The Australian Private Health Insurance Boom: Was It Subsidies Or Liberalised Regulation?

H.E. Frech III[a], Sandra Hopkins[b,*] and Garry MacDonald[b]
[a] *Economics Department, University of California, Santa Barbara, California, USA*
[b]*School of Economics and Finance, Curtin University of Technology, Perth, Australia*

Summary

Over the period 1997 to 2000, the Australian government introduced two waves of price subsidies, then liberalised regulation to encourage private health insurance. Most of the increase in coverage occurred after the liberalization. Thus, it appears that this policy change rather than the earlier subsidies, explains most of the increase. We explore the relative impact of the different policy changes using trend analysis and careful attention to timing. While much of the increase in coverage may be attributed to liberalised regulation, the price subsidy did increase coverage. The increase was commensurate with existing estimates of the price elasticity of demand for health insurance.

KEY WORDS:- health insurance, age-rating, community rating, trend analysis, price elasticity

JEL Classifications: Ill, I18, H51, G22, L31, H2

*Correspondence to: School of Economics and Finance, Curtin University of Technology, Perth, Australia 6151. Tel.: +61 8 92663410; fax: +61 8 92663026;
e-mail: hopkinss@cbs.curtin.edu.au

Introduction

Over a three year period from July 1997 to July 2000, the Australian government introduced three successive policy changes designed to increase private health insurance coverage. The combined effect was an increase in the population coverage from a low point of 30.1 percent to 45.7 percent. The motivation for the policy changes was to induce more Australians to use the private sector for their hospital care and in so doing reduce the pressure on the public sector.

Most of the increase in coverage occurred after the last policy, prompting many commentators [1, 2] to attribute almost all the increase to this last policy. We use trend analysis and estimates of the elasticities of demand for health insurance to delineate the impact of each successive policy on insurance coverage.

The policy changes

The three new policies designed to promote private health insurance were introduced over a three year period. The changes included tax surcharges on high-income earners, subsidies on the price of insurance, risk rating of policies and the introduction of a broader range of insurance policies [3].

The first policy change, in July 1997, had two parts. The first part introduced a tax surcharge to induce high-income earners to purchase private health insurance. Couples with annual incomes above $100,000 and singles with incomes over $50,000 are charged an income tax surcharge of 1 percent of their income if they fail to purchase private health insurance. The second part of the policy instituted a means-tested partial refund on health insurance premiums to encourage those with lower incomes to also purchase private health insurance.

The response to this policy was underwhelming. The percentage of the population with private health insurance actually declined from 31.9 at the 30th June 1997 to 30.1 the end of December 1998 (refer to Table 1).

The second policy change, effective from January 1999, provided for a 30 percent rebate (subsidy) on all health insurance. The rebate was not means-tested. Policy-holders receive the subsidy through a 30 percent reduction in the insurance premium, as a payment from the Health Insurance Commission or as a tax offset at the end of the year. Over 70 percent of people opt for a reduction in the premium which means that the impact of the subsidy is effective immediately [1].

On the face of it, the response to the substantial rebate was surprisingly slow and small. The percentage of the population with private health insurance increased from 30.1 percent at the end of 1998 to 31.3 percent at the end of 1999 (refer to Table 1.)

The third policy change liberalised the regulations on policy benefits and community rating. The centrepiece of the policy, known as "Lifetime Health Cover", introduced a limited amount of age-rating into private health insurance. The regulatory change enabled anyone who was insured by the time they were 30, or older persons prior to the cut-off date of the 30th June 2000, to take advantage of a base premium. People who join up after the deadline are penalised by an increase in the base premium of 2 percent for each year the individual is over 30 at the time of first joining, with a ceiling of 70 percent over the base premium. The new prices took effect in July 2000.

The effect of the introduction of age-rating was impressive. The percentage of persons with private health insurance jumped from 31.3 at the end of 1999 to 43 at the end of June 2000 (refer to Table 1).

Trend analysis

We use quarterly data on the percentage of the Australian population with private health insurance from the March quarter 1987 to the March quarter 1997 quarter to fit a deterministic trend. 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. The first quarter 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 1997.

Fitting a deterministic trend to the data is very simplistic. But, the model fits remarkably well during the stable policy regime. The estimation of an alternative more sophisticated forecast of a random walk model with negative drift and using stationary data yields similar results to the simple deterministic model[1]. Since the deterministic trend and the negative drift terms give us broadly the same picture we chose to stick with the simpler method of analysis.

As one can see in Fig.1, the model ceases to forecast adequately from the second quarter 1999. The 30 percent subsidy came into effect on the 1st January 1999. The *t* statistics of the forecast values become significant for every period from and including the second quarter 1999 (refer to Fig. 2 and Table 1).

Based on our deterministic forecast of the simple model of private health insurance, the percentage of coverage without any policy changes would have declined to 25 percent by the 3rd quarter 2001, whereas with the policy changes it had actually increased to 44.9 percent. This means that without the policy changes, 4.9 millions Australians would have insurance coverage whereas in fact 8.7 million Australians have coverage (refer to Table 1).

Our estimates contrast with a health insurance industry study, which forecasts a more drastic negative trend. Using a similar method, but based only on three data points, Schneider [5] forecasts that only 4.2 million or 22 percent of the population would have had health insurance in the September quarter 2001, in the absence of the new policies.

Using our forecast, we estimate the impact of the successive policy changes by observing the difference between the actual percentage insured and the predicted percentage insured based on the trend (refer to Table 1).

The first policy, the surcharge for high-income earners without insurance and the subsidy for low income earners with insurance, was introduced on the 1 July 1997. At that time, most high-income earners would already have been privately insured. In 1993-94, 77 percent of households in the highest income decile had private health insurance [6]. For low income earners, although the effective price of insurance had declined, the out-of-pocket gap payment for private hospital care still posed a considerable barrier to purchase. Moreover, the impact of the subsidy was diluted by the continual rise of insurance premiums and an expectation of further price rises [7]. One would expect informed consumers to have fully adjusted to the first policy by June 30, 1998, the end of the tax year and the deadline for taking advantage of the new policy.

The forecast of our deterministic model supports the view that the first policy change had little impact on the percentage insured. The data tracks the trendline very closely, for a full two quarters past the 30th June 1998 deadline (Fig. 1). Interestingly, the government argued that this policy slowed the decline in coverage through the retention of existing members [2], but we find no evidence of this. The view that the means tested rebate should have slowed the decline was based on eligibility for the

rebate of almost 80 percent of households [8]. The result of no effect for this policy is somewhat surprising.

The second policy change of the 30 percent subsidy on the price of insurance took effect from the 1st January 1999. Again, one would expect full adjustment by the 30th June 1999. In contrast to the first policy, this policy clearly does move the data off the trendline. This is clear by June 1999 (Fig. 1 & 2). There was a considerable time lag between the second policy and the effectiveness of the third policy of age rated premiums, making quantitative interpretation of the data straightforward.

The third policy was announced on the 29th September 1999 and was effective from the 15th July 2000. Here, the cut-off date is even clearer; the 30th June 2000. Most of the promotional activities under the rubric of "Lifetime Health Cover" were concentrated in the March and June quarters 2000 [1]. The impact of this policy is powerful. The data fairly leaps upward by June 2000 (Fig. 1).

This timing means that there was a window in which the change in the numbers insured can be attributed to second policy of the 30 percent rebate. This window goes from the start of the first quarter 1999 to the end of the fourth quarter 1999. Extending it to the fourth quarter allows for some additional lag in adjustment. In practice, this attributes a bit more impact to the second policy. Over this period, there was a 5.2 percentage increase in the number of people insured. This amounts to an 11 percent increase over the base, where the base is defined as the trend line had there been no policy changes. So, a 30 percent decrease in price lead to an 11 percent increase in the quantity demanded. This implies a very reasonable price elasticity of demand of –0.37. Butler [9] estimates that price elasticity ranges from –0.35 to -0.50.[2]

Clearly, most of the increased coverage is due to introduction of age-rating (Fig. 1). The number of people with insurance increased 42.8 percent in the first three quarters of 2000. This is a massive increase in the insurance pool and can reasonably be attributed solely to enrolment before the cut-off date for age-rated policies in July 2000.

Conclusions

Untangling cause and effect is important. The second policy of the 30 percent subsidy is costly. Butler [1] estimates that it costs the Australian taxpayers about $2 billion per year. It is clear that this subsidy has had some effect, but the quantitatively powerful policy was liberalizing age-rating and the type of policies allowed.

Private health insurance is not yet stable. There has been a downturn from the high point of 45.7 percentage in the third quarter of 2000. A major question is whether the market will stabilise at around 45 percent or will resume its decline of the 1980s and 1990s. If the jump in the percentage insured represents a one-time structural break in the series with no change in the underlying time trend, the market will resume its decline from the high point in September 2000. At the historic rate of decline, all gains will be eroded in around ten years.

If this pessimistic interpretation is correct, the government will have to continue to innovate in terms of insurance products and policies to preserve the recent gains. Age-rating was successful. More liberalisation of insurance products may be necessary to avoid a repeat of the downward trend of the mid 1980s to 1997.

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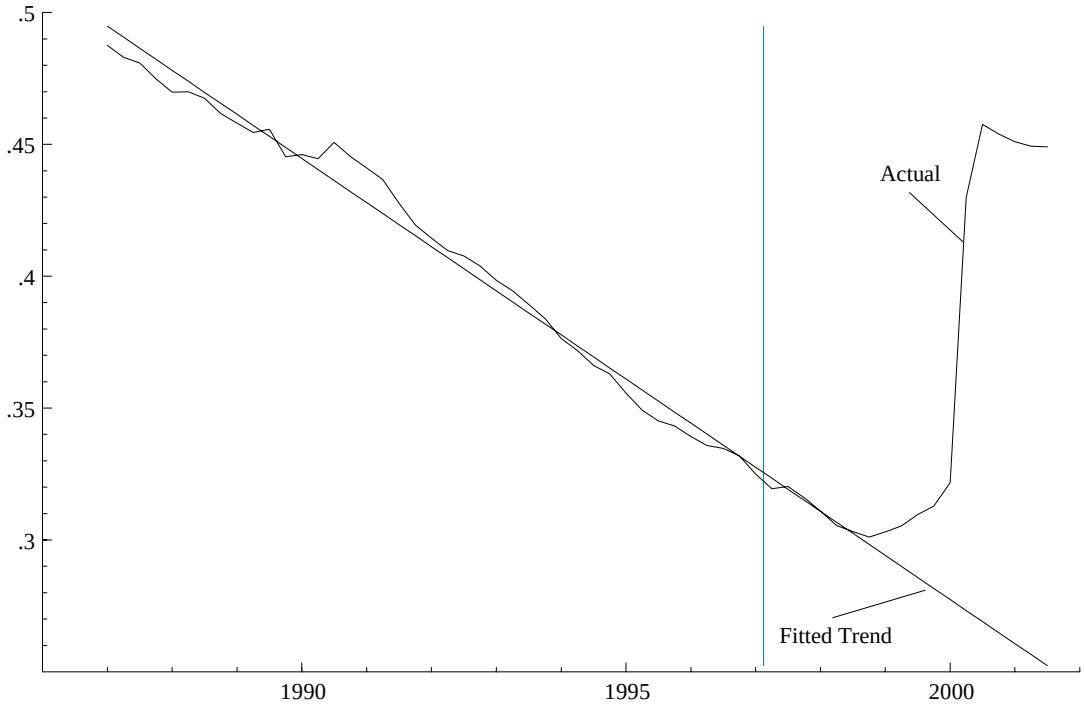
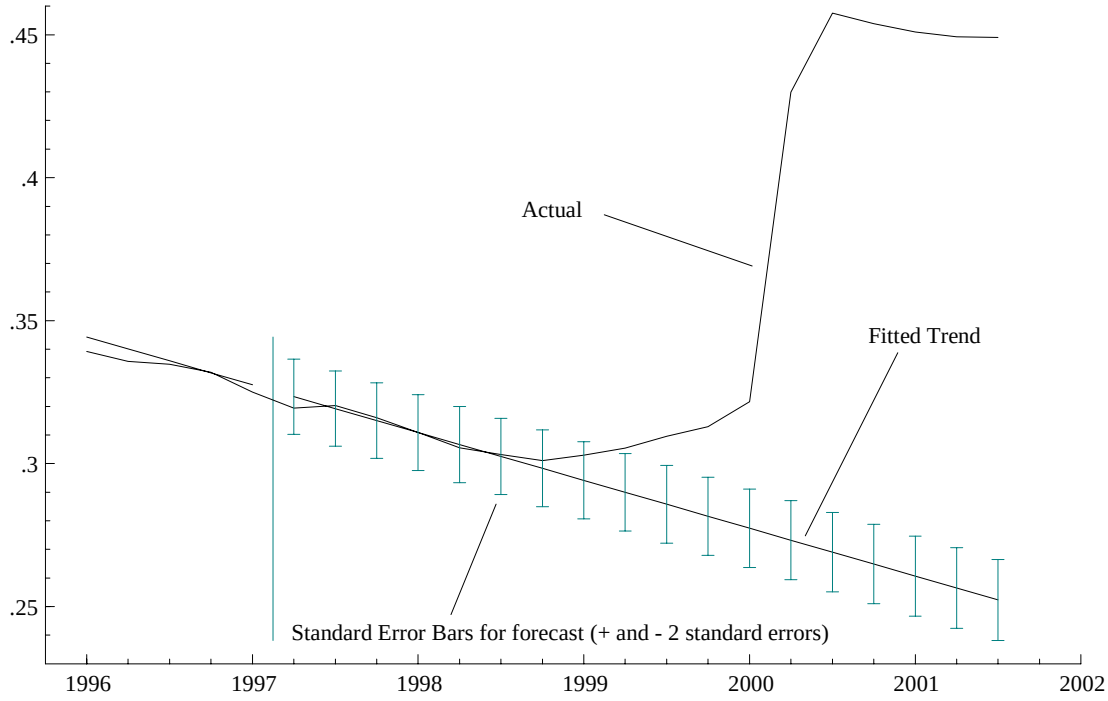
Figure 1: Actual and fitted values for proportion of the population privately insured:



Source: [4]

Figure 2: Divergence between actual and fitted values for proportion of the population privately insured



Source: [4]

Table 1: Actual and trend estimate of the population with private health insurance:

first quarter 1977 to third quarter 2001

	Actual coverage		Trend in coverage without policy changes	
Quarter	Population (000)	%	Population (000)	%
1997:1	6007	32.5	6007	32.5
1997:2	5916	31.9	6009.7	32.4
1997:3	5951	32	5932.4	31.9
1997:4	5885	31.6	5866.4	31.5
1998:1	5814	31.1	5814.0	31.1
1998:2	5728	30.5	5765.6	30.7
1998:3	5699	30.3	5680.2	30.2
1998:4	5676	30.1	5619.4	29.8
1999:1	5733	30.3	5562.7	29.4
1999:2	5793	30.6	5490.1	29.0
1999:3	5890	31.0	5434.0	28.6
1999:4	5970	31.3	5378.7	28.2
2000:1	6157	32.2	5296.6	27.7
2000:2	8236	43.0	5228.9	27.3
2000:3	8790	45.7	5174.0	26.9
2000:4	8743	45.4	5103.3	26.5
2001:1	8720	45.1	5046.4	26.1
2001:2	8712	44.9	4986.6	25.7
2001:3	8733	44.9	4901.4	25.2

Source: [4]

Table 2: Analysis of 1-step forecasts

Date	Actual	Forecast	Actual less forecast value	Forecast SE	t-value
1997:2	0.3194	0.3234	-0.004003	0.006563	-0.610019
1997:3	0.3203	0.3192	0.001077	0.006586	0.163606
1997:4	0.3160	0.3150	0.000959	0.006609	0.145061
1998:1	0.3109	0.3109	3.993e-005	0.006633	0.006019
1998:2	0.3055	0.3067	-0.001179	0.006658	-0.177049
1998:3	0.3032	0.3025	0.000702	0.006684	0.105083
1998:4	0.3011	0.2983	0.002784	0.006711	0.414774
1999:1	0.3030	0.2941	0.008865	0.006739	1.31544
1999:2	0.3054	0.2900	0.015446	0.006768	2.28228
1999:3	0.3096	0.2858	0.023827	0.006797	3.50531
1999:4	0.3129	0.2816	0.031309	0.006828	4.58532
2000:1	0.3217	0.2774	0.044289	0.006859	6.45683
2000:2	0.4299	0.2732	0.156671	0.006892	22.7337
2000:3	0.4576	0.2690	0.188552	0.006925	27.2292
2000:4	0.4539	0.2649	0.189034	0.006958	27.1658
2001:1	0.4510	0.2607	0.190315	0.006993	27.2143
2001:2	0.4493	0.2565	0.192796	0.007029	27.4299
2001:3	0.4490	0.2523	0.196677	0.007065	27.8385

Source: [4]

Endnotes

[1] We tested the series for a unit root and found that we could not reject the null that the series was I(1) with negative drift. If we assume that the data generation process can be modelled as a simple random walk with drift, we can write this as:
$x_t = \alpha + x_{t-1} + e_t$ or $\Delta x_t = \alpha + e_t$.
In such circumstances, the estimate of the drift, α, will give us an indication of the downward trend in the data. Our estimates yielded a value of $\alpha = -0.004$ for the drift term, very similar to the time trend in our simple regression model.

[2] Slightly complicating the elasticity interpretation is the fact that the combination of the tax surcharge and reduced premium could lead to a price close to zero for high-income consumers. For example, a family with a taxable income of $100,000 could purchase a family policy with an annual premium of $1,800, receive a subsidy of $540 and avoid the tax surcharge of $1,000 [1]. This is unlikely to be a major issue quantitatively, since most high-income earners were already insured before the policy changes.