (quality assurance based on routine data). The basis for QSR quality measurement is provided by routine data of the AOK.[14] The particular strength of the QSR process is the cross-case analysis of invoicing data from hospitals in combination with further administrative data on insured members. In the QSR process, a hospital's entire service range is not evaluated but instead selected service areas are defined and key ratios for results quality are then examined within these service areas. This selected sectional perspective makes it possible also to analyse results indicators beyond the actual hospital stay such as mortality after 30 days, 90 days and one year as well as re-admissions due to complications. A hospital's quality is

13 According to ICD-10-GM, decubitus according to L89 is subdivided into four stages. Stage 1 decubitus is characterised by non-blanchable erythema (redness) with skin intact; stage 2 decubitus involves abrasions, blisters, partial loss of skin including epidermis and/or dermis or loss of skin without further specification; at stage 3 decubitus, there is a loss of all skin layers with damage or necrosis of subcutaneous tissue possibly extending to underlying fascia; stage 4 decubitus involves necroses of muscles, bones or supporting structures (e.g. tendons or joint capsules).

14 Cf. also website on QSR process: http://www.qualitaetssicherung-mit-routinedaten.de/methoden/index.html

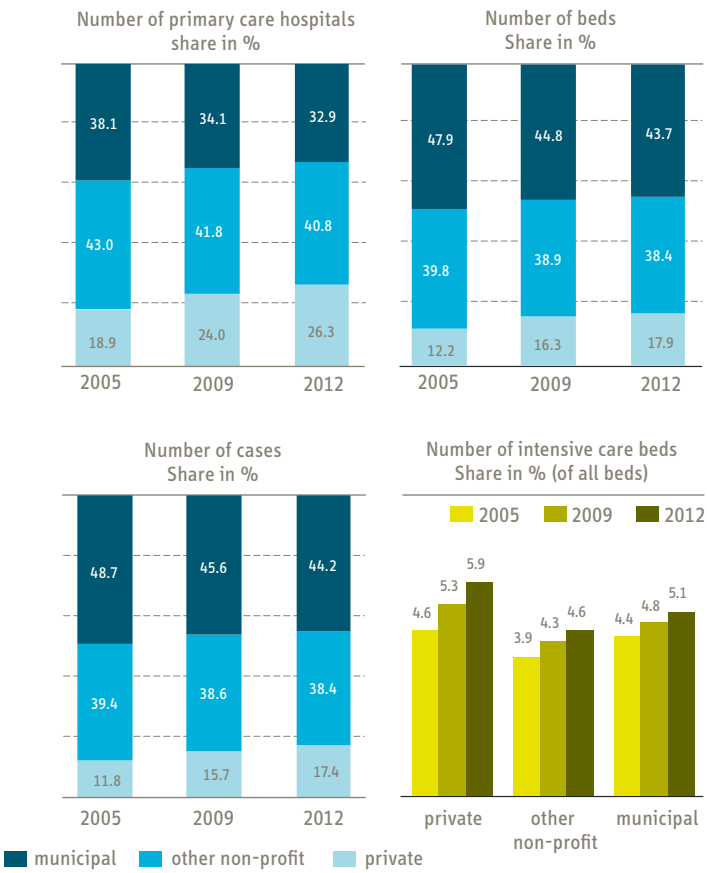
assessed using statistical procedures. QSR indicators are divided into three categories indicating below-average, above-average and average quality (hereinafter referred to as quality points) for up to 6 different service areas. To condense this information, we calculated the share of the maximum quality points reached for each hospital on the basis of the quality points awarded over all service areas. Lastly, we calculated the mean of these shares over all owners.

4. Detailed analyses of primary care hospitals

4.1 Market shares

Diagram 6 shows the changes in the market shares of the primary care hospitals by ownership type between 2005 and 2012. During this period, the share of private hospitals increased by 7.4 percentage points with reference to the number of hospitals, by 5.7 percentage points with reference to the number of beds and by 5.6 percentage points with reference to the number of cases. It becomes apparent that the private hospitals on average acquired more smaller hospitals. It is further revealed that in the area of intensive care beds private hospitals even make a disproportionate contribution to the treatment of patients suffering from severe conditions and thus to ensuring (emergency) care. Furthermore, a persistent market consolidation on the hospital market, i.e. mergers in the hospital sector, can be observed (Augurzky et al. 2011) – driven in particular by the hospital chains under private, but increasingly also those under public and non-profit ownership.

Diagram 6
Market shares
2005, 2009 and 2012; in %



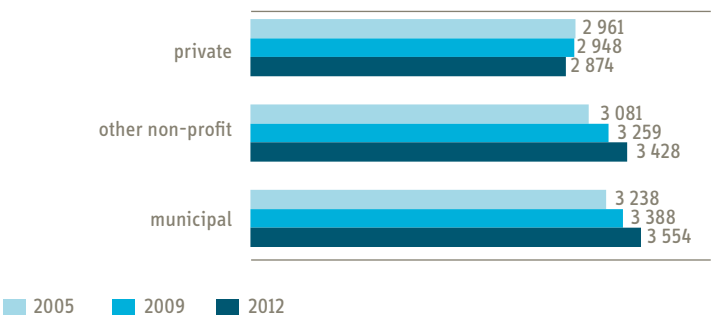
Source: RWI, FDZ (2015).

4.2 Efficiency

To cover their capital costs, private hospital owners have to generate a return on their capital employed. This calls for a high level of efficiency. That means adhering to stringent cost and revenue management as well as high (labour) produc-

tivity. To minimise costs, it is necessary to reap economies of scale through high occupancy, achieve specialisation of services volumes as well as optimise clinical processes in addition to cost-sensitive management – often in conjunction with investments. The merger into a group can moreover unlock networking reserves referred to as "economies of scope". Here, the private hospitals lead the way, as shown among other things by the adjusted costs per case-mix point[15] (Diagram 7). Whereas these have increased for other non-profit and public hospitals, they even decreased for private hospitals.

Diagram 7
Adjusted costs
2005, 2009 and 2012; in € per case-mix point



Source: RWI, FDZ (2015). – Note: [1] Adjustment of total costs by costs for ambulatory care, research and teaching as well as others; including expenditures for training fund

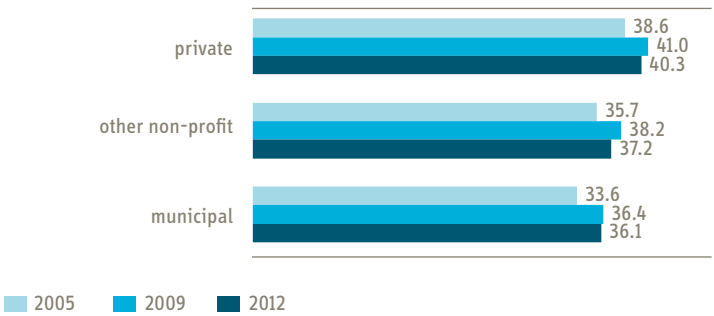
Private hospitals had proportionately higher material costs compared with the other ownership types (Diagram 8). However, the percentage declined with all ownership types on a comparison between 2009 and 2012. The higher material cost share of the private hospitals is presumably explained by a higher ratio of services performed by external entities (i.e. their higher level of outsourcing). This is part of the production process based on economic division-of-labour principles. A glance at the more detailed cost structure (e.g. percentage of medical supplies in material costs) under section 4.4 in particular reveals that the private hospitals do not spend less money on medical infrastructure than the other owners.

15 *Under the DRG system, case mix represents a hospital's case number weighted by severity of treatment. It thus measures a hospital's service volume.*

Diagram 8

Material costs

2005, 2009 and 2012; shares as % of gross costs



Source: RWI, FDZ (2015).

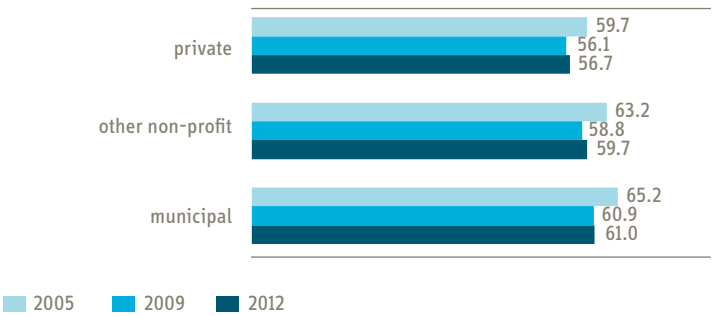
Personnel costs, at roughly 57% of gross costs, are proportionately lower with the private providers (Diagram 9). This might result, firstly, from the fact that hospitals under private ownership prefer in-house wage agreements and are not bound by rigid industry-wide collective bargaining rules. This allows for a higher degree of performance-linked remuneration and greater freedom in the terms agreed for individual employment contracts as well as additional possibilities of retaining qualified staff. Secondly, it may reflect a higher efficiency in service provision and the possibly greater level of outsourcing by private hospitals.

The Federal Statistical Office has been measuring the outsourcing rate since 2010. It is based on the share of a hospital's expenditures for non-salaried doctors and other staff, as well as outsourced services, in the costs of personnel and materials (Diagram 10). The outsourcing of services and personnel has been on the rise across all ownership types. Private hospitals had the highest outsourcing ratios over all years. In 2013 they reached a level of 5.9%, with the figures at municipal and other non-profit hospitals being much lower at 4.9% and 4.2%, respectively. These figures presumably reflect the fact that, for example, the areas of cleaning, catering, radiology, laboratory, pick-up/delivery services and sterilisation, referred to as secondary services, with the private hospitals are more frequently performed by external service providers (outsourcing), reducing the number of full-time staff.

Diagram 9

Personnel costs

2005, 2009 and 2012; shares as % of gross costs

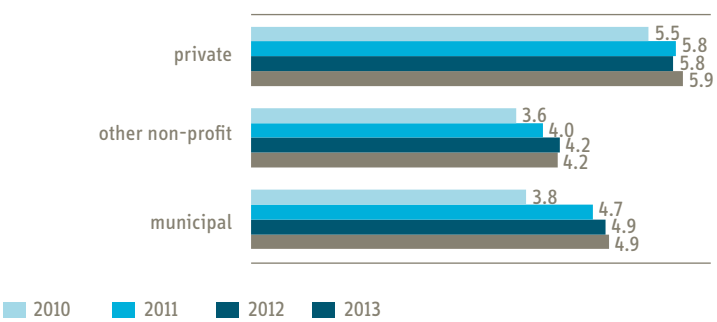


Source: RWI, FDZ (2015).

Diagram 10

Outsourcing ratio in general hospitals

2010 to 2013, share in % of personnel and material costs



Source: RWI, Federal Statistical Office (cost statements). – Note: Values refer to general hospitals excluding university hospitals. The outsourcing ratios for municipal and private hospitals were adjusted for university hospitals using an allocation key.

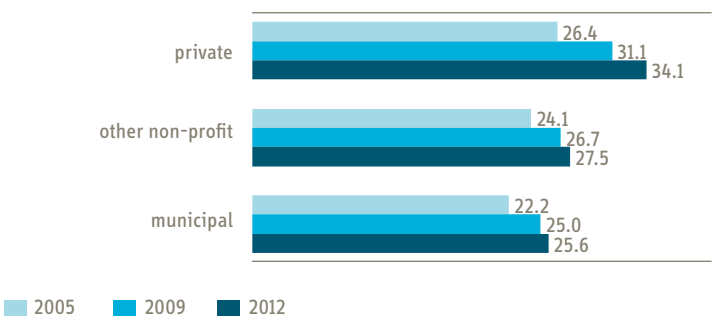
Privately Owned Hospitals – 2015

Labour productivity rose in all hospitals between 2005 and 2012 (Diagram 11), but was consistently higher at the private facilities. In 2012 it stood at 34.1 case-mix points, significantly higher than with other non-profit or public hospitals. This explains the lower costs per case-mix point. As the outsourcing ratios have shown, though, private hospitals are also assisted to a greater extent by external staff. As a result, the total service volume is split between fewer internal employees. The difference between hospital owner types is more striking in the non-medical area compared with the medical area (Diagrams 12 and 13). The relative rise in case-mix points per non-medical full-time staff member was particularly high over time with private owners. Again, this is presumably explained by the higher outsourcing ratio with the private hospitals, where outsourcing is particularly focused on non-medical staff (cleaning, catering, etc.).

Diagram 11

Case-mix point per full-time employee

2005, 2009 and 2012

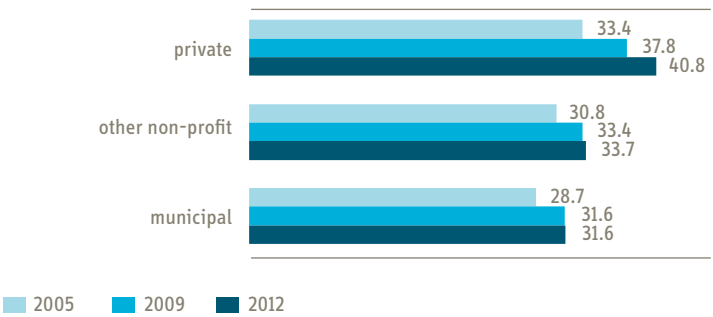


Source: RWI, FDZ (2015).

Diagram 12

Case-mix point per full-time medical employee

2005, 2009 and 2012

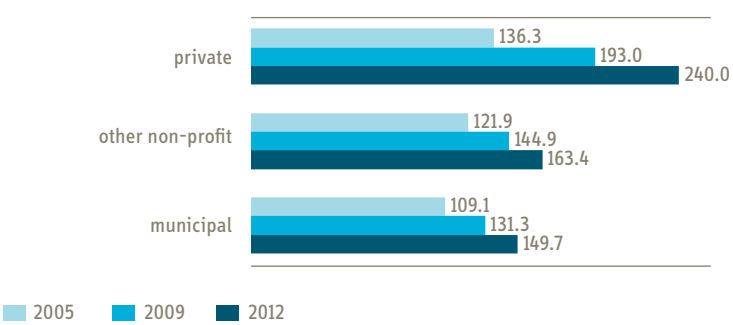


Source: RWI, FDZ (2015). – Note: Full-time medical employees include all full-time medical doctors, nurses, employees from the medical-technical area and staff performing support functions.

Diagram 13

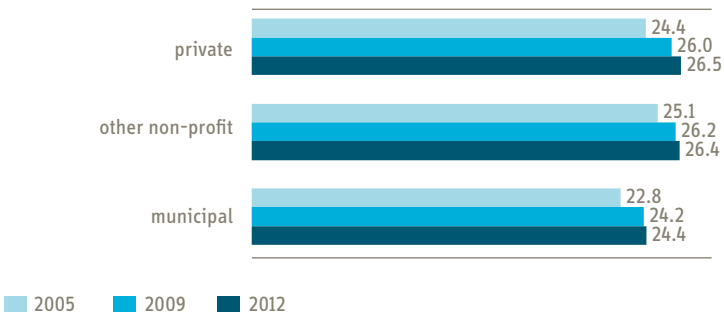
Case-mix point per full-time non-medical employee

2005, 2009 and 2012



Source: RWI, FDZ (2015). – Note: Non-medical full-time employees include all full-time employees of clinical facility staff, management and support functions, technical service, administrative service, special service and other staff.

Diagram 14
Number of cases per full-time employee
2005, 2009 and 2012



Source: RWI, FDZ (2015).

However, the higher case-mix points per full-time employee conceivably also reflect a higher workload of the staff. Empirically, the available data do not allow productivity on the one hand and workload on the other to be separated. However, a disproportionately high workload with an average remuneration cannot be sustained in the long run given the current vying for qualified staff. If, for example, case numbers per full-time employee are compared, i.e. approximately the number of patients cared for per full-time employee, the employee/patient ratio with private hospitals is hardly higher (Diagram 14). Furthermore, higher productivity does not necessarily mean a higher workload if workflow processes within the hospital are designed intelligently, thus reducing inefficiencies. Lastly, performance-linked remuneration can result in higher productivity and have a tendency to retain more productive staff.

4.3 Nursing staff in the hospital

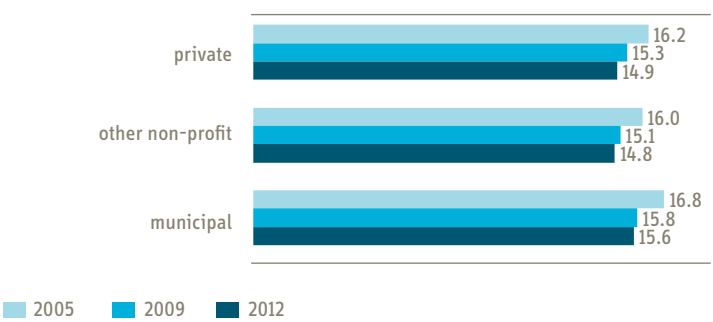
The current debate on healthcare policy is taking a critical look at the level of nursing staff within the hospital sector. There are many who fear that hospitals are increasingly making cuts to staffing and resources – in relation to service volume – for "bedside nursing" (Thomas, Reifferscheid, Pomorin and Wasem 2014). In the diagrams below, various key ratios in this regard are analysed by ownership type. The number of full-time nursing staff per 1 000 cases has seen a decline with all owners from 2005 to 2012 (Diagram 15). With private and other non-profit owners the figures in each case are slightly below those of public owners, with the difference being significantly lower than with the number of full-time employees

per case-mix point. As to be expected from the previous analyses, the number of full-time employees per case-mix point is lowest with private hospitals (Diagram 16). In 2012, they hired 11.6 full-time nursing employees per 1 000 case-mix points, compared with more than 14 full-time nursing employees with hospitals under other non-profit and public ownership. The figure is on the decline with all owner types. On an isolated view of this key ratio it remains unclear whether this trend overall can be attributed to growing productivity and whether the lower figure at private facilities is related to a generally higher efficiency level. That said, the key ratio "number of full-time employees per case-mix point" does not reflect "bed-side nursing" either. It is true that degree of severity has an influence on the level of nursing required. However, nursing requirement is also heavily dependent both on the number of patients being cared for (number of cases) and on the number of occupancy days. Diagram 17 moreover shows that private hospitals do not have any worse employee/patient ratio for the number of nurses per treatment day than the other owners. Here, the values are practically identical across all ownership types.

Diagram 15

Full-time staff in nursing per 1 000 cases

2005, 2009 and 2012

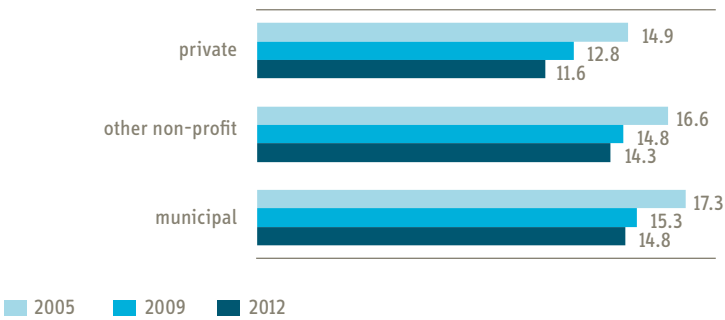


Source: RWI, FDZ (2015).

Diagram 16

Full-time staff in nursing per 1 000 case-mix points

2005, 2009 and 2012

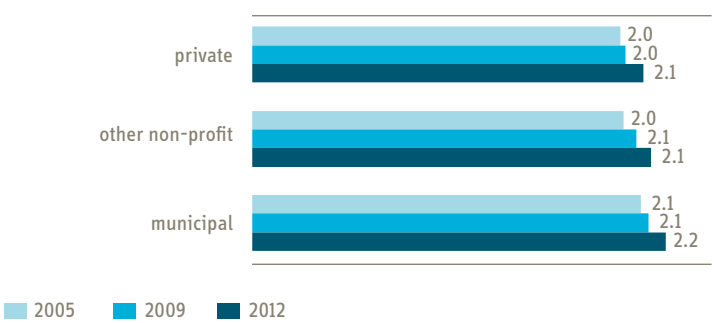


Source: RWI, FDZ (2015).

Diagram 17

Full-time staff in nursing per 1 000 occupancy days

2005, 2009 and 2012



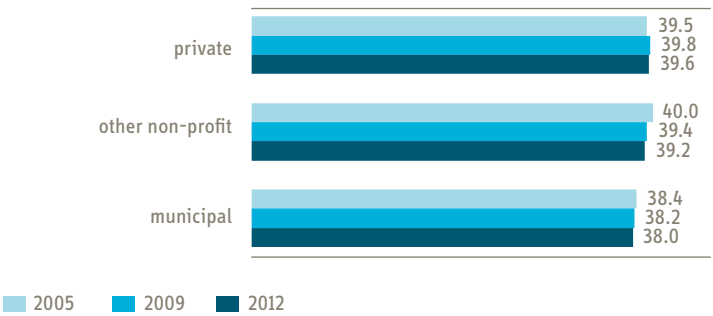
Source: RWI, FDZ (2015).

Lastly, it is also probably worth noting that the share of full-time employees in nursing as a percentage of all full-time staff in 2012 was slightly higher at private hospitals than with non-private hospitals (Diagram 18). Over all ownership types it was in the range of 38% to 40%. Between 2005 and 2013, a very slight decline was even witnessed with public and other non-profit facilities. By contrast, the share has remained stable with private owners.

Diagram 18

Share of full-time employees in nursing in total full-time employees

2005, 2009 and 2012, share in %



Source: RWI, FDZ (2015).

These key ratios do not allow any statement as to whether there are any significant differences in "bedside nursing" between the different ownership types. Neither may it be concluded that "bedside nursing" is a problem with hospitals in general. It will only be possible to make a statement in this regard when it is additionally possible to also take account of the qualification and motivation of nursing staff on the one hand and results quality of the services provided on the other. Such analysis, however, would go beyond the scope of the Fact Book.

4.4 Earnings strength and investment capacity

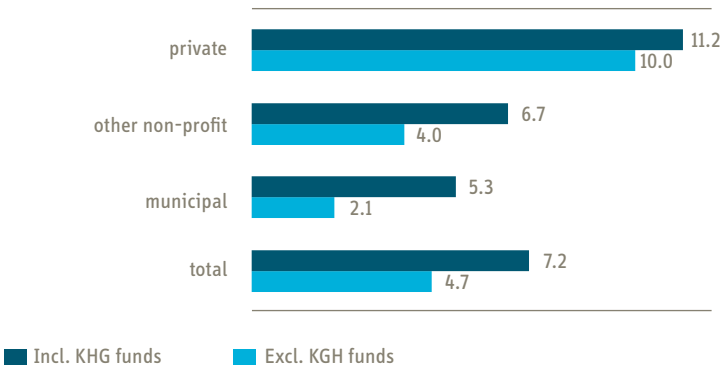
The efficiency of the private hospital owners is reflected among other things in their earnings strength. The EBITDA margin (incl. government grants) of private hospitals averaged 11.2% of revenues[16] in 2013 and was thus significantly higher than with non-private hospitals (Diagram 19). Looking at the EBITDA margin excluding government grants, i.e. operating income from own strength, the gap between private and other ownership types is even greater because private hospitals resort to government grants to a lesser extent.

16 EBITDA = operating earnings, i.e. income after deducting personnel and material costs. It stands for "Earnings before interest, taxes, depreciation, and amortization". It is a business ratio that provides a relatively good approximation of a company's cash flow. EBITDA margin is the ratio of EBITDA to income.

Diagram 19

EBITDA margins of general hospitals

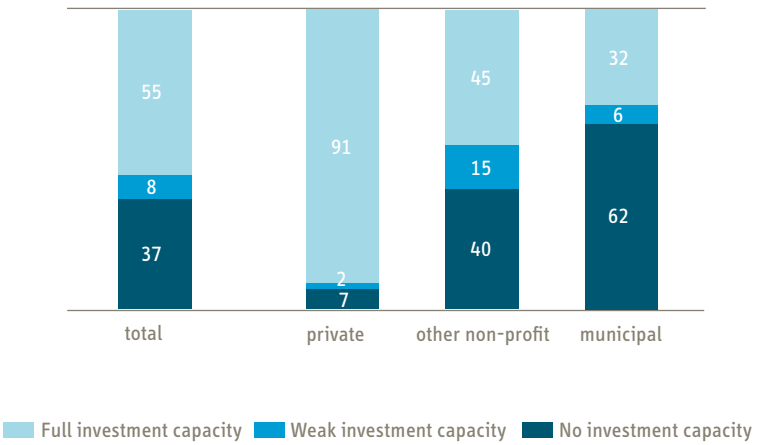
2013; as % of total income



Source: RWI.

From EBITDA, capital employed is financed. It can be used to finance re-investments for preserving assets. But it also provides return on capital to finance debt and equity capital for investments. A hospital's investment requirement cannot be represented by an absolute measure. With the aid of key ratios from a hospital's balance sheet structure, however, it is possible to work out how high the EBITDA margin at the least has to be to finance depreciation/amortisation and cost of capital. This "minimum EBITDA margin" depends among other things on market interest rates, on the nature and duration of use of fixed assets and on the hospital's service portfolio. EBITDA is thus a measure of a company's investment capacity.

Diagram 20
Investment capacity of general hospitals
2013; shares in %



Source: RWI.

Diagram 21
Share of investment in total revenue of general hospitals
2013; in %

Source: RWI.

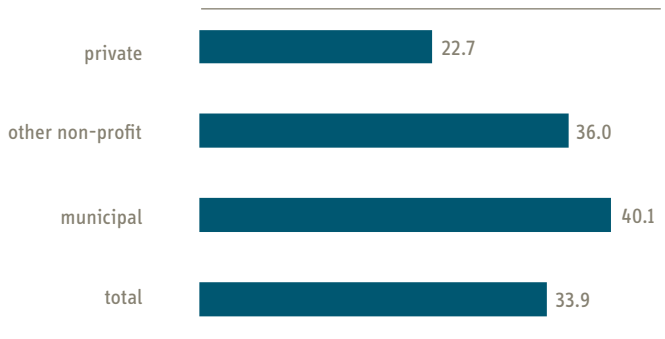
From a comparison of actual EBITDA margin with minimum EBIDA margin, it is possible to make an estimate of hospitals' average investment capacity by ownership type (Diagram 20, for a more detailed look at how EBITDA margin and minimum EBITDA are calculated, see Augurzky et al. 2015). Only 7% of the private hospitals had no capacity to invest in 2013, compared with 62% in the case of the municipal facilities and 40% with other non-profit facilities. Indeed, the private hospitals used a larger share of their revenue for investments (6.3%) – versus 5.3% with their non-profit and 6.1% with their municipal counterparts (Diagram 21).[17] And a relatively high level of capital employed has actually been shown to lower operating costs on average (Augurzky et al. 2014 and 2015). This holds true for all hospital owners. Against this background, it is therefore perfectly sensible to use private capital (on a remunerated basis) to thereby raise earnings strength.

Private hospitals use significantly fewer public resources in the form of government grants, thus benefiting taxpayers. Conversely, by paying taxes on their profits they even make a contribution towards financing the State's tasks for society. This is illustrated by a comparison of the special item ratio (Diagram 22). Special items are the cumulative government grants received (after depreciation) in the past. Overall, it can be seen that private hospitals draw on fewer public funds.

Government grants include funds under the German Hospital Act (KHG funds) financed by the federal states, but often also include funding from owners. The owner-specific difference in the special item ratio therefore cannot be attributed solely to differences in government grants claimed from the federal states. That is because the federal states generally award government grants on an owner-neutral basis. Part of the difference may presumably be explained by the fact that private hospitals claim fewer KHG funds compared with their investment activity. Added to that is that particularly public hospitals also receive public funds from their municipal owners which frequently are likewise booked as special items.

17 The investments were derived from the change in fixed assets over two years. Investments for acquiring a hospital were approximately eliminated so that investments actually refer to the improvement in company assets. In the case of the three large private hospital chains Rhön-Klinikum, Helios Kliniken, Asklepios and Sana, investments (excluding acquisition of hospitals) were taken from the annual reports.

Diagram 22
Special item of general hospitals
2013; as % of balance sheet total



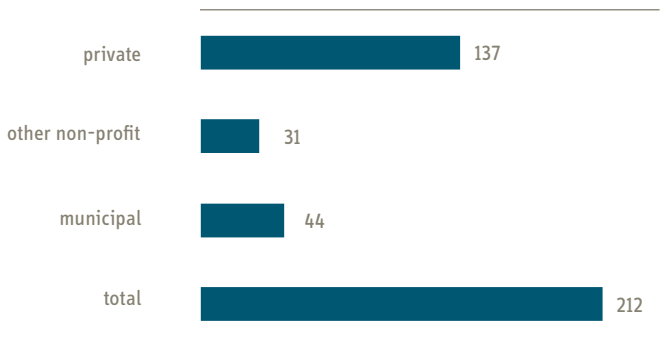
Source: RWI.

Despite the fact that private hospitals claim fewer government grants, they generate a higher net profit on which they paid roughly 137 million euros in corporate income tax in 2013, significantly more than the other ownership types (Diagram 23). This becomes even clearer when viewed in terms of tax per bed (Diagram 24).

Diagram 23

Corporate income tax of general hospitals

2013; € m

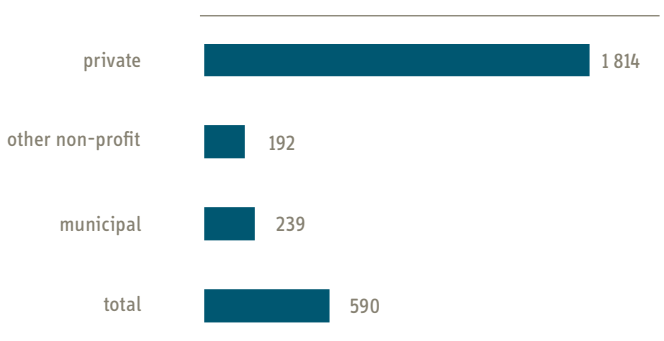


Source: RWI. – Note: The calculation of tax included both taxes on income and other taxes.

Diagram 24

Corporate income tax and other tax per bed of general hospitals

2013; in €



Source: RWI. – Note: The calculation of tax included both taxes on income and other taxes.

4. Detailed analyses of primary care hospitals

In summary we may note (Tables 2 and 3) that private hospitals have a higher equity ratio, a lower special item ratio, a higher EBITDA margin and higher profitability than other non-profit or public hospitals. They pay more taxes and make greater investments in medical infrastructure than hospitals from the other ownership categories.

Table 2

Balance sheet data of general hospitals

2013

	Private	Other non-profit	Municipal
Equity ratio, in % of balance sheet total	33.1	30.7	22.7
Special item, in % of balance sheet total	22.7	36.0	40.1
EBITDA margin (incl. KHG funds), in % of total revenues	11.2	6.7	5.3
EBIT margin (excl. KGH funds), in % of total revenues	10.0	4.0	2.1
Return on revenue (after tax, EAT), in %	4.2	1.2	-0.8
Return on total capital, in %	5.2	1.9	0.0
Taxes/income, in %	0.9	0.1	0.1
Taxes, € m	137.0	31.0	44.0

Source: RWI. – Note: Calculated taking into account beds.

Table 3

Investments in general hospitals

2013

	Private	Other non-profit	Municipal
Investments/total revenues, in %	6.3	5.3	6.1
Fixed assets currently versus cost of acquisition and production, in %	68.6	49.4	50.0
Investments per bed, in €	12 608	9 644	11 797

Source: RWI.

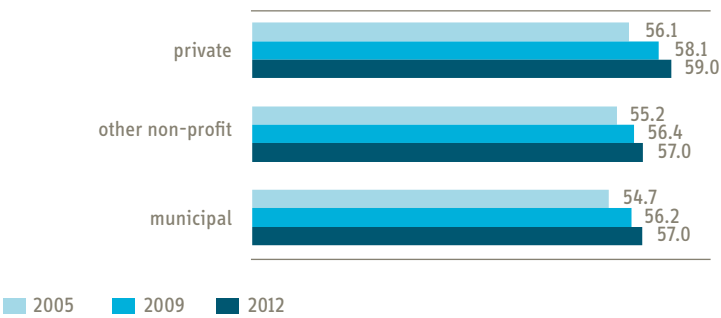
4.5 Participation in healthcare delivery

Among those critical of hospital privatisation, the presumption is that a trade-off is made between profit orientation on the one hand and full participation in healthcare delivery on the other. In the previous Fact Book (Augurzky et al. 2012), it was shown that private hospitals, as a share of their total patients, treat just as many patients under statutory health insurance as hospitals from the other ownership categories. Current analyses of medical service volumes moreover do not reveal any trade-off between profit orientation and full participation in healthcare delivery.

Diagram 25

Average age of patients

2005, 2009 and 2012; in years

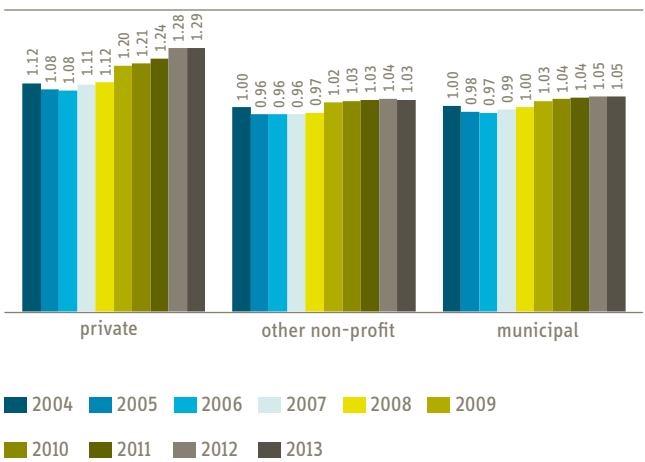


Source: RWI, FDZ (2015). The figures relate to primary care hospitals.

The average age of patients treated in private hospitals is higher than in other hospitals (Diagram 25), which is probably related to their higher case-mix index (CMI) (Diagram 26). The presumably higher number of secondary diagnoses with older patients[18] consequently results in a higher CMI under the DRG system. Another reason for the higher CMI, despite high rural coverage by private facilities, may be a greater specialisation among the private hospitals.

18 Studies by the Federal Statistical Office reveal a clear correlation between age of patients and the number of secondary diagnoses at hospital. Whereas 45-64-year-olds on average reveal 3.6 secondary diagnoses, the figure for over-85s, at 7.1 secondary diagnoses, is almost double (Federal Statistical Office 2009).

Diagram 26
Average CMI
2004 to 2013



Source: RWI, WIdO (2005-2015), Federal Statistical Office (List of hospitals). – Note: Values refer to general hospitals excluding university hospitals. The CMI values were weighted by number of beds. CMI values from 2004-2007 differ from the last Fact Book by the currently better availability of data and these higher general pool.

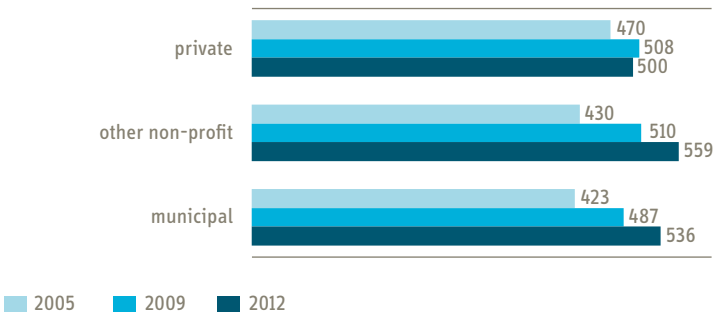
As far as costs per case-mix point for medical supplies[19] and drugs are concerned, private hospitals reveal lower costs (Diagrams 27 and 28). In 2012, private hospitals had lower costs per case-mix point for both indicators. Lower costs for medical supplies and drugs with the private hospitals can be explained, among other things, by better purchasing terms within larger networks.

19 According to the definition of the Federal Statistical Office, medical supplies are made up of: drugs, blood/banked blood/blood plasma, dressing materials/remedies and medical aids, medical and nursing consumables/instruments, anaesthesic and other OR supplies, laboratory supplies, implants, transplants, dialysis supplies, medical transport costs and other medical supplies.

Diagram 27

Costs of medical supplies excluding drugs per case-mix point

2005, 2009 and 2012; in €

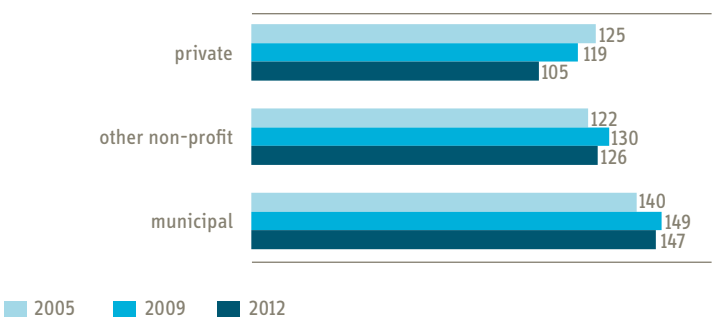


Source: RWI, FDZ (2015).

Diagram 28

Costs of drugs per case-mix point

2005, 2009 and 2012; in €



Source: RWI, FDZ (2015).

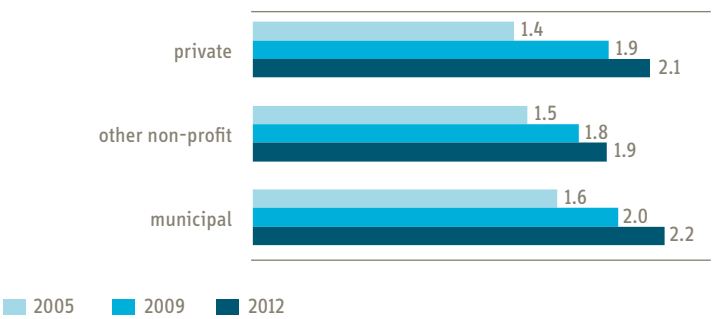
4. Detailed analyses of primary care hospitals

In terms of availability of medical technology infrastructure as measured by the number of large medical equipment units[20], there are almost no differences by ownership type (Diagram 29).[21] Lastly, it was shown in the last Fact Book that private hospitals do not treat any more or any fewer privately insured patients than the other hospitals do (Augurzky et al. 2012).

Diagram 29

Number of large medical technology units per bed

2005, 2009 and 2012



Source: RWI, FDZ (2015).

4.6 Participation in emergency care

The increasing pace of privatisation in the hospital sector is prompting fears of private facilities' inadequate participation in emergency care for want of sufficient remuneration. In the following we examine what the actual situation of emergency care is by looking at a number of different representative indicators on emergency care (in this regard cf. also Schreyögg et al. 2014). The basis for the indicators is provided by administrative health insurance fund data of the AOK health insurance funds from 2013, which were evaluated for this purpose by the Research Institute of the AOK (WIdO).

20 Large medical equipment units include computer tomographs, dialysis units, digital subtraction angiography units, gamma cameras, heart-lung machines, magnetic resonance tomographs, coronary angiographic workplaces, linear accelerators (circular accelerators), positron-emission computer tomographs (PET), lithotripters and tele-cobalt therapy units.

21 Since available capacity is examined here, reference is made to bed capacities kept available instead of case mix.

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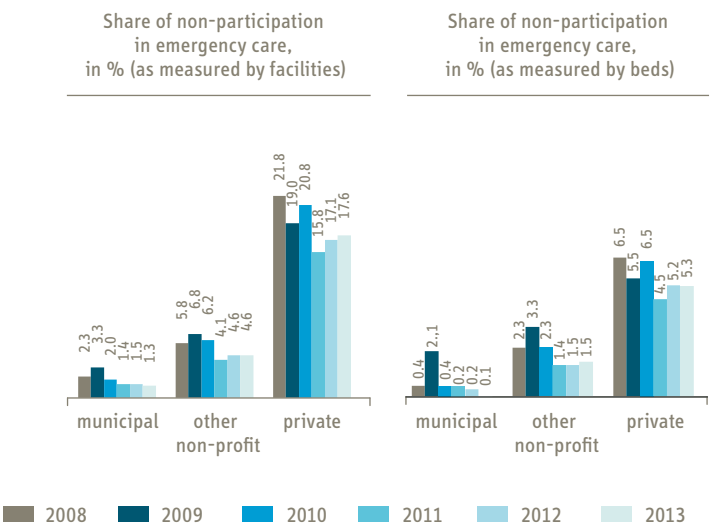
Diagram 30 shows the share of general hospitals that do not participate in emergency care. A facility is considered not to participate if the hospital has agreed on deductions for that. If non-participation is measured by facility numbers by ownership type, this reveals that private hospitals participate significantly less frequently in emergency care, followed by other non-profit and municipal hospitals. If, however, hospital size as measured by beds is taken into account, that results in a noticeable reduction in the level of non-participation amongst private hospitals. This may be assessed as an indication that those private hospitals not participating in emergency care include many small clinics.

Diagram 30

Non-participation in emergency care

2008 to 2013; share in %



Source: RWI, WIdO (2009-2015), Federal Statistical Office (List of hospitals). – Note: Shares refer to general hospitals excluding university hospitals. A facility is considered not to participate if the hospital has agreed on deductions for non-participation.

Indeed, Diagram 31 clearly shows that it is primarily hospitals with fewer than 50 beds that do not offer any emergency care. Hospitals with a size of between 50 and 199 beds participate in emergency care far more frequently, whereas hospitals with more than 200 beds participate in emergency care almost without exception. Apart form hospital size, the degree of specialisation[22] and the type of a facility's care delivery are probably decisive factors when it comes to keeping available emergency care capacities. We define two types of care delivery: firstly providers of basic care, which include general hospitals that keep available at least five beds in the departments of surgery and internal medicine, and secondly providers of specialist care, which include general hospitals having a size of between 50 and 300 beds but not keeping available any beds in the departments of surgery and internal medicine. Almost all providers of basic care participate in emergency care, whereas approximately 15% of specialist care providers[23] did not do so in 2013. The higher the degree of specialisation, the higher the percentage of non-participation is.

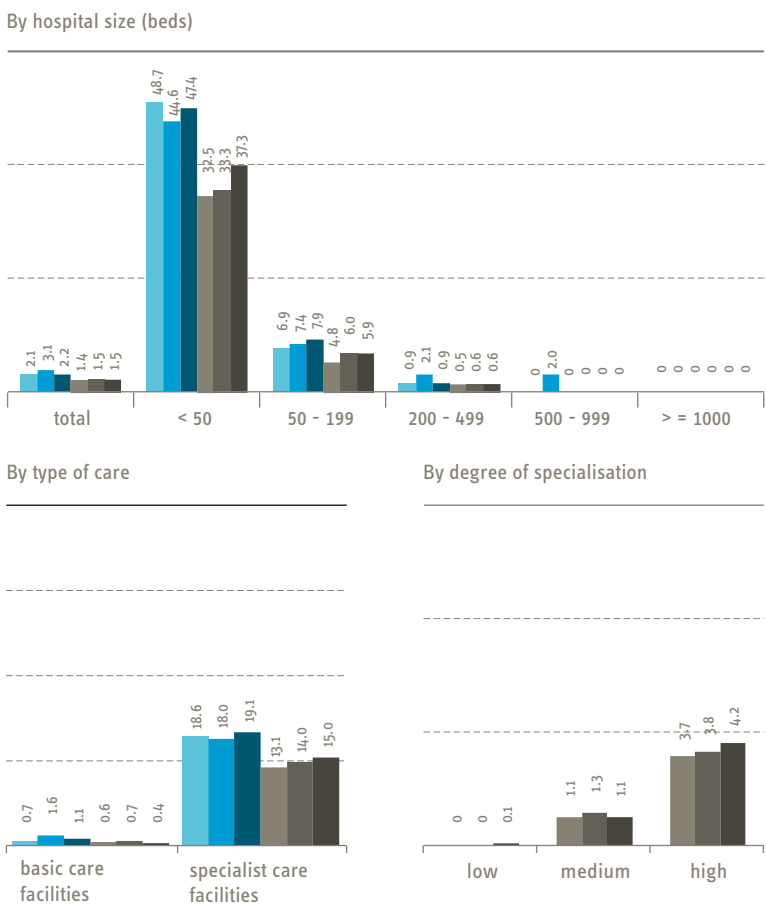
22 We calculate a hospital's degree of specialisation using WIDo's Gini coefficient for specialisation. The Gini coefficient is in a range of between 0 and 1. The higher the Gini coefficient, the higher the hospital's degree of specialisation is. Accordingly, we divide the hospitals into the three specialisation categories "low", "medium" and "high" depending on the distribution of the Gini coefficient.

23 Most providers of specialist care are located in urban regions where emergency care should be concentrated anyway.

Diagram 31

Non-participation in emergency care by size, type of care delivery, and degree of specialisation

2008 to 2013; share in % of all beds



Source: RWI, WIdO (2009-2015), Federal Statistical Office (List of hospitals). – Note: Shares refer to general hospitals excluding university hospitals. A facility is considered not to participate if the hospital has agreed on deductions for non-participation. Providers of basic care are defined as hospitals having at least 5 beds in the departments of surgery and internal medicine. Providers of specialist care are defined as hospitals with 50 to 300 beds that do not have any surgery and internal medicine departments.

4. Detailed analyses of primary care hospitals

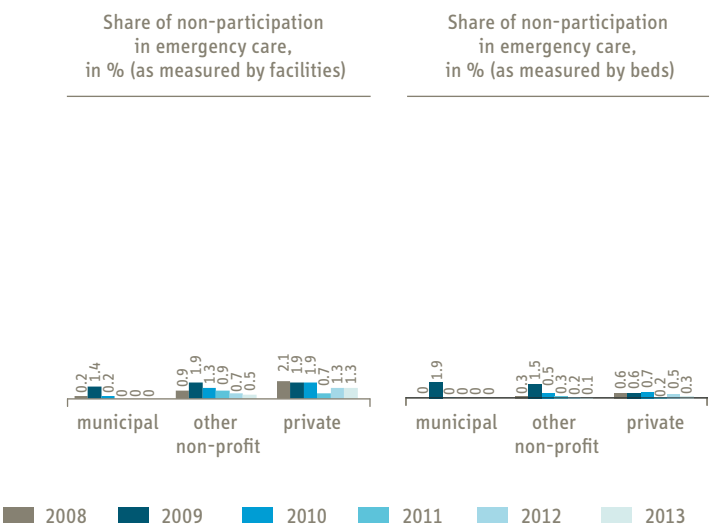
In the interest of an economically efficient division of labour, it makes perfect sense for not all services to be provided by all providers. It is likely in the interests of patients for emergency care to be provided to a greater extent by providers of basic care that moreover keep available an adequate and broad infrastructure in terms of medical technology and staffing. As a general rule, providers of basic care are in a better position to adequately deal with emergencies than small or highly specialised hospitals. A necessary condition for that, however, is that hospitals providing nursing care can be easily reached by every patient. Looking forward, it is likely that as the trend towards specialisation in the German healthcare system increases, so too will the number of hospitals no longer participating in emergency care. But that will not necessarily be a disadvantage for patients if at the same time emergency and rescue services are professionalised, as has taken place e.g. in Denmark (Augurzky et al. 2014).

Diagrams 32 and 33 show that the higher share of non-participation amongst private hospitals is clearly determined by specialised facilities. In the case of basic care facilities, no significant ownership-specific differences are found. Private providers of basic care participate in emergency care practically just as frequently as other non-profit and public basic care hospitals.

Diagram 32

Non-participation in emergency care in the case of providers of basic care by ownership type

2008 to 2013; share in %

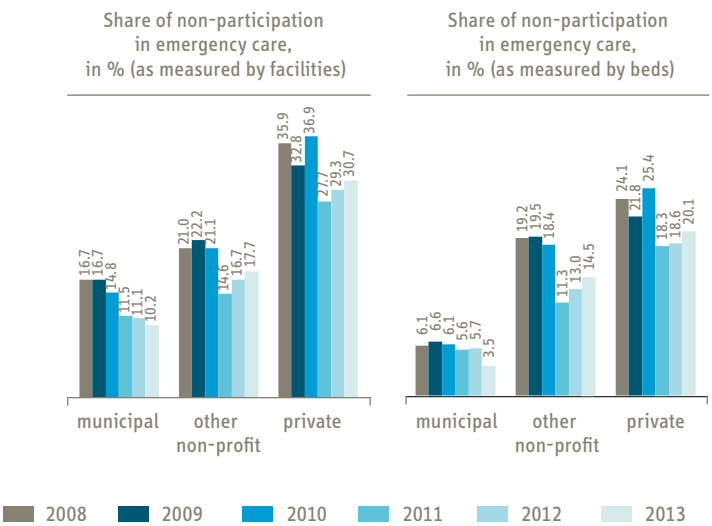


Source: RWI, WIdO (2009-2015), Federal Statistical Office (List of hospitals). – Note: Shares refer to general hospitals excluding university hospitals. A facility is considered not to participate if the hospital has agreed on deductions for non-participation. Providers of basic care are defined as hospitals having at least 5 beds in the departments of surgery and internal medicine.

Diagram 33

Non-participation in emergency care in the case of providers of specialist care by ownership type

2008 to 2013; share in %



Source: RWI, WIdO (2009-2015), Federal Statistical Office (List of hospitals). – Note: Shares refer to general hospitals excluding university hospitals. A facility is considered not to participate if the hospital has agreed on deductions for non-participation. Providers of specialist care are defined as hospitals with 50 to 300 beds that do not have any surgery and internal medicine departments.

The share of emergency cases in the total number of patients allows for an alternative means of drawing conclusions on emergency care. Pursuant to section 21 of the Hospital Remuneration Act (Krankenhausentgeltgesetz – KHEntgG), all emergency cases in Germany are coded with the admission reason "N" (abbreviation for German word Notfall (English: emergency)). Defining emergency cases based on reason for admission is not a medical definition but an indicator of whether or not the case is based on a referral (cf. Schreyögg et al. 2014). It is an administrative code and signifies that the patient was given access to the hospital through its emergency ward. Diagram 34 shows the share of emergency cases by type of hospital and ownership. For the general pool and for the general hospitals, municipal hospitals have the highest percentage of emergency cases (47-50%), followed by other non-profit hospitals (44%) and private hospitals (40%). A similar picture emerges for specialist facilities, with the share of emergency cases declining steeply over all ownership types. In the case of basic care facilities, however, no significant differences between ownership types emerge.

Diagram 34

Emergency criterion I – patients with admission reason "emergency"

2013; share in %

Source: RWI, WIdO (2015), Federal Statistical Office (List of hospitals). – Note: Providers of basic care are defined as hospitals having at least 5 beds in the departments of surgery and internal medicine. Providers of specialist care are defined as hospitals with 50 to 300 beds that do not have any surgery and internal medicine departments.

4. Detailed analyses of primary care hospitals

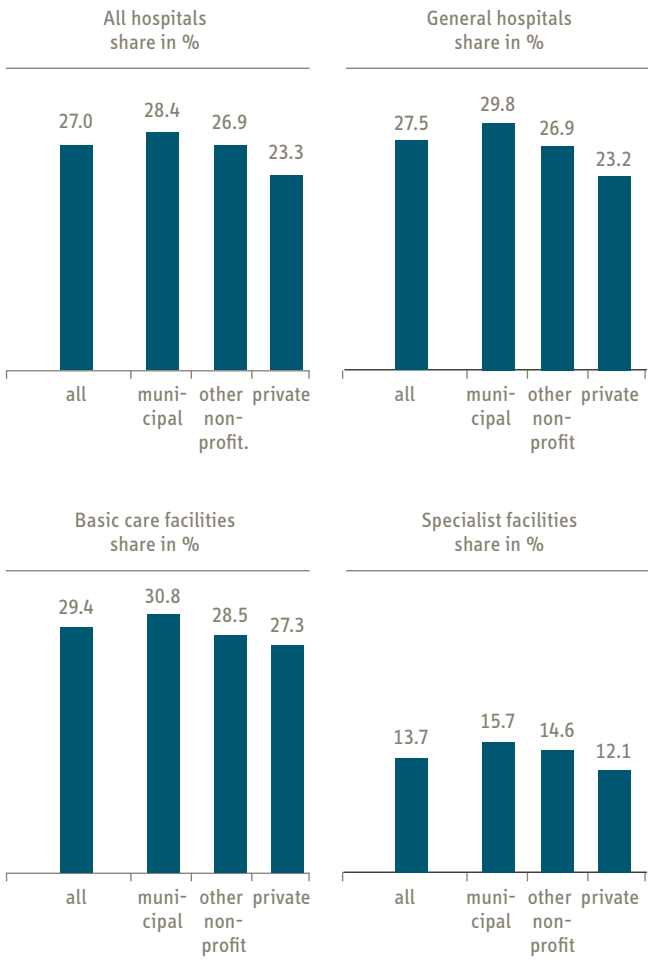
A further indicator for representing emergency care is provided by the share of patients admitted to hospital outside normal working hours (in this regard, cf. Schreyögg et al. 2014). In this case the patient can be assumed to be an emergency patient. The patients we include here are those admitted during the night between 7 p.m. and 6 a.m., Saturday afternoons and on Sundays and national public holidays[24]. Figure 35 shows the share of these admissions in total admissions. This reveals a similar pattern as the previous diagram.

24 National public holidays include New Year's, Easter Friday, Easter, Labour Day (1 May), Ascension, Pentecost, German Unification Day as well as Christmas and Boxing Day.

Diagram 35

Emergency criterion II – admissions of patients outside normal working hours

2013; share in %



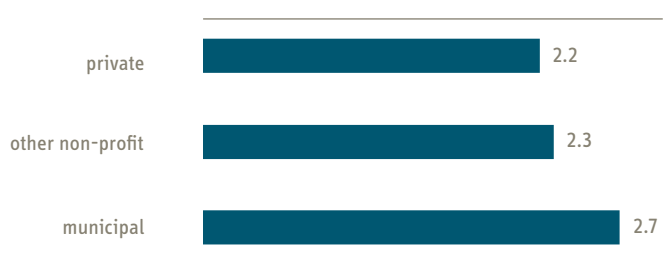
Source: RWI, WIdO (2015), Federal Statistical Office (List of hospitals). – Note: Providers of basic care are defined as hospitals having at least 5 beds in the departments of surgery and internal medicine. Providers of specialist care are defined as hospitals with 50 to 300 beds that do not have any surgery and internal medicine departments.

4.7 Quality

Another important subject of hospital medical care is the quality of the services provided. This is examined here on the basis of the AQUA indicators of the structured quality reports pursuant to section 137 (3) SGB V from 2012 and the QSR indicators of the WIdO. Generally, analyses in the Hospital Rating Report (e.g. Augurzky et al. 2015) as well as academic articles (e.g. Porter 2010) show that the aims of quality and efficiency are not at odds with each other but instead go hand in hand.

The following three diagrams do not represent the rates of the respective individual indicators but reflect the share of facilities qualified as conspicuous. In Diagram 3, the data basis and the structure of the ratios were described. In the previous Fact Book it was shown (Augurzky et al. 2012) that private hospitals exhibit "qualitative conspicuities" less frequently than hospitals from the other ownership categories. Compared with the last Fact Book, however, the present Fact Book does not use one general indicator of quality but instead three individual indicators. The present AQUA indicators are more multifarious compared with the BQS indicators from the last Fact Book and are not easily condensed to an aggregate indicator. For the ownership-specific assessment of the qualitative conspicuities for the risk-adjusted rate of post-operative wound infections, the values are somewhat better in the case of privately owned hospitals (Diagram 36). The rate of post-operative wound infections can be used as an indicator of hygiene in the hospital.

Diagram 36
Risk-adjusted rate of post-operative wound infections
2012; share as % of all hospitals with qualitative conspicuities



Source: RWI, quality reports (2012).

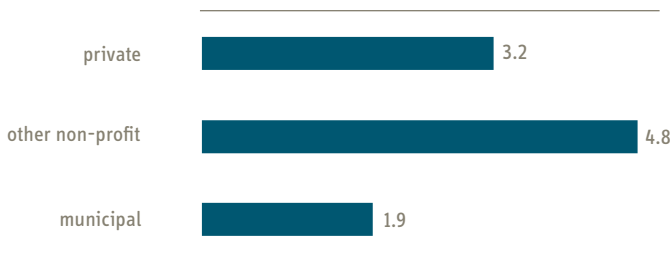
Privately Owned Hospitals – 2015

For the risk-adjusted rate of total deaths in the hospital, the private hospitals are about average (Diagram 36). 3.2% of all private facilities are qualified as conspicuous. With the municipal hospitals, this figure is merely 1.9% of facilities, whereas other non-profit facilities are qualified as conspicuous far more often (4.8%). At 3.3% of conspicuous facilities, the private hospitals are also about average in terms of the risk-adjusted rate of patients with decubitus ulcers on discharge (Diagram 37). Here, the other non-profit hospitals (2.6%) score better, whereas the frequency of conspicuities is higher with the municipal facilities (3.9%).

Diagram 37

Risk-adjusted rate of deaths

2012; share as % of all hospitals with qualitative conspicuities

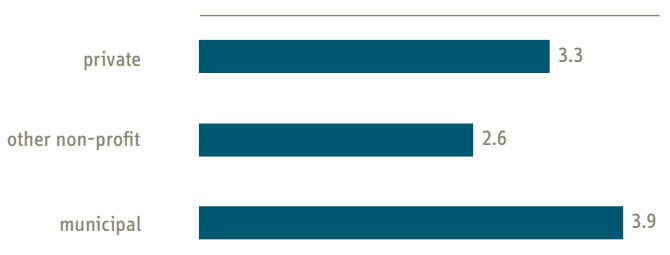


Source: RWI, quality reports (2012).

Diagram 38

Risk-adjusted rate of patients with decubitus ulcers on discharge

2012; share as % of all hospitals with qualitative conspicuities



Source: RWI, quality reports (2012). – Note: Stage 1 to 4 decubitus ulcer is included.

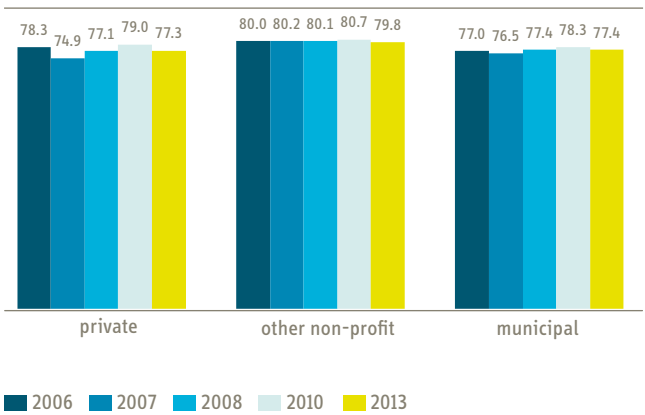
The assessments on maximum attainable QSR quality points (Diagram 39) reveal no significant differences in these shares in terms of ownership types.

Diagram 39
Maximum attained QSR quality points
2013; share in %

Source: RWI, WIdO (2015). – Note: Ratio of attained quality points to maximum possibly attainable quality points according to available QSR indicators.

In additional to medical quality, the service quality experienced by patients as measured in patient satisfaction is also of great importance. The basis for measuring it is the patient surveys of the health insurance fund Techniker Krankenkasse from 2006 to 2013. Diagram 40 shows that there are no ownership-specific differences in this regard. For all owners, average patient satisfaction is roughly in the range of 77% to 80%. Underlying patient satisfaction was determined from various questions of a questionnaire which patients from the health insurance fund Techniker Krankenkasse filled out after their hospital stay (TK 2014a, 2014b).

Diagram 40
Share of satisfied patients
2006 to 2013; share in %



Source: RWI, TK (2014a). – Note: The figure indicates the percentage of patients who are satisfied. The values were weighted by the respective hospitals' number of beds.

4.8 Securing regional care delivery

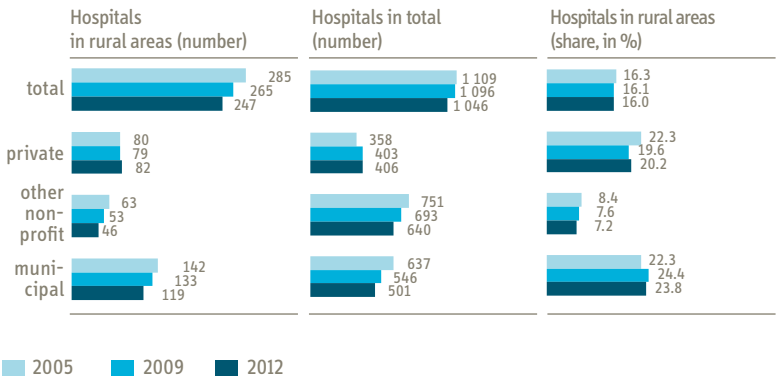
Sufficient generalised healthcare delivery to the population is an important component of the basic services provided by the State enshrined in legislation through the welfare state principle (Art. 20 I of the German Constitution). It also includes generalised healthcare delivery in rural regions. There are critical voices taking the view that it cannot always be provided efficiently and is therefore of less interest for private owners. Insofar, the non-private (in particular municipal) hospitals would have to take responsibility for it and consequently fare worse on average in terms of efficiency.

Diagram 41 shows the share of rural hospitals by ownership type for 2005, 2009 and 2012. First of all it has to be noted that the number of rural hospitals in the case of private owners is not declining compared with the facilities from the other ownership categories. It is even the case that new ones are being added, whereas the other ownership categories are witnessing a decline.

Diagram 41

Ownership type by rurality – number of hospitals

2005, 2009 and 2012; share in %



Source: RWI, Federal Statistical Office (List of hospitals), BBR (2010). – Note: Rurality is defined by population density of more than 150 inhabitants/km² and without a regional centre of more than 100,000 inhabitants or with a regional centre of over 100,000 inhabitants and a density of under 100 inhabitants/km².

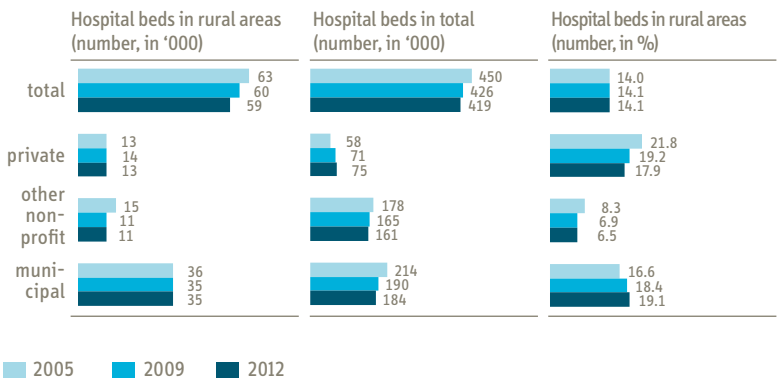
It is apparent that there were also privatisations in rural regions. In 2012 the share of private hospitals in rural regions stood at over 20%. The share is higher only in the case of municipal facilities and significantly lower with the other non-profit hospitals.

Diagram 42 illustrates this trend over time as measured by the number of hospitals beds. Since 2009, number of beds in rural regions remained nearly unchanged. Across all ownership types, the proportions have seen a slight decline from 2009 to 2012. Nonetheless, privately owned facilities show a similarly high level of rural healthcare delivery as their municipal counterparts.

Diagram 42

Ownership type by rurality – number of hospital beds

2005, 2009 and 2012; number of hospitals



Source: RWI, Federal Statistical Office (List of hospitals), BBR (2010). – Note: Rurality is defined by population density of more than 150 inhabitants/km2 and without a regional centre of more than 100,000 inhabitants or with a regional centre of over 100,000 inhabitants and a density of under 100 inhabitants/km2.

5. Time series of general hospitals

In this section, key ratios are shown as far as possible over time. The basis for this is provided by the publicly accessible data of the Federal Statistical Office and the annual financial statements of hospitals. A selection by "primary care hospitals" is not possible because this sampling is not available for all years. As a result, the hospital sampling taken as a basis here is somewhat larger than in section 4. The key ratios therefore always refer to general hospitals. Purely psychiatric hospitals and university hospitals are not included.

5.1 Efficiency

Key ratios on efficiency (Tables 4 to 11) point to higher profitability and investment capacity. This is seen in particular in the analysis of the financial ratios (Tables 2 and 3). Moreover, a higher labour productivity of private providers is observed, above all on a view with reference to case-mix points per full-time employee (Table 4).

5. Time series of general hospitals

Table 4

Case-mix points per full-time employee

2013

	Private	Other non-profit	Municipal
Total	35.3	26.9	25.9
Doctors	192.1	156.7	147.3
Nurses	87.6	68.4	68.4
Non-medical	43.2	32.5	31.4

Source: RWI, WIdO (2015), Federal Statistical Office (basic data).

Table 5

Number of cases per full-time employee

1996 to 2013

Year	Private	Other non-profit	Municipal
2013	27.4	26.0	24.7
2012	27.4	26.2	24.7
2011	27.3	26.2	24.7
2010	26.7	26.0	24.9
2009	26.5	25.9	24.5
2008	26.0	26.0	24.2
2007	25.8	25.7	23.8
2006	24.0	25.2	23.7
2005	24.3	25.1	23.5
2004	24.5	25.0	22.8
2003	25.3	25.3	22.9
2002	25.2	25.3	22.8
2001	23.2	23.9	21.7
2000	23.6	23.8	21.4
1999	23.2	23.1	20.8
1998	22.4	22.5	20.3
1997	21.4	21.6	19.5
1996	20.8	20.8	18.8

Source: RWI, Federal Statistical Office (basic data).

Here it has to be pointed out that on average a full-time employee in privately owned hospitals generates more revenue, i.e. more case-mix points, but at the same time does not really have more patients to care for. The higher number of case-mix points per full-time employee stems from the higher average CMI of the private hospital operators.

Table 6

Number of cases per full-time employee (medical doctors)

1996 to 2013

Year	Private	Other non-profit	Municipal
2013	149.1	151.6	140.6
2012	153.8	154.9	142.7
2011	154.7	157.9	145.3
2010	158.3	159.8	150.3
2009	159.5	162.9	150.3
2008	157.9	164.8	150.7
2007	159.6	164.8	150.1
2006	155.3	164.8	152.3
2005	165.0	168.1	154.2
2004	174.2	175.4	156.6
2003	194.3	185.5	167.2
2002	200.2	191.6	171.2
2001	191.8	185.4	165.5
2000	202.1	188.1	166.1
1999	201.9	186.1	164.6
1998	200.6	185.1	162.9
1997	207.2	181.9	162.4
1996	208.1	183.9	160.4

Source: RWI, Federal Statistical Office (basic data).

5. Time series of general hospitals

Table 7

Number of cases per full-time employee (nursing services)

1996 to 2013

Year	Private	Other non-profit	Municipal
2013	68.0	66.2	65.3
2012	67.0	66.3	65.1
2011	67.0	65.3	64.3
2010	65.6	65.2	64.9
2009	64.9	64.9	64.2
2008	63.8	65.1	63.2
2007	64.0	64.1	61.9
2006	61.4	62.6	60.9
2005	61.0	61.9	60.7
2004	62.0	61.2	58.1
2003	63.0	61.1	57.8
2002	61.9	60.5	56.9
2001	56.4	56.2	53.2
2000	56.5	55.7	52.8
1999	56.7	54.3	51.3
1998	54.2	53.0	50.1
1997	52.2	50.8	48.2
1996	50.0	48.8	46.4

Source: RWI, Federal Statistical Office (basic data).

Table 8

Number of cases per full-time employee (non-medical services)

1996 to 2013

Year	Private	Other non-profit	Municipal
2013	33.6	31.5	30.0
2012	33.3	31.6	29.9
2011	33.1	31.4	29.7
2010	32.1	31.0	29.8
2009	31.8	30.8	29.3
2008	31.1	30.9	28.8
2007	30.8	30.5	28.3
2006	28.4	29.8	28.1
2005	28.5	29.5	27.8
2004	28.5	29.2	26.6
2003	29.1	29.3	26.6
2002	28.8	29.2	26.3
2001	26.4	27.4	24.9
2000	26.7	27.2	24.6
1999	26.2	26.3	23.8
1998	25.2	25.6	23.2
1997	23.8	24.5	22.2
1996	23.1	23.4	21.3

Source: RWI, Federal Statistical Office (basic data).

5. Time series of general hospitals

Table 9

Number of nurses per doctor

1996 to 2013; in full-time equivalents

Year	Private	Other non-profit	Municipal
2013	2.2	2.3	2.2
2012	2.3	2.3	2.2
2011	2.3	2.4	2.3
2010	2.4	2.5	2.3
2009	2.5	2.5	2.3
2008	2.5	2.5	2.4
2007	2.5	2.6	2.4
2006	2.5	2.6	2.5
2005	2.7	2.7	2.5
2004	2.8	2.9	2.7
2003	3.1	3.0	2.9
2002	3.2	3.2	3.0
2001	3.4	3.3	3.1
2000	3.6	3.4	3.1
1999	3.6	3.4	3.2
1998	3.7	3.5	3.3
1997	4.0	3.6	3.4
1996	4.2	3.8	3.5

Source: RWI, Federal Statistical Office (basic data).

5.2 Personnel

Private hospitals have a lower personnel cost share than other hospital operators, which is presumably partly explained by their higher rate of outsourcing and, by the same token, a higher share of material costs (see also section 4.2). Note that in the costs of medical doctors as a proportion of gross costs there are hardly any ownership-specific differences (Table 16).

Table 10
Number of full-time employees in total
1996 to 2013; in thousands

Year	Private	Other non-profit	Municipal
2013	105.6	241.8	291.2
2012	105.6	238.9	287.6
2011	101.0	236.2	287.9
2010	98.9	233.8	283.8
2009	95.8	233.2	286.1
2008	91.9	231.4	286.7
2007	89.6	227.2	289.7
2006	88.1	230.0	290.2
2005	78.3	229.8	302.6
2004	70.4	233.3	313.1
2003	60.7	243.6	327.1
2002	54.4	246.7	337.8
2001	52.4	255.7	339.7
2000	47.5	255.7	346.3
1999	46.0	260.8	351.7
1998	44.5	258.2	362.3
1997	39.4	260.9	372.7
1996	41.2	270.2	375.0

Source: RWI, Federal Statistical Office (basic data).

5. Time series of general hospitals

Table 11

Number of full-time employees (medical doctors)

1996 to 2013; in thousands

Year	Private	Other non-profit	Municipal
2013	19.4	41.6	51.2
2012	18.8	40.5	49.8
2011	17.8	39.2	48.9
2010	16.7	38.0	47.0
2009	15.9	37.1	46.7
2008	15.1	36.6	46.1
2007	14.5	35.5	46.0
2006	13.6	35.2	45.2
2005	11.5	34.3	46.2
2004	9.9	33.3	45.5
2003	7.9	33.2	44.9
2002	6.8	32.6	45.0
2001	6.3	32.9	44.5
2000	5.5	32.3	44.6
1999	5.3	32.3	44.5
1998	5.0	31.4	45.1
1997	4.1	30.9	44.8
1996	4.1	30.6	43.9

Source: RWI, Federal Statistical Office (basic data).

Table 12

Number of full-time employees (non-medical services)

1996 to 2013; in thousands

Year	Private	Other non-profit	Municipal
2013	86.2	200.3	240.0
2012	86.8	198.4	237.9
2011	83.2	197.1	239.0
2010	82.2	195.8	236.8
2009	79.9	196.1	239.4
2008	76.8	194.9	240.7
2007	75.1	191.7	243.8
2006	74.5	194.8	245.0
2005	66.7	195.5	256.4
2004	60.5	200.0	267.6
2003	52.8	210.4	282.2
2002	47.6	214.1	292.8
2001	46.1	222.8	295.2
2000	42.0	223.4	301.7
1999	40.7	228.4	307.3
1998	39.5	226.8	317.2
1997	35.3	229.9	327.8
1996	37.1	239.7	331.1

Source: RWI, Federal Statistical Office (basic data).

5. Time series of general hospitals

Table 13

Number of full-time employees (nursing services)

1996 to 2013; in thousands

Year	Private	Other non-profit	Municipal
2013	42.5	95.2	110.3
2012	43.1	94.5	109.2
2011	41.1	94.6	110.6
2010	40.2	93.2	108.8
2009	39.2	93.2	109.3
2008	37.4	92.6	109.8
2007	36.1	91.2	111.4
2006	34.4	92.6	113.0
2005	31.2	93.2	117.5
2004	27.8	95.5	122.8
2003	24.4	100.8	129.8
2002	22.1	103.4	135.3
2001	21.6	108.6	138.3
2000	19.8	109.1	140.5
1999	18.9	110.8	142.6
1998	18.4	109.6	146.6
1997	16.1	110.7	150.9
1996	17.1	115.0	151.7

Source: RWI, Federal Statistical Office (basic data).

Table 14

Number of full-time employees (medical-technical services)

1996 to 2013; in thousands

Year	Private	Other non-profit	Municipal
2013	13.6	33.7	43.0
2012	13.6	33.1	42.8
2011	12.8	32.3	42.4
2010	12.6	31.6	40.4
2009	12.2	31.3	40.7
2008	11.7	30.9	40.5
2007	11.4	30.2	40.6
2006	12.6	30.5	39.2
2005	10.8	30.5	41.7
2004	9.5	31.0	42.6
2003	8.0	32.1	44.3
2002	7.1	32.5	45.3
2001	7.2	33.6	45.8
2000	6.5	33.4	46.4
1999	6.2	34.0	46.5
1998	6.0	33.3	47.5
1997	5.3	33.2	48.3
1996	5.5	34.1	48.4

Source: RWI, Federal Statistical Office (basic data).

5. Time series of general hospitals

Table 15

Share of personnel costs in gross costs

2002 to 2013, share in %

Year	Private	Other non-profit	Municipal
2013	56.5	59.9	60.5
2012	55.9	59.6	60.5
2011	55.0	59.1	60.3
2010	55.3	58.7	60.5
2009	55.2	58.8	60.6
2008	55.5	59.3	60.6
2007	56.4	60.4	61.5
2006	58.2	61.7	63.5
2005	59.2	63.1	64.9
2004	59.8	64.1	65.8
2003	59.9	64.8	66.6
2002	59.3	64.9	66.4

Source: RWI, Federal Statistical Office (cost statements). – Note: Gross costs correspond to the gross costs of the hospitals.

Table 16

Share in costs of medical doctors in gross costs

2002 to 2013; share in %

Year	Private	Other non-profit	Municipal
2013	19.2	18.7	19.1
2012	18.5	18.3	18.8
2011	17.8	17.7	18.2
2010	17.5	17.2	18.0
2009	17.1	16.8	17.4
2008	16.6	16.5	17.1
2007	16.4	16.3	16.9
2006	15.4	16.1	16.8
2005	15.2	16.2	16.7
2004	14.9	15.9	16.3
2003	14.1	15.5	16.0
2002	13.6	15.2	15.6

Source: RWI, Federal Statistical Office (cost statements). – Note: Gross costs correspond to the gross costs of the hospitals.

5. Time series of general hospitals

Table 17

Share in costs of nursing services in gross costs

2002 to 2013; share in %

Year	Private	Other non-profit	Municipal
2013	17.9	19.2	19.2
2012	18.1	19.5	19.4
2011	17.9	19.8	19.8
2010	18.1	19.7	20.0
2009	18.3	20.1	20.1
2008	18.5	20.5	20.4
2007	19.0	21.1	21.0
2006	19.5	22.0	22.2
2005	20.5	22.8	22.9
2004	20.7	23.7	23.6
2003	21.5	24.4	24.3
2002	21.7	24.8	24.5

Source: RWI, Federal Statistical Office (cost statements). – Note: Gross costs correspond to the gross costs of the hospitals.

5.3 Medical treatment

This section will use additional data to examine the question of whether the efficiency of privately owned hospitals is achieved to the detriment of medical care / quality. As it turns out, the private facilities by no means score worse in terms of patient treatment. On average, the private hospitals treat an older and more complex type of patients, which is reflected in a higher CMI (cf. Diagram 26). Compared with hospitals from other ownership categories, there are no significant differences in medical treatment, for example in the percentage of caesarean sections (Table 18) or the percentage of stillborn children (Table 19).

Table 18

Share of deliveries by caesarean section in all deliveries

1996 to 2013; share in %

Year	Private	Other non-profit	Municipal
2013	31.6	31.1	31.7
2012	32.1	30.6	31.6
2011	31.9	30.9	32.3
2010	31.9	30.9	31.9
2009	31.0	30.3	31.2
2008	30.2	29.3	30.2
2007	28.2	28.7	28.9
2006	28.8	27.5	28.5
2005	26.6	26.6	26.8
2004	25.3	25.9	25.7
2003	24.7	24.4	24.8
2002	23.6	23.8	23.4
2001	21.4	22.2	21.4
2000	20.4	20.7	20.6
1999	19.3	19.7	19.5
1998	18.9	19.0	18.6
1997	19.6	18.0	17.6
1996	18.7	17.7	17.0

Source: RWI, Federal Statistical Office (basic data).

5. Time series of general hospitals

Table 19

Share of stillbirths in total births

1996 to 2013; share in %

Year	Private	Other non-profit	Municipal
2013	0.29	0.23	0.27
2012	0.25	0.22	0.29
2011	0.18	0.23	0.31
2010	0.23	0.22	0.30
2009	0.24	0.24	0.29
2008	0.20	0.24	0.31
2007	0.17	0.24	0.29
2006	0.26	0.26	0.29
2005	0.23	0.25	0.31
2004	0.23	0.29	0.31
2003	0.23	0.30	0.33
2002	0.25	0.31	0.37
2001	0.30	0.31	0.37
2000	0.30	0.32	0.36
1999	0.25	0.33	0.40
1998	0.28	0.35	0.38
1997	0.30	0.35	0.39
1996	0.31	0.37	0.41

Source: RWI, Federal Statistical Office (basic data).

Table 20

Share in the number of outpatient operations pursuant to section 115b SGB V in all cases

2002 to 2013; share in %

Year	Private	Other non-profit	Municipal
2013	10.8	11.3	9.7
2012	10.9	11.2	9.6
2011	11.0	11.3	9.6
2010	11.1	11.6	9.6
2009	11.0	11.3	9.6
2008	11.1	10.8	9.5
2007	10.9	10.2	9.0
2006	9.3	9.4	9.0
2005	8.8	8.2	7.9
2004	8.2	6.8	6.4
2003	6.5	3.9	3.7
2002	5.6	2.8	2.8

Source: RWI, Federal Statistical Office (basic data).

5. Time series of general hospitals

Table 21

Share in the costs of medical supplies (excluding drugs) in gross costs

2002 to 2013; in %

Year	Private	Other non-profit	Municipal
2013	16.6	14.6	13.7
2012	16.7	15.0	13.9
2011	17.0	14.9	14.0
2010	17.1	14.7	13.5
2009	16.7	14.4	13.2
2008	15.6	14.1	13.3
2007	15.3	13.8	12.8
2006	15.0	13.5	12.5
2005	15.0	13.0	12.2
2004	15.2	12.7	11.8
2003	15.3	12.4	11.6
2002	15.2	12.6	11.8

Source: RWI, Federal Statistical Office (cost statements). – Note: Gross costs correspond to the gross costs of the hospitals.

Table 22

Costs of medical supplies excluding drugs per case-mix point

2004 to 2013; in €

Year	Private	Other non-profit	Municipal
2013	517	583	561
2012	513	577	559
2011	540	565	549
2010	544	549	521
2009	524	526	504
2008	508	514	503
2007	491	489	478
2006	500	467	454
2005	472	438	430
2004	447	400	405

Source: RWI, Federal Statistical Office (cost statements), WIdO (2005-2015). – Note: There are slight deviations from values from the last Fact Book because of the improvement in the data basis for the CMI.

Table 23

Share of costs of drugs in gross costs

2002 to 2013; in %

Year	Private	Other non-profit	Municipal
2013	3.1	3.5	4.0
2012	3.2	3.4	3.9
2011	3.3	3.4	3.9
2010	3.5	3.6	4.1
2009	3.7	3.7	4.1
2008	3.9	3.7	4.2
2007	4.0	3.9	4.2
2006	4.1	3.8	4.1
2005	4.0	3.7	4.0
2004	4.0	3.6	3.9
2003	4.0	3.6	3.9
2002	4.1	3.7	4.0

Source: RWI, Federal Statistical Office (cost statements). – Note: Gross costs correspond to the gross costs of the hospitals.

Table 24
Costs of drugs per case-mix point
2004 to 2013; in €

Year	Private	Other non-profit	Municipal
2013	96	139	163
2012	97	130	156
2011	105	129	154
2010	111	136	160
2009	115	135	156
2008	127	136	158
2007	127	137	158
2006	135	131	150
2005	127	125	141
2004	118	115	135

Source: RWI, Federal Statistical Office (cost statements), WIdO (2004-2015). Remarks: There are slight deviations from values from the last Fact Book because of the improvement in the data basis for the CMI.

5.4 Societal aspects

To perform their tasks for society, hospital operators, in addition to providing medical care, also have a duty to make sparing use of public resources, to generate public resources through tax payments, and lastly to train specialist staff. The data reveal that private hospitals receive considerably fewer government grants but pay significantly more taxes than other hospital owners (cf. Table 2). In terms of training costs (Table 25), the private hospitals in the past had a smaller share in gross costs than the other owners. However, it steadily increased and in 2013 even exceeded the level of the municipal facilities for the first time, whilst remaining at a constantly high level with the other non-profit facilities. Assuming persistent momentum and an increasing shortage of skilled staff, it is likely to rise further.

Table 25
Share of training costs in gross costs
2002 to 2013; in %

Year	Private	Other non-profit	Municipal
2013	0.65	0.82	0.61
2012	0.65	0.82	0.65
2011	0.63	0.80	0.64
2010	0.57	0.79	0.64
2009	0.56	0.78	0.68
2008	0.53	0.79	0.67
2007	0.56	0.79	0.64
2006	0.80	1.04	0.98
2005	0.42	0.77	0.73
2004	0.46	0.80	0.70
2003	0.35	0.76	0.73
2002	0.31	0.76	0.72

Source: RWI, Federal Statistical Office (cost statements). – Note: Gross costs correspond to the gross costs of the hospitals.

5.5 Capacity availability

Sections 4.5 and 4.8 have shown in an impressive manner that the privately owned hospitals participate in keeping available medical infrastructure to secure generalised hospital care delivery meeting the needs of patients. This is demonstrated once again by the following table of the number of intensive care beds per 100 beds (Table 26) and the number of large medical technology units per 1,000 beds (Table 27) over time. Lastly, the higher investment ratio of the private hospital operators shows that they invest much more in infrastructure than the other operators (cf. Table 3).

5. Time series of general hospitals

Table 26

Number of intensive care beds per 100 beds

1996 to 2013

Year	Private	Other non-profit	Municipal
2013	6.1	4.8	5.4
2012	6.0	4.6	5.3
2011	5.8	4.5	5.1
2010	5.6	4.4	5.1
2009	5.5	4.3	5.0
2008	5.1	4.2	4.9
2007	4.8	4.1	4.7
2006	4.9	4.1	4.6
2005	4.6	3.9	4.5
2004	4.4	3.8	4.5
2003	4.2	3.7	4.4
2002	4.0	3.8	4.4
2001	3.7	3.8	4.4
2000	3.5	3.7	4.3
1999	3.4	3.6	4.3
1998	3.3	3.5	4.1
1997	3.3	3.4	4.0
1996	3.2	3.3	3.8

Source: RWI, Federal Statistical Office (basic data).

Table 27

Number of large medical technology units per 1,000 beds

1996 to 2013

Year	Private	Other non-profit	Municipal
2013	21.7	19.7	23.9
2012	21.2	19.3	23.4
2011	20.5	18.8	22.4
2010	19.8	18.6	21.8
2009	19.0	17.6	20.7
2008	18.2	16.7	19.9
2007	16.8	16.3	19.2
2006	16.2	15.4	17.9
2005	14.2	14.8	16.9
2004	13.4	14.0	16.1
2003	12.7	12.7	15.3
2002	12.4	12.2	14.3
2001	4.7	4.0	4.8
2000	4.1	3.7	4.5
1999	3.7	3.4	4.0
1998	3.3	3.0	3.7
1997	3.1	2.7	3.3
1996	3.2	2.4	3.0

Source: RWI, Federal Statistical Office (basic data).

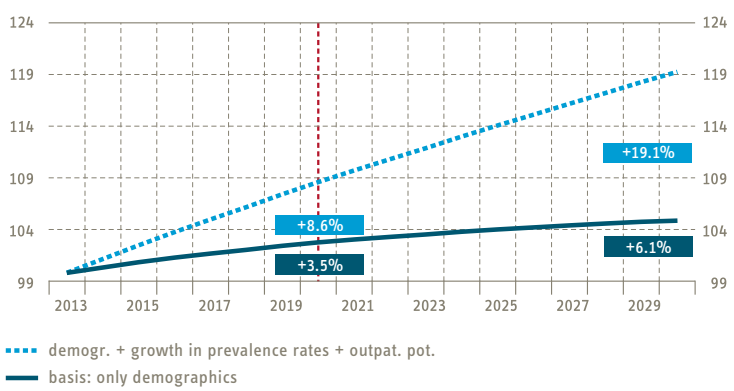
6. Outlook

With demographic trends, the hospital market is also set to see further growth in future. Given the expected trend in demographics, trends in prevalence rates and outpatient potential, RWI expects to see about 9% more cases nationally by 2020 than in 2013 (Augurzky et al. 2015). This corresponds to a average annual increase of roughly 1.2% and would translate into a total increase of 19% by 2030. Assuming constant prevalence rates, the rise would be only 4% or 0.5% p.a. by 2020 (Diagram 43). In future, however, outpatient service volumes will also play a greater role in and at the hospital. Coming on top of this is the impending digitalisation of medical care that will have an as yet unforeseen impact on healthcare demand. It will be decisive for hospital owners to adjust to changing demand in good time with investments, optimised processes as well as adjustments in service volume structures. That will call for a great deal of entrepreneurial skill and in particular investment capital, not to mention qualified staff as well.

Diagram 43

Projection of number of cases

2013 to 2030; 2013=100



Source: RWI; FDZ (2013).

Just as the need to raise capital, recruiting qualified staff will be one of the big challenges facing all hospitals. Based on calculations in the 2015 Hospital Rating Report (Augurzky et al. 2015), demand for staff is expected to be 4% higher in 2020 than in 2013. At the same time, demand for non-medical staff is expected to continue its decline, which would translate into growth even in excess of 4% in the medical area. In the context of what will likely be a shrinking labour force in future, jobs in healthcare will have to be made more attractive if qualified staff are to be recruited and retained. But since other sectors will also have to take this same route, efficient allocation of human resources will become increasingly important. Only by raising labour productivity – while at the same time increasing the attractiveness of the workplace – will it be possible to offset the shortage of staff as demand rises. This can be achieved in conjunction with labour-reducing investments and smart policy frameworks. It is to be hoped that healthcare policy will take advantage of the current hospital reform to create an adequate regulatory environment for this.

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Glossary

BDPK	Federal Association of Private Hospitals in Germany (Bundesverband Deutscher Privatkliniken e.V.)
GDP	Gross domestic product
Cash Flow	The monies available to a business. In this Study, we calculate cash flow as net profit plus depreciation on assets financed from own funds.
CM	Case mix - Total of all relative weightings of DRGs performed in a hospital.
CMI	Case mix index - average relative weighting of a hospital or specialist department: case mix divided by the number of cases.
DKG	German Hospital Association (Deutsche Krankenhaus-gesellschaft)
DRG	Diagnosis related groups – remuneration-uniform case groups to which each case is attributed depending on diagnoses and the procedures performed. In 2012, 1,193 different DRGs were available. Each DRG has a relative weighting that is the same in every hospital throughout Germany.
FDZ	Research Data Center of the Federal State Statistical Offices (Forschungsdatenzentrum der Statistischen Landesämter)
EBITDA	Earnings before interest, taxes, depreciation, and amortization – this is operating earnings, i.e. revenue after deducting personnel and material costs. It is a business ratio that provides a relatively good approximation of a company's cash flow.
EBITDA margin	Operating result before financial, tax, investment, extra-ordinary earnings and depreciation divided by revenues
EBITDAR	Earnings before interest, taxes, depreciation, amortization and rents
Equity ratio	Equity capital divided by balance sheet total

Glossary

Equity ratio with special item	Equity capital including special item divided by balance sheet total
Income	Total of revenue income, changes in holdings, recognised own services and other operating income
Non-p.	Non-profit
SHI	Statutory health insurance
P&L	Profit and loss statement (also known as income statement) – list of a company's expenditures and income for a certain period, normally a financial year.
ICD	International Statistical Classification of Diseases
KHG	Hospital Financing Act (Krankenhausfinanzierungsgesetz)
Personnel costs	Total of gross wages and salaries, social security contributions, pension expenditures
Rating	To assess a debtor's solvency, rating classes are formed. A debtor is assigned to a category in a bank-internal rating according to bank-internal criteria, and with internationally operating rating agencies such as Moody's, Standard & Poor's or Fitch the assignment is effected following a comprehensive assessment of the company.
Relative weighting	Weighting of a DRG under the remuneration system based on DRG case flat rates; the remuneration of a DRG is obtained by multiplying its relative weighting and base rate.
Material costs	Material expenditure (consumables and supplies, merchandise and services)
SGB	German Social Insurance Code (Sozialgesetzbuch)
Special item ratio	Special item divided by balance sheet total

TK	Techniker Krankenkasse
FT	Full-time employee
WIdO	Research Institute of the AOK (Wissenschaftliches Institut der AOK)

Glossary

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