

17 COST BENEFIT ANALYSIS OF ASBESTOS RELATED DISEASES AND HEALTH CARE AND RELATED EXPENSES

17.1 INTRODUCTION

For the purpose of a Cost Benefit Analysis it is important to ascertain what total costs are being imposed on the economy as a result of controlling the use of asbestos i.e. the costs associated with industry complying with the stringent occupational health and safety regulations set by government. This cost will also include the recurrent costs of the government's inspection apparatus.

On the benefit side it is necessary to quantify the economic value of the health care and compensation savings that will be made in terms of fewer people that will contract ARDs if asbestos were to be phased out of the economy. Setting these costs and benefits off against each other then indicates the value of the benefits that would be achieved from a complete phasing out of asbestos.

17.2 COST OF CONTROL

The results of the CBA calculation of the costs of control are given in table 62. Separate calculations have been undertaken for high-risk and low risk employees. High-risk employees are defined as those that come into direct contact with asbestos materials and those that are in the vicinity but do not come into direct contact and, therefore have a low incidence coefficient.

The following important assumptions are made to set the CBA calculation in motion:

- The higher contamination rate is set at 5%. This percentage signifies the ARD infection rates that prevailed before the government implemented its current stricter occupational health and safety control measures.
- An employee turnover rate of 15% is assumed for South Africa. This figure is obtained from official statistics, and enables the model to make provision for new entrants into the labour force and, consequently, new people that are being exposed to asbestos.
- The value of a life is set at R92,545. This is the average discounted value of the average worker in the economy based on the remainder of his/her normal working life¹⁾
- An average health care and compensation cost of R75,796 per individual, as supplied by the Compensation Commissioner's Office.
- The rate of contamination over the research period (2002-2032) is based on the expected non-intervention scenario used for the CBA analysis.
- A latency period of 10 years is assumed and a fatality rate of a maximum of 10 years is also built into the model.

¹⁾ CBA Manual, Water Research Commission, Report No. 1132/1/02, Table 6.9.

TABLE 62: MACROECONOMIC IMPACT OF PHASING OUT OF ASBESTOS

(R' MILLIONS, 2002)	TOTAL COST OF ARD'S	NET PRESENT VALUE (8%)
Insulation industry	66.28	R 12.46
Factory workers		
Transport Equipment		
• High risk	4.45	R 0.87
• Low risk	5.77	R 1.13
• Total	10.22	R 2.01
Electrical Machinery		
• High risk	0.54	R 0.10
• Low risk	9.01	R 1.69
• Total	9.55	R 1.79
Metal Products		
• High risk	0.38	R 0.08
• Low risk	6.37	R 1.27
• Total	6.75	R 1.35
Non-Metallic Mineral Products		
• High risk	0.73	R 0.14
• Low risk	4.74	R 0.93
• Total	5.47	R 1.08
Building construction	34.72	R 6.82
Vehicle repairs	7.13	R 1.40
TOTAL HEALTH CARE AND COMPENSATION SAVINGS	140.12	26.91

17.3 RESULTS OF THE HEALTH COSTS CBA ANALYSIS

A pre-discounted value of R140 million is arrived at. Discounted at an 8% rate a NPV of only R27 million is attained. Put another way, if asbestos were to be banned with immediate effect, this would be an indication of what the economy would save in terms of the two cost elements used for this calculation viz. the medical cost and the loss to the economy of a person having to leave productive employment prematurely.

Table 63 reflects the impact that the three phasing out scenarios have on health care and compensation cost savings.

TABLE 63: HEALTH CARE AND COMPENSATION SAVINGS ASSOCIATED WITH THE PHASING OUT SCENARIOS

(R MILLIONS, 2002 PRICES)	PRESENT VALUES		
	SHORT TERM SCENARIO +/- 3 YEARS	MEDIUM TERM SCENARIO +/- 6 YEARS	LONG TERM SCENARIO +/- 10 YEARS
Health care benefits	27.00	19.81	9.97
Number of people affected	771	663	476

This analysis indicates that the benefits of phasing out asbestos declines as the phasing out periods are extended. This is due to the fact the number of people who are prevented from contracting an ARD declines. The "number of people affected" statistics illustrate this point.