Why Subsidise Private Health Insurance?

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Abstract

What are the economic rationales for the public subsidy of private health insurance? Inducing more people to purchase private cover has the potential to create a positive fiscal externality, as it frees up the limited public beds and other public resources for people who cannot afford private health insurance. Investigating this quantitatively, based on short-run demand estimates, we find that the subsidy cannot be justified on the basis of this externality effect alone. We estimate that the optimal subsidy is actually negative, that is, a tax on private health insurance premiums. On the other hand, the externality does finance some of the costs. We then consider a long-run dynamic version, consistent with the government's stated rationales for the reforms. In this context, the subsidy might be justified, or at least largely offset, by the fiscal externality. We then discuss other rationales for a subsidy and implementation issues.

1. Introduction

In the late 1990s, the Australian Government introduced a series of changes to the prices and regulation of private health insurance. The changes were designed to encourage more people to hold private health insurance and to use the private sector for their hospital care. The details and the impact of the regulation and price changes are discussed elsewhere (Hopkins and Frech 2001). In brief, the policy changes were spectacularly successful as the percentage of the Australian population with private health insurance jumped from 31.1 per cent in December 1998 to 46.1 per cent in September 2001.

The most contentious issue in the changes in the pricing and regulation of private health insurance has been the introduction of the 30 per cent subsidy. Much of the debate on the subsidy has centred on its effectiveness. There is a view that the subsidy achieved little yet costs a lot. Two empirical studies (Frech, Hopkins and MacDonald 2003; Quinn 2002) have quantified the impact of the subsidy. Both find that most of the increase in membership may be attributed to the change in rating but that the subsidy did have an effect.

The generality of the subsidy combined with the increase in the number of policyholders led to a considerable blow-out in the budgeted amount. The subsidy was approximately $1.6 billion in 1999–2000, or $82 per capita, compared with an initial estimate of approximately $1 billion. Recent government-mandated increases in health insurance premiums have added to the amount paid out of pocket for

premiums as well as the subsidised contribution from the government. With premium increases, the subsidy was predicted to increase to $2.8 billion for 2002 (Quinn 2002).

Having committed considerable taxpayer funds and attained an uncertain outcome, there are reasonable questions being raised about the wisdom of the government policy of subsidising private insurance. There are essentially two views on the role of public subsidies for the private sector where there is a public health insurer. One view holds that the private sector relieves pressure on the national insurer and therefore improves the access and quality of care for those patients who remain in the public sector. The other view holds that the private sector drains resources from the public sector and leads to a decline in access and quality of care (Iversen 1997). Much of the analysis below focuses on the first view that the private sector has the capacity to relieve pressure on the public sector and thus there are externalities associated with the subsidisation of the private sector.

2.   Rationales for the Subsidy

In an earlier article (Frech et al. 2003), we use a simple deterministic trend to estimate the impact of the introduction of the 30 per cent subsidy. We fit a trend to quarterly data on the percentage of the Australian population with private health insurance from the March quarter of 1987 to the March quarter of 1997. This is a period of stable policies. The trend is fitted by regressing the percentage of the population with health insurance on a constant and a time variable (refer to Figure 1). We estimate that between 1993 and 1997 the percentage with private coverage was declining at a rate of about 1.6 percentage points per year. The first quarter of 1997 corresponds to the first policy change of a means-tested subsidy and tax surcharge for high-income earners. The estimated model is used to forecast forward from the first quarter of 1997.

A deterministic trend is very simplistic, but the model fits remarkably well during the stable policy regime. As one can see in Figure 1, the model ceases to forecast adequately from the second quarter of 1999. The t statistics of the forecast values become significant for every period from and including the second quarter of 1999 (Frech et al. 2003). The 30 per cent subsidy took effect from 1 January 1999. In contrast to the first (1997) policy of a means-tested rebate, this policy clearly does move the data off the trend line.

Figure 1   Actual and Fitted Values for the Proportion of the Population Privately Insured
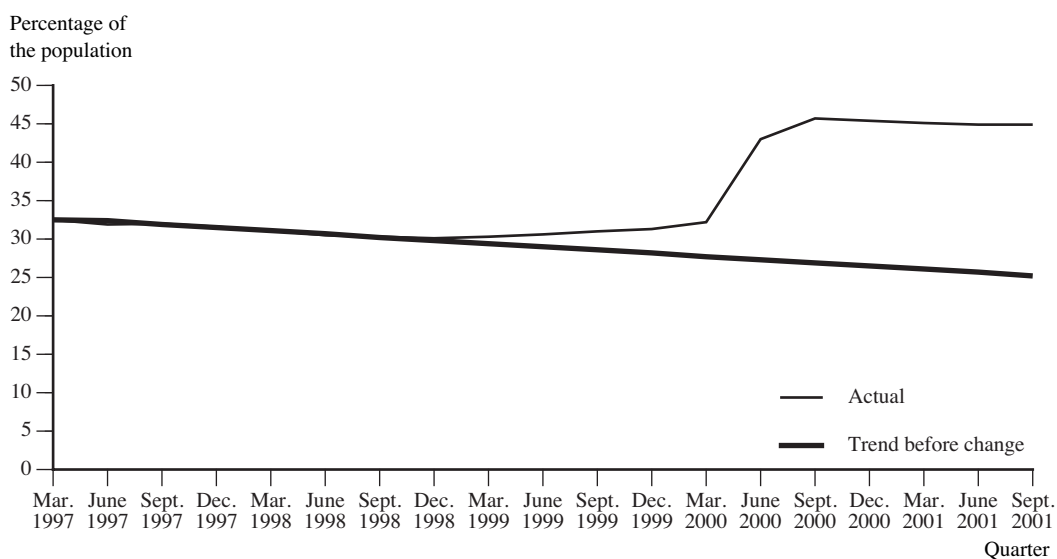
Source: Private Health Insurance Administration Council (2002).

The third policy of allowing lifetime community rating was announced on 29 September 1999 and was effective from 15 July 2000. Most of the promotional activities under the rubric of 'Lifetime Health Cover' were concentrated in the March and June quarters of 2000 (Butler 2002). This timing means that there was a window in which the change in the numbers insured can be attributed to the second policy of the 30 per cent rebate. This window goes from the start of the first quarter of 1999 to the end of the fourth quarter of 1999.

Over this period, there was a 4.0 percentage point increase in the actual number of people insured. This amounts to an 11 per cent increase over the base, where the base is defined as the trend line had there been no policy changes. So, a 30 per cent decrease in price led to an 11 per cent increase in the quantity demanded. This implies a reasonable price elasticity of demand of –0.37. Butler (1999) estimates that price elasticity ranges from –0.35 to –0.50.

Clearly, most of the increased coverage is due to the introduction of lifetime community rating (Figure 1). The number of people with insurance increased 42.8 per cent in the first three quarters of 2000. We estimate that the subsidy increased the percentage of the population covered by 4 percentage points, while the liberalised rating increased it by 16 per cent (Frech et al. 2003, p. 59). It is clear that this 30 per cent subsidy has had some effect, but the quantitatively more powerful policy was liberalising community rating.[1]

The above discussion shows that the subsidy did have an effect but was it sufficient to justify the expenditure in the first place?

We suggest in the analysis below that there are a number of economic reasons for the subsidy. First, we consider the impact and size of the fiscal externality from encouraging wealthier consumers to buy private insurance. In order to do this, we use the estimated short-run elasticities from Frech et al. (2003) to consider the size of the shift and the impact that this is likely to have on the public sector. We also consider a more long-run or dynamic analysis. We then consider other arguments that may be and in some cases have been used to justify the public subsidy of private health insurance. These arguments are based on horizontal equity, the deadweight loss of rationing by waiting, and the role of public sector administration and the unions.

2.1 Fiscal Externality

The concern of individuals for each other's access to highly productive health care creates one type of externality. Other consumers benefit when a low-income or very high-risk consumer gets highly productive health care. Since many other consumers benefit from the externality, this creates a public good aspect to health care consumption. The notion of interdependent utility in turn provides a justification for subsidised access to health care services for some consumers. This is especially true where the health services are perceived as being basic and highly effective, such as some cancer surgery and emergency care.

There is considerable evidence from Australian, US and UK studies that private health insurance is a normal good: demand is strongly related to income. In 2001, 82.5 per cent of Australian households in the highest income quintile had private health insurance compared with 29.5 per cent in the lowest income quintile (Australian Bureau of Statistics 2001). Also, there seems to be little adverse selection; ill health is not a major determinant of choice of private insurance (Hopkins and Kidd 1996; Besley, Hall and Preston 1999; Frech 1996). The normality of private health insurance means that poorer people are less likely to hold private health insurance policies and are left to cope with the waiting time for treatment in the public hospital system. In addition to being the least likely to exit the queue by purchasing private health insurance, poorer people also tend to be the most medically needy (Besley and Gouveia 1994).

As a person signs up for private health insurance and leaves the public hospital system, this confers an external benefit on the public system. This is the fiscal externality. If shifting to the private system were price-sensitive enough, it could be entirely self-funding or even make a net profit for the public sector

(that is, if a small subsidy would cause a huge shifting from the public sector or prevent a large shifting into the public sector). Short of that, as long as shifting responds at all to price, a subsidy to private insurance causes a direct benefit to the public sector, thus partially off-setting its cost.

2.1.1 The Optimal Subsidy: Short-Run Analysis

Using the estimated price elasticity of demand for private insurance from Frech et al. (2003), we can calculate the optimal subsidy, strictly in terms of direct savings to the public hospital sector (ignoring all other benefits from the subsidy).

In estimating the optimal subsidy, we make a few simplifying assumptions. First, we assume that all the public sector costs are saved when a consumer shifts to private insurance. In a recent article, Vaithianathan (2002) has argued contrarily that increases in private health insurance have little or no effect on the use of private hospital care. She argues primarily that the new coverage is mostly purchased by consumers who would have used private care anyway, as self-insured people. However, the data suggest that the amount of self-insured hospital care consumed in private hospitals prior to the subsidy and liberalised rating was too small for it to have been an important issue. Self-insured hospital care amounted to 9 per cent of private hospital visits of any kind, but only 4 per cent of private hospital revenue in 1996–97.[2] At that time, private hospital expenditures amounted to 22 per cent of total hospital expenditures, so that the self-insured accounted for less than 1.0 per cent of total hospital spending (Productivity Commission 1999).

Further, based on an assumption of long-run inelastic supply of private health care, Vaithianathan (2002) argues that any slight shifting to private care would be choked off by rising private care prices. We have a different interpretation on this. We would argue that resources can, in the long run, move from public to private sectors fairly easily. On balance, we believe that the purchase of private insurance leads to substantial shifting from public to private care, something that can be seen even in early observations (Hopkins and Frech 2001).

Using later data than we had, Deeble shows that between 1998–99 and 2000–01 hospital separations increased by 16 per cent for private patients, but only 1 per cent for public patients (2002, p. 5). In later work, he states that the highest estimate of shifting from the data was 7.7 per cent of public patients up to 2000–01 (2003, p. 10). Thus, as a working approximation for purposes of a tractable quantitative analysis, we view private hospital care as varying roughly one for one with private health insurance. The difficulties come in linking changes in private insurance to the subsidy.

For most of the analysis, we will assume that all of the subsidy is applied to insurance which can induce shifting. Roughly speaking, this means hospital care. When we estimate what proportion of the subsidy is self-financed by the shifting into private hospital care, we will need to account for the fact that much of what is subsidised is not closely related to hospital care (for example, dental care). We will revisit this issue when we discuss implementation issues.

While private and public hospitals are imperfect substitutes, private insurance will lead to switching hospital choice as long as private hospitals are generally preferred when out-of-pocket prices are similar. The main way in which private hospitals differentiate themselves from their public sector counterparts is in the amenities or hotel facilities which they offer patients. A commonly expressed view of the role of the private sector hospitals is that they perform mostly elective and non-complex surgery, or the 'lumps and bumps'. They certainly have an important surgical role performing 52 per cent of surgery in Australia. The percentage is higher for selected procedures such as knee operations and cataract operations (Australian Institute of Health and Welfare (AIHW) 2002a). The surgical activity as well as other functions of the private hospitals, however, are of increasing complexity (AIHW 2002a). For example, 163 of 299 private hospitals have special care units. Special care includes intensive care, coronary care and neonatal care (Australian Bureau of Statistics 2002).

Our judgement is that most hospital care is shifted by the purchase of private health insurance. In any case, incomplete shifting would have two offsetting effects: (i) it would make private insurance cheaper and thus reduce the amount of the subsidy and (ii) it would reduce the public sector saving.[3,4]

Because of this, and for analytical simplicity, we assume first that shifting is complete. Alternatively, one can interpret our result as applying to the part of hospital care that is actually shifted, thus is actually paid by private insurance.

Our simplifying assumption ignores some other issues, such as the fact that doctors are paid partly from the public sector for treating private patients. It also ignores different physician fees and fee bases in the two sectors. Perhaps most importantly, it ignores the increase in public sector costs for doctors' fees associated with the (probable) increase in utilisation as a person shifts to private coverage. This assumption can be softened with better information, including further results of our own ongoing research.

Second, we assume that insurance companies use actuarially fair pricing. This assumption is analytically very helpful. It is also quite reasonable, since actual pricing is reasonably close to actuarially fair. The price of insurance is best represented by the inverse of the loss ratio. This is not the change in premiums (because part of the premiums is paid back as benefits in expected value) but rather the change in the excess of premiums over benefits paid, In 1998–99, this inverse was 1.13 (Standard & Poor's 2001) indicating that for each dollar of benefits paid, 13 cents were retained to finance insurance operations. According to the Private Health Insurance Administration Council (2001), the premium–benefits ratio first increased from 1.13 in 1998–99 because the holders of new policies were subject to waiting time clauses with regard to several benefits. The ratio was back to 1.10 in 2001–02 (Hopkins and Zweifel 2003). Thus, the various reforms did not impact greatly on the loss ratio.

Because of our assumption of actuarial fairness, a subsidy of private insurance is treated the same as a subsidy of private hospitals. In a more detailed analysis, subtle differences in incentives, information and the management of cost controls would arise. Indeed, Australia has had large subsidies of private hospitals, up until 1985–86. In the last full year, the subsidy amounted to 12.5 per cent of private hospital costs (Deeble 2003). This is a fascinating topic that underlies many policy debates in many countries, but which is beyond the scope of this article.

Third, we assume that the demand curve is linear. While this is a reasonable simplification, the price changes being considered are large, at least 30 per cent, so that different assumptions on functional form would give somewhat different quantitative results. The demand function is then:

$$Q = A - BP \tag{1}$$

where Q = the proportion of the population with private health insurance, and P = the net price of insurance, measured as dollars of premium per dollars of expected benefit (the inverse of the loss ratio). Thus, with actuarially fair pricing, $P = 1.0$ is the price before the subsidy, and $P = 0.70$ is the price with the 30 per cent subsidy. Therefore, the subsidy is defined as $1 - P$.

A and B are positive constants. Savings to the public sector are just a constant times the proportion of the population with private insurance, Q. The cost is the subsidy times that same proportion times the same constant. The constant is the dollar cost of health care for the entire population. Since it is a constant anyway, we will drop it and write savings, net of the cost of the subsidy, $(1 - P)Q$, as:

$$S = Q - (1 - P)Q \tag{2}$$

or:

$$S = PQ \tag{3}$$

Note that the maximand ends up to be total revenue from private health insurance, the same maximand one would get for a monopolist with zero production costs. In terms of net price, the maximand is:

$$S = P(A - BP) \tag{4}$$

or:

$$S = AP - BP^2 \tag{5}$$

To maximise savings, one finds the first-order condition by taking the derivative of S with respect to P and setting it equal to zero:

$$\frac{\partial S}{\partial P} = A - 2BP = 0 \tag{6}$$

Solving for the optimal price, P^*, we get:

$$P^* = \frac{A}{2B} \tag{7}$$

From Frech et al. (2003), we can quantify how the number insured responds to changes in the price. This generates an estimate of A and B. As the price falls from 1.0 to 0.7, the proportion insured goes from 0.282 to 0.313. The constants are therefore:

$$A = 0.385 \text{ (38.5 per cent)} \tag{8}$$

$$B = 0.10 \tag{9}$$

The demand equation is:

$$Q = 0.385 - 0.10P \tag{10}$$

The optimal net price then is:

$$P^* = \frac{0.385}{0.20} = 1.93 \tag{11}$$

implying a subsidy that is negative:

$$SUB = 1 - 1.93 = -0.93 \tag{12}$$

Thus, the optimal subsidy is actually a large tax (93 per cent of premiums). This makes sense because demand for private health insurance is fairly inelastic in the short term. Frech et al. (2003) estimate a price elasticity of –0.37. Optimal taxation theory suggests large taxes on goods that are demanded inelastically. Another

Figure 2   Optimal Subsidy
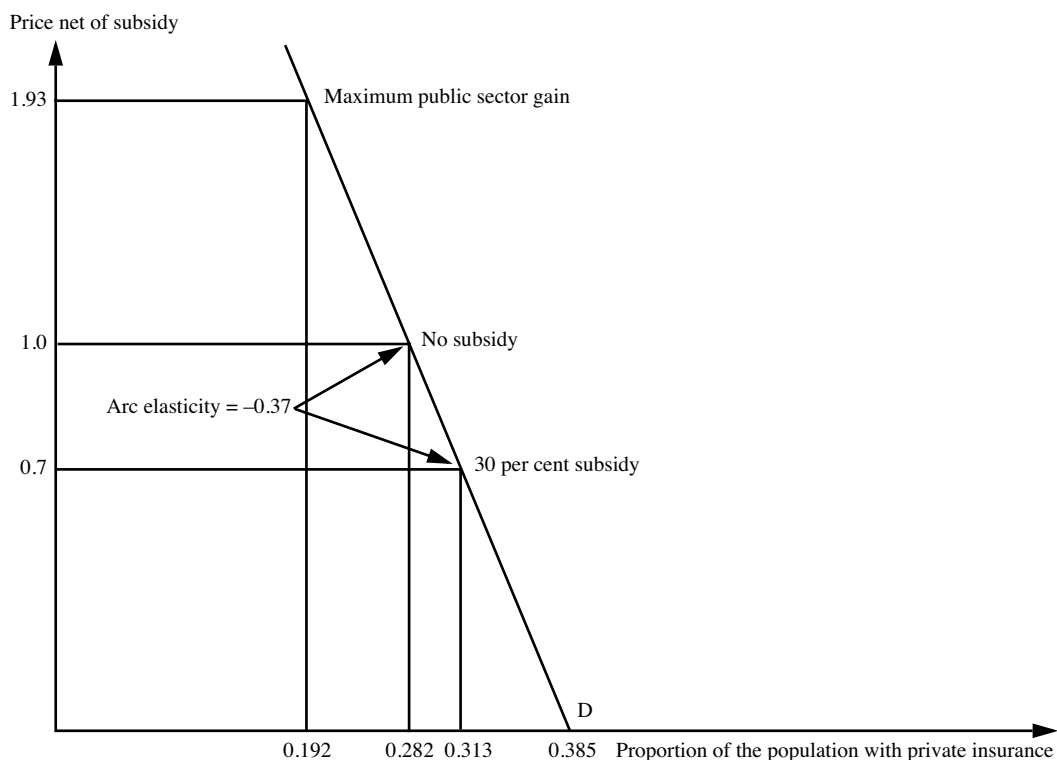
viewpoint is that, through its ability to subsidise or tax, the public sector has monopoly power over the supply of private health insurance. From a simple wealth-maximising viewpoint, if demand is inelastic, price should be high.

The price variations analysed here are large, so that thinking in terms of elasticities is inherently tricky. (Refer to Figure 2.) For example, the instantaneous elasticity at the point of maximum gain to the government, where price is 1.93, is –1.0, while the arc elasticity, starting at the no-subsidy point, is –0.37.

Note that our result comes from the traditional optimal taxation approach, where a state is simply maximising something, here income to itself, starting from a fully socialised position. As mentioned above, the maximand turns out to be total revenue from private insurance, thus guaranteeing that the optimum must be where the instantaneous demand elasticity is –1.0.

In this class of models, the government is not constrained by either public choice or equity concerns. This outcome with a high tax on private insurance is especially problematic from the perspective of horizontal equity between those who opt for private insurance and those who do not. The people in private insurance pay taxes for the public system, then pay for their private insurance and then pay again a large tax on those private insurance premiums. This outcome could probably not be sustained as a political equilibrium.

2.1.2 The Subsidy Is Partly Self-Financing

We also calculate how much of the subsidy is repaid by consumers leaving the public system (that is, the extent to which the subsidy is self-financing). We do this by first analysing the part of insurance that is related to shifting (that is, hospital care). We then adjust according to the proportion of the actual subsidy that falls on hospital care.

To do this, note that the subsidy is paid to 31.3 per cent of the population, but causes 3.1 per cent of the population to leave the public system. The saving from the shifting is therefore (still, all in terms of the proportion of total national health care spending):

$$(Q_1 - Q_0) \tag{13}$$

where Q_0 = the starting (no subsidy) proportion of the population with private health insurance, and Q_1 = the ending (subsidised) proportion with private health insurance. Substituting in our values (0.282 and 0.313), savings are 0.031. The cost is:

$$(1 - P)Q_1 \tag{14}$$

Substituting in, this is 0.094.

Thus, the externality/shifting effect funds 33 per cent, almost one-third of the total cost of the subsidy that is paid for hospital care. To adjust for the percentage of the total subsidy, we need to estimate the proportion of the subsidy that goes to either public or private hospital care. In 1999–2000, this was 48.3 per cent for private hospital care and 5.2 per cent for public hospital care, for a total of 53.5 per cent (AIHW 2002b). We would also argue that some part of administrative expenses (13.6 per cent) should also be considered since they partly offset public administration and partly support productive cost management programs (Danzon 1992).

However, to be conservative, we will use 50 per cent.[5, 6] This adjustment leads to the conclusion that 16.5 per cent, just under one-sixth of the total cost of the subsidy, is offset by the fiscal externality, based on short-run elasticities. This effect is of major quantitative importance, reducing the cost of the subsidy, even though it falls well short of justifying the entire subsidy.

This estimate can be compared to Deeble's estimate that about 26 per cent of the cost of the tax subsidy is offset by 2000–01 (2002, p. 6; 2003, p. 11). However, the shifting that underlies Deeble's offset estimate results from both the tax rebate and liberalised rating.

To make Deeble's estimate more comparable, we adjust it downward to focus on the shifting that was due to the subsidy alone. There are several reasons to expect the proper adjustment to be well below what might be suggested by the relative numbers of consumers who bought private insurance. First, 2000–01 is the first year of the liberalised rating. One

would not expect instantaneous adjustment of behaviour. Second, many of the private plans imposed waiting periods as long as a year for many services and conditions. Thus, newly insured consumers could not shift quickly. Third, liberalised rating attracted a large number of younger and healthier consumers (indeed, this was part of the purpose). These people would use disproportionately less hospital care. Thus, we would suggest that by 2000–01, it would be reasonable to attribute half of the shifting to the rebate. This adjustment implies that Deeble's estimate of the fiscal offset should be reduced to 13 per cent to compare to our estimate of a bit over 16 per cent.[7]

2.1.3 What Is the Necessary Elasticity for Complete Self-Financing?

We can also estimate the necessary elasticity for the subsidy of hospital insurance to be completely self-funding. For the subsidy to be self-funding by means of the externality, the savings would have to equal the costs:

$$(Q_1 - Q_0) = (1 - P)Q_1 \qquad (15)$$

Rearranging:

$$\frac{Q_0}{Q_1} = P \qquad (16)$$

Inserting our starting value, $Q_0 = 0.282$ and the net price, $P = 0.7$, we get $Q_1 = 0.403$.

For the subsidy to be self-funding, the proportion with private health insurance would have to increase from 0.282 to 0.403, as a result of the subsidy alone. This increase in the proportion in response to the price change implies an arc elasticity of –1.43. Here again, elasticities are tricky. Calculating the instantaneous elasticity at the 30 per cent subsidy (price is 0.70) gives a much lower value of –0.69.

An elasticity of –1.43 or even –0.69 is quite unrealistic, as least in the short run. It is evident from both Australian and most overseas studies that the demand for private health insurance is generally not so elastically demanded, at least not in a static analysis.

2.1.4 Could the Subsidy Be Self-Funding in a Dynamic, Long-Run Setting?

In the long run, the elasticity of demand in the Australian setting would be much larger, because of slow-moving selection effects. Indeed, one can view the slow decline of private health insurance up to the time of these reforms as resulting from a selection spiral on age.[8] The analysis goes like this: at each policy anniversary, some low-risk (mostly younger) consumers drop out. This leaves a pool of higher risk consumers, leading to further rate increases, which, in turn, lead to further drop-outs at the next anniversary. This phenomenon is common in regulated systems where insurers are prevented from pricing accurately according to risk (Frech 1996). If the 30 per cent subsidy were to slow (even without completely eliminating) this selection-driven decline, it could easily lead to a long-run elasticity in excess of –1.43. The subsidy could slow the decline by attracting more low-risk consumers, even though the relative rates do not reflect their relatively low-risk situation.

We can do a suggestive, exploratory quantitative analysis, using the data from Frech et al. (2003), which suggests a secular decline of about 1.6 per cent per year (Figure 1). Thus, in the absence of either the subsidy or insurance regulatory reforms, the predicted percentage with insurance would have fallen to 10.1 per cent by the end of 2009.

The subsidy, by itself, brought about a jump in the percentage insured to 3.1 percentage points by the end of 1999. If we make a conservative assumption that the subsidy caused the observed one-time structural break in the series but does not slow the secular decline, the market would resume its decline from this higher starting point in 1999. To get an idea of the effects of this, let us consider the effects 10 years from the start of the subsidy. This means that the subsidy policy (alone) would have led the percentage with insurance to be 13.2 per cent by the end of 2009. Using these figures, the 10-year arc elasticity would be –1.01. In this situation, the fiscal externality does not quite finance the entire subsidy, but it does offset a far higher proportion than in the short run. If we

were to consider the situation earlier than 10 years out, the elasticity would be smaller. Later than 10 years out, the elasticity would be larger. Further, if we allowed the subsidy to slow the rate of decline in the future, rather than simply cause a one-time shift, the elasticity would be larger.

While these projections can only be suggestive, they are probably conservative in terms of the economics. Due to the diseconomies of a shrinking private sector and a rapid speeding of selection, without the recent reforms, the private sector might collapse, rather than continue its gentle linear decline. If that was prevented by the subsidy, the implied elasticity would be far larger than what we have calculated.

Indeed, this dynamic analysis seems to be what the government had in mind when it rationalised the reforms as preserving the existence of the private sector. The reform packages were described as being aimed 'to stabilise the health insurance sector by stopping the decline in health fund membership' and 'the private sector is a vital complement to the long term viability of Medicare and the public hospital system' (Wooldridge 1997). Of course, to literally stop the decline in health fund membership would imply a very large long-run elasticity and would be far better than self-financing.

The private hospital system accommodates heterogeneous consumer tastes for different and possibly higher quality in terms of hospital amenities, greater choice of specialist physicians and coverage of some specific services. Restrictions on choice, imposed by limiting access to the private sector, decrease utility for individuals who put a value on diversity.

Without the changes in regulation and the pricing of private health insurance, the percentage of the population privately insured would have continued to decline, possibly leading to the ultimate demise of the private hospital sector. The welfare loss imposed by the diminution of alternatives in the quality of hospital care would have harmed those who place a high value on choice and are willing to pay to have access to it.

The government at the time of the policy changes to the insurance industry acknowledged the role of consumer choice. 'Austra-lians consistently say they want access to choice in their health needs and the private health industry is a vital complementary service to our world-class public health system.' (Wooldridge 1999).

While we suggest that the subsidy slowed the selection-induced decline of private insurance, this does not imply that the subsidy is the only way or the best way to achieve this. Nor do we argue that the subsidy is more important than the limited departures from community rating allowed so far (Frech et al. 2003). There are many benefits from more accurate risk rating. But, there is also a downside: more accurate rating increases the risk of becoming permanent members of a high-risk class. Further, if self-financing and preservation of choice were the only goals, it might well have paid to wait for private insurance to decline further before introducing a subsidy. But, it is hard to predict the speed of selection-driven declines.

2.1.5 Conclusions on the Positive Fiscal Externality

Although it is clear from our simple short-run analysis that the subsidy cannot be justified on the basis of the fiscal externality alone, the externality does reduce the cost to taxpayers. An exploratory analysis shows that this conclusion could be reversed if the subsidy reduces the secular decline of private coverage by even a small amount. Further, as we shall see, there are other interesting welfare benefits entailed in private funding of hospital care in Australia.

2.2 Horizontal and Vertical Equity

As a general rule, we would suggest that issues of vertical and horizontal equity should be dealt with through the tax and welfare system taken as a whole, rather than through health policy. Redistributing income through the health system is a highly inefficient way of redistributing income (McLeod 1987). In a recent article, Gans and King (2003) take a similar view, enabling them to focus on subtle efficiency issues. In light of this, we do not discuss vertical equity at length. Horizontal equity is another issue; one that is actually created by

the health care system itself. Consumers who buy private insurance continue to pay taxes and the Medicare levy to support the public system. The universal subsidisation of private health insurance may be viewed as a means of compensating these consumers. The rationale for the subsidy under this view is horizontal equity. The rationale has been suggested as an argument for introducing a subsidy of private health insurance in the United Kingdom (Emmerson, Frayne and Goodman 2001).

2.3 *Welfare Costs of Rationing by Waiting*

Public insurance systems with free public hospital care generally tend to be poor at managing moral hazard. As a result, waiting is an expected corollary of free public provision.

Australian public hospital inpatient and outpatient treatment is free at the point of service. The combination of the zero price and restrictions on supply imposed by global budgets and regulation of bed numbers, operating theatres and technology results in considerable excess demand. This is exemplified by waiting periods for surgery. The median waiting time for elective surgery admissions in 1999–2000 was 27 days (AIHW 2002c). The median waiting time for elective surgery in Western Australia reached a high point of 8 months in December 1998 but fell to 6 months in December 2001 and 5 months in August 2003 (Western Australian Department of Health 2003). These figures exclude the waiting period for outpatient visits including public dental clinics, and they exclude people discouraged from seeking care altogether by the prospect of waiting.

Rationing by waiting entails a welfare loss. In many markets, say queuing for petrol, this loss represents the money value of the time wasted in the queue (Frech and Lee 1987). Waiting for surgery imposes a cost which, in addition to the time spent waiting physically in offices, includes lost income and reductions in productivity due to an incapacity to carry out normal daily activities, the reduction in quality of life including physical and psychological pain and suffering, and increased reliance on family members, and on health and social services generally (Danzon 1992). Further, work-

places can be disrupted by absent workers, so that social income losses can easily exceed lost wages (Pauly et al. 2002).

But, rationing can be used in a way to minimise the welfare loss. For example, rationing by waiting may not be a pure deadweight loss if there is some gain in terms of targeting resources to a particular socially favoured group (Besley et al. 1999).

Alternatively, services could be rationed according to their medical efficaciousness. There is an attempt to do this in the public hospital system in Australia by the management of the waiting list for surgery according to medical need or urgency. Unfortunately, this does not necessarily equate with medical efficaciousness. If it were a competitive market with complete information, the most medical efficacious treatments would also typically have the most inelastic demand. In order to minimise the welfare loss from queuing, the most elastically demanded services, in this case those with the most unfavourable outcomes, should be the most severely rationed (Frech and Lee 1987).

Given that we do not have perfect, or even good, information about the most medically efficacious procedures and do not prioritise services in terms of a particular socially favoured group, the welfare cost of rationing by waiting is likely to be high. Considering this, alleviating the waiting time by providing incentives to get people out of the public queue and into the private sector is sensible.

2.4 *Federal–State Relations, the Role of Public Sector Administration and Unions*

Financing of health care in Australia, as in all industrialised economies, is highly politicised. The politicisation is exacerbated in Australia by the division of health funding between the state and federal governments. The federal government provides a block grant to the states for hospital funding and funds doctor consultations and pharmaceuticals directly. As the block grant from the federal government and state budgets have been reduced in real terms over time, the so-called 'funding crisis' in the hospital system has contributed to bed closures and the reduction in public services generally.

Longer waiting lists for public hospital beds have been a result of three forces: reductions in funding in real terms, a decrease in the percentage of the population with private health insurance and an increase in demand for services due to improvements in technology. The state governments have little control over these forces. For these reasons, state governments have a vested interest in pushing patients on to the private sector (Palmer 2000). From the state governments' viewpoint, less demands on the public hospital system and more privately insured persons, with the assistance of a federal government subsidy, help their bottom line.

An additional and largely political explanation for shifting health care to the private sector relates to the power of public sector employees and unions. Besley and Gouveia (1994) suggest that privatisation may not be motivated by increased efficiency at all but by an attempt to redistribute rents away from public sector employees and towards taxpayers and to deal with fiscal crises. Of course, stronger private sector incentives and more competitive labour markets may still contribute to greater efficiency, even if rent-shifting is the main political motivation.

3.   Implementation Issues

There are good economic reasons for having a subsidy and it has had some direct effect on the numbers insured. Reasonable questions may be asked, however, about the application of the subsidy.

A major issue is the application of the subsidy to insurance covering such a broad mix of services and goods. We estimate that 53.5 per cent of the subsidy applies to hospital care. In a similar vein, Deeble (2003) estimates that only 40 per cent of the subsidy is applied to services which are likely to reduce demand on public services. He argues that much of the subsidy is applied to services which have no cost offsets on the public side, namely the subsidisation of ancillary services, the inclusion of gap insurance and the administrative costs of running private health funds. We would argue that some of the private administrative costs should

be counted as part of the subsidy for hospital care (Danzon 1992).

A major part of ancillary services, about half, is dental services. While there is no direct offset, until recently (1996) there was a Commonwealth dental program. Deeble (2003), in particular, recommends dropping the subsidy for ancillary insurance. This would focus the subsidy on hospital care, which strikes us as a sensible idea.[9]

Moves to limit the subsidy of ancillary services have already been made. The insurance funds announced that they would stop reimbursing the cost of gym shoes, relaxation tapes and other lifestyle benefits from 31 December 2003. This change is a response to considerable criticism of the application of the government subsidy to this area. In the long run, subsidising ancillary services does not prevent or slow the selection-based decline of private insurance and therefore does not contribute to preserving choice.

One might like to subsidise, or otherwise cover, additional services beyond hospital care and even beyond the currently allowed ancillary services. For example, it might be wise to cover in some way the gap payment on general practitioners' or specialists' consultations outside of hospitals. The gap payment is the difference between the doctor's bill and the amount the insurer has agreed to pay for the service. The gap payment, particularly for consultations with medical specialists, can be considerable and expose low-income and unusually sick households to substantial financial risk (Frech 1999). But, expanding on Deeble's policy recommendation, the rationale for expanding the subsidy beyond hospital insurance is different. There may be a fiscal offset, however. Many people visit the emergency departments of public hospitals rather than their general practitioners as the former service is free. The increase in demand for public outpatient services, in turn, has placed considerable strain on the hospital budgets.

Finally, there is a concern that the funds may not be passed through and actually spent on consumer benefits. Here, the early experience is reassuring. As we saw above, the loss ratios are generally low and have declined from 1.13

to 1.10 since the introduction of the subsidy (Hopkins and Zweifel 2003). This demonstrates that, although the premiums have increased, the benefits paid out have increased even more. Thus, the various reforms had little impact on the loss ratio.

An alternative use of the subsidy money is to spend the equivalent amount in the public hospital system. One issue here is whether public hospitals can deliver treatment and care more cheaply than private hospitals. There is a long-standing ongoing debate in the Australian health services industry about the relative efficiency of public and private hospitals.[10]

The relative efficiency argument has been developed by Duckett and Jackson (2000). They find an average cost ratio of public hospital to private hospital separations, adjusted for casemix, of 1.11. When they adjust, however, for the different ways that costs such as depreciation, pathology and pharmacy costs are counted in the public and private sectors, the ratio reduces to 0.91.

There has been considerable debate about the robustness of the Duckett and Jackson (2000) cost ratios. Palmer (2000) and Wright (2001) have both questioned the figures, and Duckett and Jackson themselves have adjusted the cost ratios since their initial article to 0.99 ('A duel …' 2001–2002). The best estimate appears to be that the two sectors cost about the same, even after accounting for different case complexities between the two.

4.   Conclusion

Is the subsidy good or bad policy? Much media commentary seems to claim it categorically as bad policy. We have attempted to widen the debate on the economic rationales for a subsidy. The debate on the subsidy has focused on the dollar amount of the subsidy but has underestimated the fiscal externality and the welfare costs imposed on consumers by a public sector that offers little diversity and untimely access for many services. The strength of the current article lies in estimating the potential magnitude of the externality. In so doing, we have assessed whether the subsidy of a largely private activity can be defended by economic argu-

ments (Iversen 1997). One can certainly question aspects of the implementation of the policy, as mentioned above, especially the wide inclusion of benefits beyond hospital care, but the economic rationale behind the concept of the subsidy is fundamentally sound.

Endnotes

1. Insurance regulation was also liberalised in a different way. More variety in the types of policy was permitted. See Hopkins and Frech (2001).

2. Self-insurance is more likely for smaller medical problems facing long waiting times in the public hospitals, hence it is a higher percentage of visits than of revenue.

3. Alternatively, privately insured consumers can be admitted to public hospitals as private patients. In this case, the private insurer pays the public hospital for the bed day cost directly. This benefits the public sector approximately the same as if the patient had gone to a private hospital (assuming that public hospitals are not charging much more than costs to private insurers).

4. The actual shifting, in dollar terms, may be greater or less than the shifting in number of people if the people who switch are worse or better risks than the average. But, this may have both a negative and positive impact on the fiscal externality. If the new people are low risks, their switch to private insurance shifts less hospital care, but it also costs less because premiums are lower.

5. But we note that Deeble (2003, p. 9) states that only 40 per cent of the subsidy went to services for which there might be offsets.

6. The adjustment is simply multiplicative, so that readers can quickly compute different estimates for the extent of self-financing by using different percentages.

7. If one were to simply base the downward adjustment on the raw numbers of consumers who purchased private health insurance in response to the two different reforms, the adjustment would be to reduce Deeble's estimate by 80 per cent, down to 5.2 per cent (Frech et al. 2003, p. 59).

8. Since the selection is not the result of asymmetric information, but a result of regulator-imposed community rating, it is best not to call it adverse selection. See Pauly (1986), Rothschild and Stiglitz (1976) and Frech (1996).

9. The issue of subsidising private hospitals versus private hospital insurance is a different issue and is discussed above.

10. For an early theoretical argument that private hospitals would be expected to be more efficient, see McLeod (1987).

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