

# Chapter 2

## Analysis of the Bill

### The advantages of education

2.1 The Government believes strongly in the advantages of education. In his second reading speech for the bill, the Treasurer said:

Education is the engine room of prosperity and helps create a fairer, more productive society. It is the most effective way we know to build prosperity and spread opportunity.<sup>1</sup>

2.2 Cross-country comparisons of economic growth generally suggest that increasing education is beneficial for the economy (in addition to its other merits):

A safe conclusion seems to be that investment in education does indeed create the pre-conditions for successful growth...<sup>2</sup>

Economic theory suggests that human capital would be an important determinant of growth and empirical evidence for a broad group of countries confirms this linkage. Countries that start with a higher level of educational attainment grow faster...<sup>3</sup>

There is little doubt from our research that education and training are decisive in national comparative advantage... improving the general education system is an essential priority of government, and a matter of economic and not just social policy...math, computing, writing, basic sciences and languages are particularly vital.<sup>4</sup>

...the consensus seems to be that having a high saving rate to enable strong investment without excessive reliance on foreign funding, *good education widely available*, openness to trade and ideas, and a stable and non-militaristic government providing a steady macroeconomic and financial environment without excessive regulation or extreme differences in incomes are important factors in providing a benign environment for strong growth in productivity. [emphasis added]<sup>5</sup>

Studies suggest that investment in human capital leads to increased investment in physical capital. With more education and training, people

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1 The Hon. Wayne Swan MP, *Proof House Hansard*, 25 September 2008, p. 1.

2 Professor Steve Dowrick, Australian National University 'The determinants of long-run growth', *Productivity and Growth*, Reserve Bank of Australia, 1995, p. 33.

3 Professor Robert Barro, Harvard University, 'Human capital and economic growth', *Policies for Long-Run Economic Growth*, Federal Reserve Bank of Kansas City, p. 213.

4 Professor Michael Porter, *The Competitive Advantage of Nations*, 1990, pp 628-9.

5 John Hawkins, 'The best of times, the worst of times: developments in productivity' in Hong Kong Monetary Authority, *Money and Banking in Hong Kong*, p. 130.

adapt more effectively to new technologies, thereby raising productivity and economic growth.<sup>6</sup>

2.3 The consensus from economic studies is that there are high rates of return to education:

Overall, our findings suggest the Australian rate of return to education, corrected for ability bias, is around 10 per cent, which is similar to the rate in Britain, Canada, the Netherlands, Norway and the United States.<sup>7</sup>

...annual rates of return for upper secondary level [education] are generally high (typically above 10 per cent)...<sup>8</sup>

...there is an unambiguously positive effect on the earnings of an individual from participation in education. Moreover the size of the effect seems large relative to the return on other investments.<sup>9</sup>

The evidence from labour economics consistently points to substantial monetary returns accruing to individuals investing in education.<sup>10</sup>

[despite a large increase in numbers of university students] ... the average return to a degree has held up well over the past 20 years.<sup>11</sup>

2.4 Admittedly, these broad studies do not demonstrate that increasing spending by parents on books and computers is specifically important. Home computer ownership is too recent a phenomenon for economic studies to have assessed conclusively its importance.

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6 Bernie Fraser, RBA Governor, 'Long-run economic growth and human capital, *Reserve Bank of Australia Bulletin*, June 1993, p. 10.

7 Andrew Leigh and Chris Ryan, 'Estimating returns to education: three natural experiment techniques compared', *Australian National University Centre for Economic Policy Research Discussion papers*, no. 493, August 2005.

8 OECD, *Human Capital Investment*, 1998, p. 69.

9 Colm Harmon, Hessel Oosterbeek and Ian Walker, 'The returns to education: microeconomics', *Journal of Economic Surveys*, volume 17, no. 2, April 2003, p. 115.

10 Barbara Sianesi and John Van Reenen, 'The returns to education: macroeconomics', *Journal of Economic Surveys*, volume 17, no. 2, 2003.

11 *The Economist*, 20 September 2008, citing research by Professor Robin Naylor.

## Home access to computers and the internet

2.5 Around three-quarters of Australian households have a computer at home.<sup>12</sup> There is a 'digital divide', however, with under half of households in the lowest income quintile having a home computer compared to 90 per cent for those in the highest income quintile.<sup>13</sup>

2.6 An important reason for students to have a computer at home is to access the internet. Around two-thirds of Australian households now have internet access at home.<sup>14</sup> In about half of these households, it is being used for education and study.<sup>15</sup> About a fifth of lower-income households without internet access cited cost (which could refer to the cost of buying a computer and/or internet service charges) as the reason.<sup>16</sup>

2.7 Australia has a similar rate of home computer availability and internet access as peers such as the United Kingdom and Canada (albeit less connected by broadband), but is lagging behind the Scandinavian countries and South Korea. One reason may be that having a home computer with internet access is relatively expensive in Australia (Table 1).

**Table 1: International comparison of home computer availability**

	% of households		Broadband costs <sup>1</sup>
	owning a computer	with internet access	
Sweden	83	77	0.24
Japan	81	61	0.06
South Korea	80	94	0.03
Australia	73	64	3.41
Canada	72	64	1.08
New Zealand	72	65	1.90
United Kingdom	71	63	0.63
United States	62	55	0.49

1 US\$ per 100 kbits/month in 2006.

Sources: Australian Bureau of Statistics, *Household Use of Information Technology 2006-07*, 8146.0, p. 48; IMD *World Competitiveness Yearbook 2008*, p. 434.

12 Australian Bureau of Statistics, *Household Use of Information Technology 2006-07*, Cat No. 8146.0.

13 Australian Bureau of Statistics, *Household Use of Information Technology 2006-07*, Cat No. 8146.0, p. 12.

14 Australian Bureau of Statistics, *Australian Social Trends 2008*, p. 201.

15 Australian Bureau of Statistics, *Australian Social Trends 2008*, p. 203.

16 Australian Bureau of Statistics, *Australian Social Trends 2008*, p. 204.

## **The case for subsidising home education spending**

2.8 An alternative to the initiative in this bill would be to cut tax rates for families with schoolchildren (or all taxpayers) and allow them to decide for themselves the best way of spending the money.

2.9 The case for the bill is that education (and in particular increased computer literacy) has benefits to the community more broadly rather than just accruing to those undertaking it; that some parents may not fully appreciate the benefits of education for their children; or that some parents may selfishly deny their children some of these benefits. If any of these propositions are true, then just giving an indiscriminate tax cut would lead to a less than socially optimal increase in families' spending on educational resources. It is fairly well established that at least the first of these propositions is true.

2.10 There is evidence that education benefits more than just those receiving it. One reason is that better educated people earn more money and so contribute more in taxes. They are also likely to increase the productivity of other workers and bring other benefits:

...educated workers may raise the productivity of their less educated co-workers, there may be spill-over effects from technical progress or knowledge accumulation which in turn arise from investments in human capital, or an environment with a higher average level of human capital may entail a higher incidence of learning from others. Investments in human capital may also have external social impacts, which can in turn have indirect economic effects. More education has for instance been found to be associated with better public health, better parenting, lower crime, a better environment, wider political and community participation, and greater social cohesion, all of which is in turn likely to feed back into economic growth...<sup>17</sup>

Spinoffs can occur where, for example, increased investment in one group of workers raises the productivity of other workers.<sup>18</sup>

### ***Home education versus school education***

2.11 Another alternative to the bill would have been to spend the money on improving educational resources in school classrooms rather than at home. However, the Government is already taking measures to increase the availability of computers in classrooms. For example, the National Secondary School Computer Fund is providing grants of up to \$1 million for schools to assist them to provide for new or upgraded information and communications technology for secondary students and the Fibre

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17 Barbara Sianesi and John Van Reenen, 'The returns to education: macroeconomics', *Journal of Economic Surveys*, volume 17, no. 2, 2003, pp 160-1.

18 Bernie Fraser, RBA Governor, 'Long-run economic growth and human capital', *Reserve Bank of Australia Bulletin*, June 1993, p. 10.

Connections to Schools initiative is providing up to \$100 million to support the development of fibre-to-the-premises broadband connections to Australian schools.

2.12 A good home environment, both intellectual and physical, has long been regarded as important to ensuring students' development. Increasingly, this environment demands home computer access.<sup>19</sup> As the Executive Director of Multimedia Victoria told a Victorian Parliamentary Committee in 2006:

I do not know how you do school without a PC at home... How do you participate in school if you do not have an internet connection at home? I think there is a gap widening between those people who can fully participate in technology at school because they have those things at home and the group of people who do not have those things at home.<sup>20</sup>

### *Price effects*

2.13 Giving a large subsidy to the purchase of home computers may push up their price (or at least slow the rate at which their prices fall). This would partly offset the benefits to families of the refunds. However, as the market for computers is quite competitive, with many retailers importing them and no supply constraints, this effect is likely to be relatively small.

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19 See Education and Training Committee, Victorian Parliament, *Education in the Net Age—New Needs and New Tools*, October 2006, pp. 168–171.  
[http://www.parliament.vic.gov.au/etc/reports/multimedia/multimedia\\_rep.pdf](http://www.parliament.vic.gov.au/etc/reports/multimedia/multimedia_rep.pdf)

20 Mr R. Shaw, Executive Director, Multimedia Victoria, Transcript of Briefing, Melbourne, 10 April 2006, p.18.