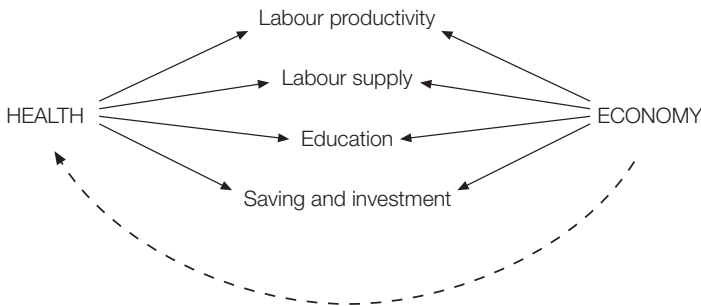


## Chapter 2

# Conceptual framework

Figure 2.1 shows the channels through which health could contribute to an economy and ultimately to economic growth. Four channels are shown, though others may exist: enhanced labour productivity, higher labour supply, higher skills from better education and training, and more savings available for investment in physical and intellectual capital. Figure 2.1 also illustrates that as an economy develops, health improves.



**Figure 2.1** *From health to wealth (and back)*

*Source:* Modified from Bloom, Canning and Jamison 2004.

### Labour productivity

Healthier individuals could reasonably be expected to produce more per hour worked. First, productivity would be increased directly by enhanced physical and mental activity. Second, more physically and mentally active individuals would make better and more efficient use of technology, machinery, and

equipment. A healthier labour force could also be expected to be more flexible and adaptable to changes (e.g. in job tasks and the organization of labour), reducing job turnover with its associated costs (Currie and Madrian 1999).

### Labour supply

Somewhat counter-intuitively, economic theory predicts a more ambiguous impact of health on labour supply. The ambiguity results from two effects that offset each other. The first effect – the *substitution* effect – suggests that as lower productivity from poor health leads to reduced wages, workers will respond to the lower returns by working less. Thus, as more leisure is pursued, the labour supply is constricted. The second effect – the *income* effect – suggests that as poor health leads to reduced wages, workers will work more to recoup lost income, thus expanding the labour supply. The income effect is likely to gain importance if the social benefit system fails to cushion the effect of reduced productivity on lifetime earnings. The net impact of the substitution and income effects thereby ultimately becomes an empirical question (Currie and Madrian 1999).

### Education

Human capital theory suggests that more educated individuals are more productive (and obtain higher earnings). Accepting that children with better health and nutrition achieve higher education attainments and suffer less from school absenteeism or dropping out of school early, improved health in early years would contribute to raising future productivity. Moreover, if good health is also linked to higher life expectancy, healthier individuals would have more incentive to invest in education and training, as the rate of depreciation of the gains in skills would be lower (Strauss and Thomas 1998).

### Saving and investment

The health of an individual or a population is likely to have an impact not only on the level of income but also on the distribution of income among savings, consumption, and investment. Individuals in good health are likely to have a wider time horizon, so their savings ratio may be higher than that of individuals in poor health. Therefore, a population experiencing a rapid increase in life expectancy may, other things being equal, be expected to have higher savings. This should also result in a higher propensity to invest in physical or intellectual capital (Bloom, Canning and Graham 2003).