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Discounting financial costs and health benefits in public health programmes

As we have stated before,[1] if a person were offered £100 with certainty either today or in 10 years, he or she would choose the £100 today. This is so regardless of inflation. With the money in hand today, the individual has an opportunity to do something with it. If it were received 10 years later, it would represent an opportunity initially lost. It is customary when making financial decisions relating to receipts of money over time to apply an annual discount rate to determine the present value of money received in the future. Applying the discount rate recently recommended by the UK Treasury (3.5%), £100 in 10 years' time would be worth £70 today.

A similar approach can be applied to projects in the public sector, notably infrastructure. However, a key difference from private commercial projects is that the social discount or profit rate is – or should be – considerably lower, because society at large has much longer time-horizons than an individual. Sheldon in 1992[2] has made the same point, stating that what is valid for an individual or a profit-oriented enterprise does not automatically apply to long-term public health programmes. He stated that "there is every reason to believe that the criteria people use for their own consumption decisions are different from those which they wish government to use for social decision making". Sheldon follows standard economic reasoning in maintaining that "the social rate of discount should be below the private rate in deciding the optimal level of public investment."

However, there is a further consideration. Expenditure on people's health for prophylactic purposes, such as medical screening, vaccination, or preventive medication, belongs in a different economic category. It is not an investment at all, but rather a part of (or a change in) the pattern of personal consumption – like shifting to healthier foods or healthier holidays (country walks rather than sedentary sunbathing). Even though the benefits are seldom instantaneous, but rather require a build-up over a run of years to be fully realised, it makes no sense to treat this change of practice as an economic sacrifice. The change in consumption in such circumstances may be government financed, like education, or privately financed. Either way, there is no basis for discounting even at low rates.

Economic assessment of the benefits in question is facilitated by the fact that a public health programme designed to prevent a disorder matures over time, in that it approaches a steady state, where the number of years of life gained each year without the disorder becomes constant. In order to decide whether the programme is justified, all that is necessary is to compare the constant annual cost of the programme with the constant annual monetary value of the benefits. If the latter is limited to the direct financial saving, and is reckoned to exceed the former, the programme is financially more than justified. Even if this condition is not met, the programme may still be considered socially worthwhile, because of indirect monetary value assigned to the benefit – for example, an annual amount for each year of life gained without the disorder that has been prevented.

It also needs to be recognized that the annual financial value of the benefit arising from a preventive programme may start to exceed the annual cost well before the steady state is attained. Until that crossover point is reached, the costs exceed the benefits, albeit in gradually diminishing amounts. The value of the programme should be judged by the steady state numbers, accepting that costs may exceed benefits in the early years.

At no stage in this analysis does the notion of discounting – converting future financial benefits into lesser present values – have any place. It is clear that the application of standard investment decision procedures to preventive public health programmes is inappropriate and should be abandoned.

References

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