

Increasing the efficiency and flexibility of capital funding for public and private hospitals

JOHN F P BRIDGES AND PERRY SPERLING

John Bridges is a PhD candidate in Economics, Graduate School, City University of New York, New York and Lecturer, Department of Economics, Case Western Reserve University, Cleveland.

Perry Sperling is Director of the Strategic Private Health Unit, Private Health Industry Branch, Department of Health and Aged Care. The views expressed here are those of the authors and may not be shared by sponsoring organisations.

Abstract

This paper outlines the recent history of capital funding in the health sector in Australia. It focuses on the trends in capital expenditures and the roles of the public and private sectors. The demand for future capital funding will depend upon a number of factors, including the state of the current capital stock and uncertain future impacts of technology and changes in patient demands. Because of these uncertainties, capital funding for the future must be flexible to meet any changes in operations and demand. The paper highlights the possible use of joint ventures between various public and private organisations, based on the principles of competition and cooperation.

Introduction

Funding reforms in the Australian health sector during the last 20 years have focused primarily on recurrent funding. However, it is uncertain whether there is a successful mechanism in place to guarantee an adequate capital investment to meet the changing nature of the health sector. Furthermore, in a discussion of capital for the hospital sector, either public or private, one needs to account not only for Commonwealth and State governments but also a variety of other stakeholders. These include private health insurance funds, health services providers (for-profits, not-for-profit and individuals), non-government organisations, clinicians and consumers.

Definitions of capital

AIHW (1999) use the National Accounts definition of capital to focus on the capital use in the health and welfare sector. Gross Fixed Capital Expenditure (GFCE) is the value of the durable inputs (with a lifetime of one year or more) that are used in the productive process. The Gross Capital Stock (GKS) is the accumulated value of the past GFCE, less any retirements. The Net Capital Stock (NKS) is the GKS less the accumulated value of depreciation of those inputs still used in the productive process (those that have not been retired). However, the shortfall of these definitions is that they are not directly related to the value of the assets. Another way to measure capital, especially that of private hospitals, is stock market value. Market value is determined by the capacity of the investment to return profits, both today and over the life of the capital assets. When valuing profit streams the market will also take into the account the level of risk in the project, with more risky assets needing to return higher profits. In the US, where a high proportion of capital for the hospital sector is

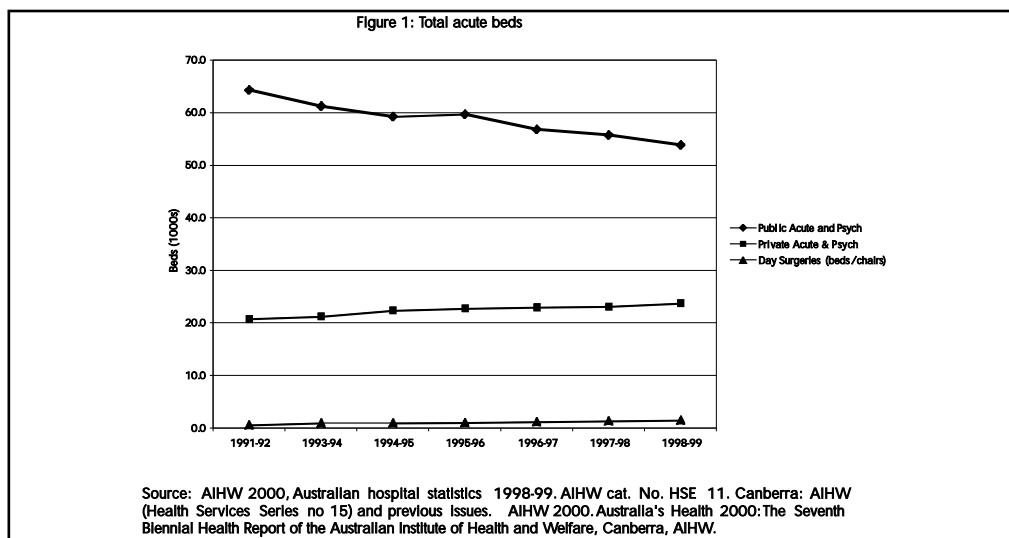
raised though municipal bond issues, physical capital is often defined as including 'land, plant [including buildings], and fixed and moveable equipment' (Gershberg, Grossman & Goldman 2000 p5).

Previous studies on capital

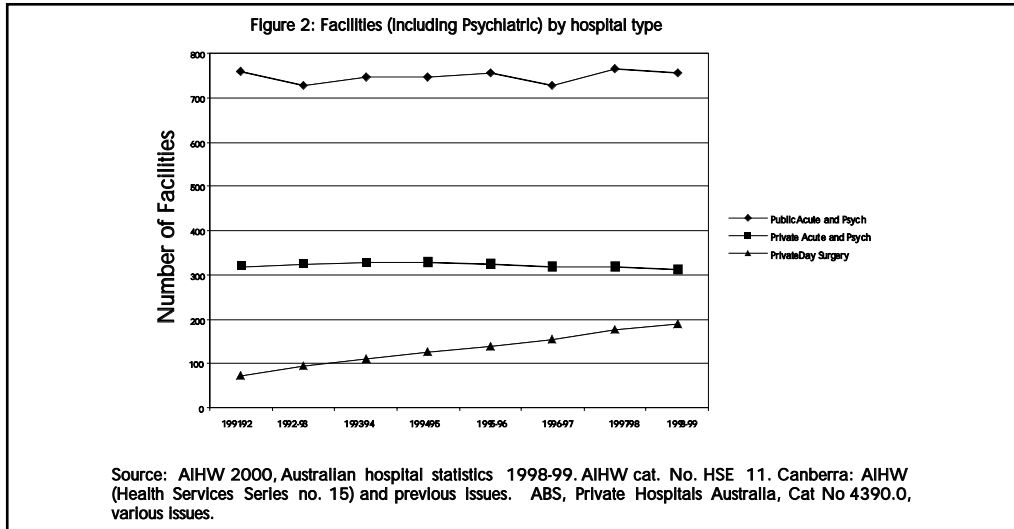
There are few research reports on the quantification of the capital stock in the hospital sector in Australia. Deeble (1992) used data from 30 public hospitals from five mainland states and the Australian Capital Territory (ACT) to estimate the capital needs for the public system nationally. Following on from this work, Deeble (1993) reported more detailed findings for Queensland alone. These two studies are the most recent comprehensive work completed on the capital needs of the hospital system and as such quantify the magnitude of capital needs. These studies also serve to highlight some empirical and research issues related to the measurement of capital. For example, land was not valued regardless of ownership type. Deeble (1993, p9) states that a 'hospital land [may] have a greater value in some other public use, say, a university, school or office site. [But this] is a matter for public asset management, not a health service'. Such a statement may be less valid as governments move towards a 'total asset management' approach. Other studies of the hospital system also examine, in part, capital needs. For example, Sinclair (2000) focuses on the needs of rural hospitals in New South Wales and makes some recommendations about capital structure and expenditures.

History of capital funding

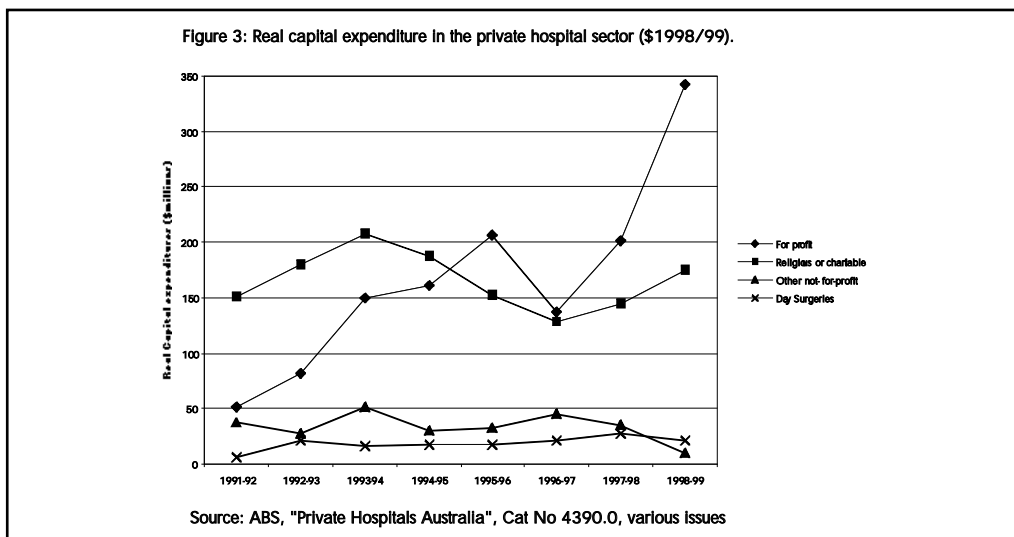
As data on the total capital stock for both the public and private hospital sectors is hard to evaluate, researchers will often use simple indicators as substitutes. Two such measures are the total number of beds and total number of facilities. Figure 1 illustrates the total number of acute beds available for public and private acute and psychiatric hospitals and beds or chairs in private free standing day hospitals. This measure shows there has been a decline in the public sector and an increase in the private sector over the last decade. This may be due to the rationalisation of public services and recent competition for both patients and staff in the private sector. Figure 2 illustrates the number of facilities (acute and psychiatric) for the private and public sector and private freestanding day hospital facilities. From figure 2, one can better see the growth of private free standing day hospitals over the past ten years. These measures, while consistently reported, are not an accurate indication of the capital stock. This is because they do not take into account capital intensity. Also, measures such as number of beds do not adequately reflect changes in the way health services are provided, such as the move to ambulatory care, especially in the private sector, and the expansion of non-admitted patient services.



Currently there does not exist a quality time series of data on capital stock in either the public or the private sector. This in part reflects the difficulties in defining capital stock, as discussed above. The Australian Bureau of Statistics does report capital expenditures for the private sector. These are reported in figure 3. The largest increase in investment in the last decade is from the for-profit acute and psychiatric hospital sector. The religious or charitable acute and psychiatric sector has remained relatively stable over the last decade with approximately just over \$150 million in investment each year. While there has also been a considerable increase in investment in the private freestanding day hospital sector, there has been a significant decline in investment in the other parts of the not-for-profit sector. This is due in part to some providers in this sector being purchased by for-profit groups.



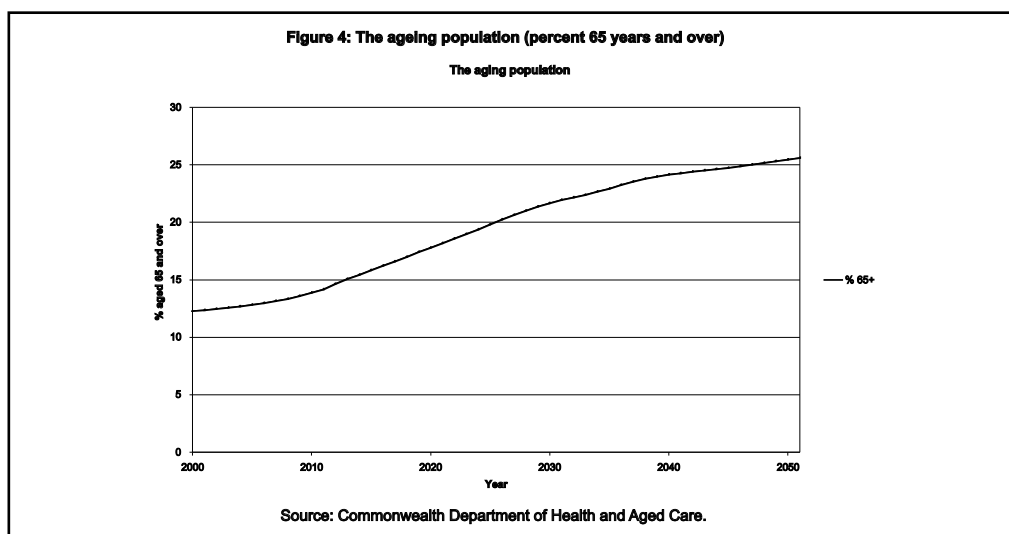
Other methods to measure the size of the public and private sector would be to use a throughput measure - such as admission rates or casemix adjusted separations. While this data is of a much better quality, it is not sensitive to changes in excess capacity across public and private hospitals and across time. That is, while casemix measures are good at measuring the intensity of beds in use, it does not account for unused beds or other non-bed capital items such as medical imaging equipment.



Changes in hospital capital needs

The role of technology in health care has been the centre of much discussion (Fuchs 1999). Murphy (1998) finds that it is impossible to predict whether technology has led to more or less spending on health care. Fuchs (1999) concludes that increased cost would come through increased utilisation and not just the high costs of purchase.

The ageing of Australia's population has also been the cause of much concern to policy makers. Figure 4 highlights the forecasted growth in the percentage of the population over 65 years of age. As seen in figure 4, the percentage aged 65 and over is set to double in the next 50 year, from 12 percent to over 25 percent. There has been much concern over the impact of ageing on the health sector (Health and Aged Care 1999 2000), but a growing number of researchers are dismissing the problem (see Normand 1998). This is because the health of population is improving at any age and the cost of treatment for terminal illness decreases with age (Scitovsky 1994). If there is a dramatic increase in the cost of care due to ageing, like the problem of technology, it will be due to a change in consumer expectations.



The hospital sector will also have to adjust to a number of other changes in the delivery of services. Current examples include the movement towards the provision of Telehealth services and changes in coronary care. Future changes in the interface between hospitals and other parts of the health system for example, community care are also likely to change the capital requirements for the hospitals in the future. While movements to such delivery patterns as hospital in the home may lead to hospitals needing less physical capital, it may increase the need for human capital for example, increased investment in training of more community nurses. Other future challenges for hospitals will include the increased use of out of hospital care and increases in inpatient acuity that will arise as a result of this trend.

Many questions arise out of this discussion of future needs for capital. Is technology too expensive? Will ageing be affordable? Can hospitals cope with the changing nature of health care? In many respects, these are the same questions. Is Australia's hospital infrastructure flexible enough cope with both anticipated and unanticipated changes in health service delivery? More importantly, what can be done to make it more flexible? There may be potential for policies to promote increased competition and cooperation in the industry. The objective of such policies should be to encourage flexibility of hospital infrastructure.

Structure and ownership

There are a number of models for structure and ownership in the public hospital sector. Each has different degrees of private participation. Such models include privatisation, contracting of services between private and public sectors, sub-contracting arrangements with the private sector and co-location. With new public facilities the private sector can be contracted to build, own and/or operate the facility. Each model introduces different types of risk for investors.

One other approach available to both private and public facilities is to contract out the provision of services to other organisations. In some instances, a public or private hospital may contract services from another public or private hospital. While contracting out does not affect ownership, it can have an effect on the profitability (and value) of the existing assets. This could potentially affect investment decisions in the sector. Vinning & Globberman (1999) outline a number of costs that could negate any potential savings from contracting out.

Co-location and consolidation of existing services onto a single campus has been a strong trend in recent history. This is because there is believed to be economies of scale and scope in such enterprises. Menke (1997) found that economies of scale and scope could be present in some types of private hospitals. One of the problems in attempting to consolidate existing public services is that there may be a political push to keep some form of health services on the vacated site, even if it is not profitable to do so.

Capital funding

Most countries who purchase public hospital services, from either public or private providers, have historically issued capital funding and recurrent funding separately (Culyer & Posnett 1991), although some countries have moved away from this as it has been shown to cause inefficiencies in the hospital sector. In the US, Bradford and Craycroft (1996) found that paying for capital on a cost basis for outpatients caused hospitals to use more capital and have higher levels of slack. This is because there is no incentive to use an appropriate level of capital. Duckett (1994 p88) finds that the current system of funding has given rise to a situation where 'capital has been a free good' for hospitals in Australia. The current structure of the capital funding system has had a significant impact on resource allocation decisions in the public hospital sector. Negative consequences include:

- Misallocation of capital resources due to centrally controlled budgets and global capital expenditure budgets set by State Treasuries;
- Poor investment decisions (for example, the 'gold plating' of some facilities when they are successful in receiving capital funds); and
- Perverse incentives with regard to maintenance of existing capital stocks.

The Steering Committee for the Review of Commonwealth/State Service Provision has suggested that 'reimbursing all capital costs (including the opportunity cost of capital and depreciation) in the casemix funding formula - in conjunction with a regime of capital charges - would provide a basis for delegating these decisions to the network [or area health service] or individual hospital' (SRCSSP 1997 p67). In a similar vein, the US utilised cost-based reimbursement for its Medicare program until it phased in the Prospective Payments System (PPS) in 1983. Originally, capital costs were exempt from the PPS, but paid on the basis of reasonable cost. In 1991, the Health Care Financing Administration decided to integrate capital funding into the PPS over a ten-year period (Grossman et al 1993).

For the private sector, there has been considerable growth in the past 10 years. An explanation for this may come from an analysis of aggressive competition between private operators. This competition has seen over-capacity in private beds in some geographic areas and increased provision of specialist units within private hospitals. Also there has been a steady growth in small same day hospitals. Recent changes in the negotiation processes with health funds have seen a fall in the profitability of the expanded private asset base. This has left the private sector over-capitalised and with excess capacity in some areas. However, with recent growth in membership rates in health funds, flow on effects in terms of increased demand for private services can be expected. There has also been little in the way of cooperation between health funds and private hospitals in

terms of planning of the private sector. There is scope for health funds to increase participation in planning the private hospital sector, either directly or via financial incentives to private hospitals.

Effects of capital charging on hospital planning

For the public sector, poor capital decisions may be more of a consequence of the planning process rather than funding. Projections have historically been limited to a three or five-year horizon and approvals are only granted annually. Thus, hospitals have an incentive to ask for too much, potentially leading to an inefficient distribution of public capital funds. Unless the public hospital system faces some of the costs of capital, say through capital charging, there is likely to be adverse incentives precluding efficient use of capital resources and an advantage to the public sector over the private sector (that is, an absence of competitive neutrality, see Samuel 1999). While public hospitals may choose not to use this advantage over private operators, it may serve to discourage investment into private hospitals.

It may be more optimal for public hospital facilities to internalise the costs of capital and receive a single payment for recurrent and capital costs. Public hospitals and regional/area health services would also benefit from more autonomy in the planning process. It would also be beneficial if this were implemented at an area wide level to avoid duplication of services and management structures. These policies would provide better incentives to have a more efficient mix of resources in the public sector. In addition, if public hospitals improve their planning process - including an adequate involvement of the local community - the adverse effects of political pressure may be avoided.

Benefits of competition and cooperation

As stated above, there may be potential for elements of competition and cooperation to improve the level of investment in the hospital sector. The public and private hospital sectors need to jointly ensure that they are sufficiently flexible to meet uncertain future needs. Currently the private hospital providers may not be able to afford to invest in the hospital sector given the recent high cost of capital and low and risky returns. By moving to a competitive market for capital in the public hospitals sector, private investors may regain some confidence in the industry. Here there is no one model of capital funding, but rather hospitals (both public and private) should be able to 'shop' around in an open market for their capital. In a competitive market, all available investors should be able to offer funds for all or part of the hospitals investment. For example, a new public hospital may be able to draw part of its capital funds from a state government, but this could be supplemented by other investors. These investors may have particular interest in certain components of the hospital's asset base such as car parks and/or power. Other investors may be interested in the redevelopment of existing hospital assets (brown sites) or development of part of the new site. Currently in some States, the state treasury will decrease capital funding dollar for dollar if supplementary funds are found.

The National Health and Data Dictionary (2000) defines public and private hospitals through ownership, management, choice of doctors and ward type (shared or single). Such a definition, which is repeated elsewhere, may serve to limit many novel types of joint service provision. It may be better to define patients as either public (Medicare) or private (insured and fee-for-service) and not the institution in which they are treated.

With the growing fixed costs associated with medical care delivery it may be better to treat public and private patients (defined by payer type) in the same facility regardless of ownership and management. The Productivity Commission (1999 p9) found that the increasing prevalence of collocation of public and private hospitals were due to complementarities and economies of scope. Certainly, there does have to be product differentiation between public and private services - given the different costs to consumers - but this could be related to the level and quality of hotel services provided within the same capital infrastructure. This would be similar to an aircraft, which has different levels of service associated corresponding with different levels of costs to consumers accommodated in the same aircraft. Often, aircraft will have the capacity to turn first class seats into economy, etc. Likewise, hospitals could adopt such service delivery patterns.

Moving towards hybrid models of capital funding (such as joint ventures) may increase the flexibility of capital in the whole hospital sector. This would require increased cooperation between existing stakeholders. This may be between the public and private sector, or between facilities in the same sector. A focus on joint ventures could be on developments, redevelopment and/or consolidation of existing services. Different types of investors may be attracted to these arrangements by allowing them to bear varying degrees of risk. Through joint ventures, the public sector may share in the increased profitability of the sector rather than running the risk of cream skimming on the part of the private hospital. For example, Hunter Area Health Service found that the benefits of co-location to the public system could be negated by a potential loss of revenue. It concluded that for a co-location to be beneficial to the public hospital, some form of compensation for loss revenue was needed (Dowling unpublished).

In addition, increased cooperation between private health funds and private hospitals may increase investor confidence in the sector. Private health funds may benefit from ensuring that current contracts with private hospitals provide an appropriate incentive to supply hospital infrastructure for their current and future membership requirements.

All of these strategies are likely to result in private investors being more interested in funding capital expansion of both public and private hospitals. However, it is important to note that this would need to be part of a holistic capital financing solution that, as stated above, would also require the resolution of the recurrent-capital funding dichotomy that currently exists. Further consideration of capital financing solutions is required, including approaches that use competition and cooperation more wisely, to ensure that public and private hospitals are able to meet future health care needs.

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