5. Reduced working hours

Without falling into a deterministic trap, it can be stated that during the last 100 years technological innovation has drastically changed society. With regard to work, there has been a change both in a quantitative and a qualitative sense. In this chapter we will limit ourselves to the quantitative aspect. As will become apparent, the relative significance of work continually declined in the past. Capital intensification meant replacement of human work by machines. Until recently this replacement – apart from the compensating effects of economic growth – has gradually been taken up by a reduction in working hours. By and large demand and supply on the labour market remained in balance. However, information technology may very well change this scene.

Working hours in historical perspective

A declining significance of labour compared to capital was predicted by various ‘classical’ economists, particularly by Marx. After Marx the interest in this topic has been fairly small. Recently however, with the introduction of information technology and the increased unemployment in all Western countries, the discussions about technology as a ‘job killer’ and ‘jobless growth’ have flared up again. Few realize, however, that the relative significance of work has declined continually during the industrial age. True enough not so much in the form of direct labour displacement, but rather by a reduction in the number of working hours. Generation after generation, working hours per year have declined, while the standard of living nevertheless rose spectacularly as a result of the same technological progress.

Figure 5.1. shows the decline in the number of working hours

T. Huppes, The Western Edge
Figure 5.1. Working hours per employee per year for four countries, 1890–1980.

*a.* ‘Working hours’ equal the contracted working hours corrected for vacations, public holidays, and sick leave.


per year for four industrialized countries during the period 1890–1980. Although the statistical material for the first decades (1890–1929) is based on fairly rough estimates, the total view is unmistakable: in all countries the number of working hours has been almost halved during the last 100 years. This reduction seems to be taking place like an evolutionary trend.

Capital intensification and reduction in working hours

The relationship between capital intensification and reduction in working hours in seven Western countries is reproduced for the statistically most reliable period, 1960–1980, in table 5.1. and figure 5.2. The table gives two measurements of both variables. The increase in capital intensity between 1960–1980 is expressed as an index number (column 1), and as an average percentage