

The Extent of Current Cross-Subsidisation in the SA Health System

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South Africa has been considering introducing a national health insurance (NHI) scheme for many years. The essential feature of such a system is universal coverage, which will ensure accessibility, equity and efficiency in the healthcare system for all South Africans. Such a system will by necessity require significant cross subsidization between wealthy and poor South Africans. While this is an accepted principle of well designed health systems, it is necessary to establish a priori what the current extent of cross subsidization is. In this regard there are widely divergent views. Econex has contributed recently to this debate by analyzing one of the leading studies in this field. We have examined the research and produced an alternative view of the current level of cross-subsidisation, as set out in this Research Note. This research note presents a short summary of the main findings, while the entire chapter which appeared in the 2009 Private Hospital review can be accessed on our website at www.econex.co.za

1. Introduction

This Research Note provides an alternative view of the financing and benefit incidence analysis in the South African health system. A seminal paper contributing to the current debate was recently published by Ataguba and McIntyre (2009) (hereafter A&M)¹. We used the assumptions and results of this paper to inform our own analysis of the extent of cross-subsidisation in

the SA health system. This Research Note demonstrates that if one were to analyse the financing and benefit incidence in the South African health sector using alternative assumptions and methods, the results would differ significantly from those derived in the A&M paper. These differences also have very important policy implications.

2. The Issue of Cross-Subsidisation

The most important conclusion of the A&M paper (from a policy perspective) is the finding that there is a general lack of cross-subsidisation in the overall health system. This conclusion is based on very specific assumptions on the progressivity or regressivity of different types of taxes, but more importantly on an assumption that corporate tax is spread 50:50 between

1. Ataguba, J. & McIntyre, D. (2009). 'Financing and benefit incidence in the South African health system: Preliminary results. Health Economics Unit, School of Public Health and Family Medicine, University of Cape Town. Working Paper 09-1. January 2009.

Table 1: Alternative Scenario's of Total Healthcare Financing

	Total Health Financing Incidence (A&M paper)	Total Health Financing Incidence (alternative Econex scenario)	Total Health Benefits
Quintile 5 (richest)	39.0%	82.3%	36.0%
Quintile 4	23.8%	11.4%	23.0%
Quintile 3	13.6%	3.5%	14.8%
Quintile 2	12.0%	1.8%	13.7%
Quintile 1 (poorest)	11.6%	1.0%	12.5%
TOTAL	100%	100%	100%

Source: A&M paper, Econex calculations.

households and shareholders. There are, however, alternative assumptions that can be made, based on economic theory as well as the structure of the South African economy, yielding quite different results. The table above summarises the results of A&M and compares this to an alternative scenario calculated from the A&M data. The alternative Econex scenario presented in column 3 of Table 1 is compared to the benefit incidence as calculated in the A&M paper. The methodological problems with the benefit incidence analysis will be explored in more detail below.

Clearly, under the alternative Econex scenario, where the richest quintile of the population finances 82.3% while receiving 36.0% of the benefits of healthcare, there must be significant cross-subsidisation in the South African health sector.

3 Main Assumptions

In order to clarify the pronounced differences between the Econex and A&M

results, the differences in methodologies applied should be understood. In this section we deal briefly with the most important points in this regard.

3.1 Treatment of taxes as financing for health expenditure

In the A&M paper, the way taxes are treated is central to the conclusions on financing incidence. The authors state in their executive summary (p. ii) that: *“Although personal income tax is very progressive, excise taxes and the fuel levy are regressive and VAT is almost proportional. The progressivity of personal income tax is offset to a considerable extent by the regressivity of other taxes”*. The *“other taxes”* referred to are excise taxes, fuel levies, value added tax (VAT) and corporate income tax.

The results of A&M's financing incidence analysis show that excise taxes, fuel levies and value added taxes are proportional to consumption for the first four quintiles and only show regressive tendencies when one includes the 5th expenditure quintile.

Of these taxes, the components that are most regressive in nature, namely excise taxes and fuel levies, are the smallest contributors to the overall tax structure. The most important aspect is however the decision by A&M to apportion corporate taxes in a certain manner. In essence the A&M paper presents three scenarios as to how corporate taxes can be allocated between consumers and shareholders:

1. All corporate tax is shifted to consumers (monopoly market situation);
2. Shareholders bear the full burden of corporate tax (competitive market situation); or
3. A mixture between the first two scenarios (i.e. 50% is shifted to consumers and shareholders bear 50%)

A&M chose to apply the third of the above mentioned scenarios to their financing incidence analysis, stating that: *“The corporate structure in South Africa certainly lends itself to opportunities to shift corporate taxes onto consumers, but the exact extent cannot be determined. For this reason, we have assumed the*

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50%:50% share of corporate tax burden between consumers and shareholders (as reflected in Figure 2) to reflect overall tax incidence in the rest of the report.” (A&M: 13).

A careful reading of the economic literature on corporate tax incidence and an examination of the structure of the South African economy shows however that the choice of the A&M scenario 3 is not necessarily correct and will skew the results significantly towards the rich not subsidising the poor (given that 50% of corporate taxes are borne by consumers).

3.2 An analysis of need

To determine the need for healthcare and to compare this with the financing incidence, the A&M paper relied on a survey which used the self-assessed health status of individuals. While we did not have access to this data and we could not verify the methodology, we do have doubts about the appropriateness of such methodologies.

Assessing health needs based on the approach used by A&M attempts to provide some picture of relative health need, depending on how people feel about their health status. If 70% of those in, say, quintile 5 report poor health and 20% of those in quintile 4 report poor health, it is very likely that quintile 5 has greater health needs than those in quintile 4. But there is a problem with such a simple conclusion, i.e. this method assumes that

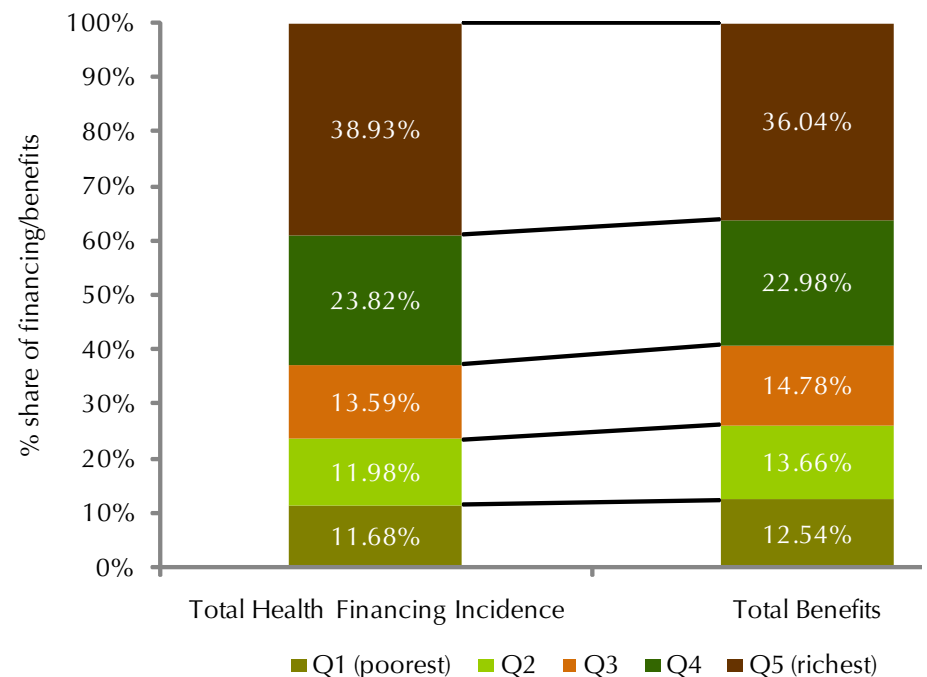
the distribution of types of ill-health is similar across quintiles. More pertinently it assumes that the average cost of treating an individual is the same, irrespective of the quintile in which he/she belongs to. To drive this point home, let us suppose that most of the people in the 70% of quintile 5 that are in poor health require low-cost treatments (on average R100 per case). If the 20% in quintile 4 require high-cost treatment (on average R1000 per case), then quintile 4 has a greater need for healthcare resources than quintile 5. It is quite plausible that people of different socio-economic classes could generally suffer different types of illnesses.

This is a short summary of the main reasons why a self-assessed health needs survey is not the best approach. However, in the next section, we assume that these figures are correct, in order to focus on the main differences between the financing incidence results of A&M and the results that follow from the alternative Econex calculation.

4 Results

Figure 14 of the original A&M paper is reproduced as Figure 1 in the current Research Note and can be seen below.

Figure 1: Comparison of Total Healthcare Benefits and Total Healthcare Financing Incidence (Ataguba and McIntyre, Figure 14)



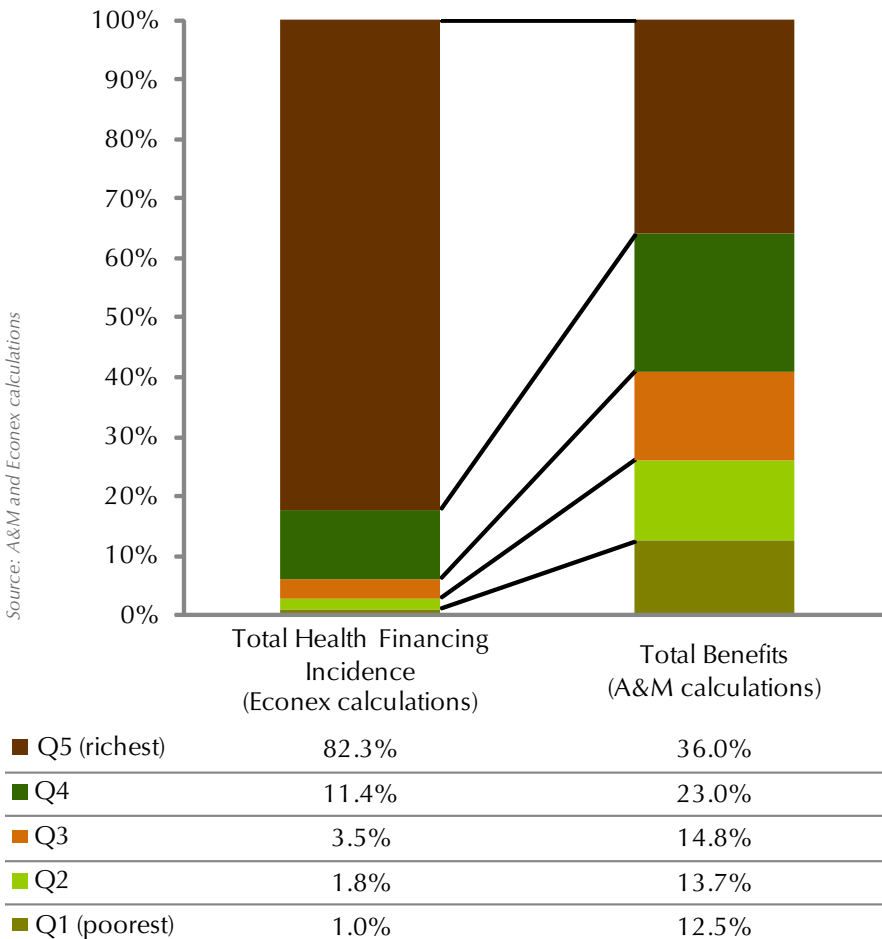
Source: Adapted from Ataguba and McIntyre, Figure 14 (p.19)

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As a result of our work in competition analysis we also have extensive experience in some of the sectors of the South African economy where regulation continues to play a role, e.g. the telecommunications, health and energy sectors. We use economic knowledge of these sectors to analyse specific problems for some of the larger telecommunications, health and energy companies.

Figure 2: Alternative Comparison of Total Healthcare Benefits (A&M calculations) and Total Healthcare Financing Incidence (Econex calculations)



The main conclusion of the paper – ‘you get what you pay for’ – is derived from this graph. In other words, the distribution of funding contributions across socio-economic groups is very similar to the distribution of healthcare benefits. However, when interpreting the financing data correctly, the following picture of cross-subsidisation emerges. This is shown in Figure 2. Clearly, in the alternative picture presented

in Figure 2, there is significant cross-subsidisation between rich and poor. We will not present a full analysis here of the alternative methodology, except to note that where the A&M analysis did not take into consideration the mean expenditure of different quintiles, the Econex analysis worked with the absolute Rand value spent on healthcare. In the A&M paper each expenditure quintile’s contribution to total health financing was

calculated as that quintile’s percentage expenditure allocated to health financing as a percentage of the sum of all five quintile groups’ percentage expenditure on health financing. This yielded skewed results whereas the Econex approach considered the absolute Rand value spent on healthcare in order to make more meaningful and accurate conclusions on the true incidence of healthcare financing in SA. For further details of the methodology applied by Econex in their financing incidence analysis, please refer to the full chapter in the 2009 Private Hospital Review.

5 Conclusion

The Econex research was aimed at presenting an alternative view as to how much different income groups contribute to healthcare financing in South Africa through a variety of taxes and private medical aid contributions. The conclusion is that although wealthier income groups, which tend to use private healthcare, receive proportionally more healthcare benefits than the rest of the population, they also pay more for healthcare than the benefits they receive. Research of this nature is important to determine not only how a National Health Insurance system would be funded, but also to understand the current imbalances between wealthy and poor South Africans’ access to healthcare. Accurate estimates of finance and benefit incidence analysis are crucial to the current NHI debate. If the point of departure for NHI design is incorrect, policies based on these estimates are also likely to be flawed in their application.

More Information

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