

is apparent that the results change radically in relation to the selected discount rate. While with a discount rate of 5 per cent the project is economically efficient because the difference between net benefits and fixed costs is positive; with a discount rate equal to or greater than 6 per cent the project is not economically viable. Another important issue in cost-benefit analysis is the assessment of the intangibles, i.e. those elements for which it is difficult to quantify their value, for instance 'the quality of life'. In conclusion, cost-benefit analysis is an important tool in the assessment of the economic viability of a project. At the same time, it is difficult to account for those elements which improve the individuals' well-being. The Balance Sheet Method and the Goals Achievement Matrix are two techniques which derive from, and improve on cost-benefit analysis.⁸ The two techniques are not explained here as they are based on the same

principles as cost-benefit analysis; the interested reader can consult the above-mentioned literature.

ENVIRONMENTAL IMPACT ASSESSMENT

Central to sustainable development is the assessment of urban projects in terms of their environmental and social impacts, as a study of the economic viability of the project would give only a partial picture of the project's impacts. It is recognized that the term 'environment' should include both physical and socio-economic dimensions. According to Glasson *et al.*, the consideration of physical elements exclusively, as is the case with the Department of Environment checklist of environmental components, is too restrictive.⁹ Table 6.2 shows both types of components to be taken into account when trying to assess the full extent of

Table 6.2 Environmental assessments: components.

Physical environment (adapted from DoE 1991)

Air and atmosphere	Air quality
Water resources and water bodies	Water quality and quantity
Soil and geology	Classification, risks (e.g. erosion)
Flora and fauna	Birds, mammals, fish, etc.; aquatic and terrestrial vegetation
Human beings	Physical and mental health and well-being
Landscape	Characteristics and quality of landscape
Cultural heritage	Conservation areas; built heritage; historic and archaeological sites
Climate	Temperature, rainfall, wind, etc.

Socio-economic environment

Economic base – direct	Direct employment; labour market characteristics; local/non-local trends
Economic base – indirect	Non-basic/services employment; labour supply and demand
Demography	Population structure and trends
Housing	Supply and demand
Local services	Supply and demand of services; health education, police, etc.
Socio-cultural	Lifestyle/quality of life; social problems (e.g. crime); community stress and conflict
