CHAPTER IX

SUMMARY AND CONCLUSIONS

In the preceding chapters, the economic evaluation of a medium sized irrigation project was attempted. After reviewing the subject matter of project appraisal, benefit cost procedure was applied to appraise the economic feasibility of the irrigation project.

In the recent years, public investment has been considered of strategic value in the development programmes of the underdeveloped countries. In such programmes, decisions pertaining to inter-sectoral and intra-sectoral selection of the projects for achieving the given objectives are of recognised importance. During the last three decades, various investment criteria in the light of the above considerations have been propounded. But by and large, the synthesised criterion of benefit cost analysis has been accepted as a common tool for project appraisal, since it enumerates and evaluates all the relevant costs and benefits and also determines the optimum scale for a project. Its value is still more in the evaluation of the water resource projects which claim an important share in the planned investment in the developing countries.

The conceptual framework of benefit cost analysis and its application in developing countries are much
debated issues. The problems of measurement of benefits and costs are also important. These problems can be solved with the help of appropriate assumptions. This technique thus can safely be applied to judge the economic feasibility both in *ex-ante* and *ex-post* form for any project. In the case of project under present study, as the project already exists, we have applied the technique in *ex-post* form to study its economic aspect. The main empirical findings of the study are as follows:

The project had its salutary effects, both direct as well as indirect at primary, secondary and tertiary levels. Apart from the marked changes in land utilisation, cropping pattern and occupational structure, the project has helped in the promotion of some of the infrastructural developments of the region. Its direct contribution has come largely through increased agricultural production and creation of more employment opportunities for farmers and landless labourers in the command area. It has also helped in the expansion of economic activities at the secondary and tertiary levels in the region. The project thus has helped in raising levels of income of all beneficiaries, in varying degree, in the region. Besides, it has also helped the region in making the distribution of income more even.
Because of the benefits on different counts, the project has proved as economically feasible one. When the project was sanctioned, the anticipated productivity rate was reckoned at 4.1 per cent. In course of time, the estimates of cost had to be revised. However, as the revised estimates of cost were high the project proved to be financially unsound. Here it was likely that had the original estimates were made on the later revised figures, the project would not have sanctioned on the financial ground. The appraisal of the project as attempted above indicates the need for undertaking any project on the basis of economic feasibility rather than on the basis of financial feasibility.

The importance of financial feasibility together with economic appraisal is also underlined in the study. Financial analysis of the project shows that financial income from the project was hardly sufficient to cover even interest charges on capital outlay. Taking into account all costs together, the project thus had incurred heavy losses. The analysis of economic benefits shows that there is wide potentiality for raising income to meet annual cost of irrigation of the project by enhancing water charges which at present are far below
the realised benefits. In the initial period of the project, the policy of subsidised rates was followed in the right direction but now a time has come for the state to siphon off a substantial part of benefits of increased output by the State. In working out water rates for different crops, increased output due to canal irrigation may be linked up with its actual contribution to total output. This can be done by production function approach with proper assumptions.

On the basis of this study it is concluded that for evaluation of such projects, the benefit cost ratios should be worked out at least at the direct primary level. There again, proper assumptions regarding probable benefits and costs should be based on the realities of the situation. For example, in the case of associated cost of the project at the farm level, concept of $A_2$ cost (farm management studies) should be considered. Similarly, for such type of irrigation project, aggregation of direct primary benefits and costs should be done for the gross cropped area keeping in view irrigable area by the project in the case of ex-ante evaluation and actual irrigated area in the case ex-post evaluation. Besides, direct primary effects, other types of effects should be given due considerations, as some of these effects, e.g., on income distribution, may be socially more desirable.