Chapter II
PROJECT EVALUATION: BENEFIT-COST ANALYSIS

'Project evaluation' is enjoying the attention of an ever increasing number of economists resulting in a growing literature on the subject. Apart from the literature on project evaluation of water resources in America, the literature elsewhere is fast expanding. One need only to cite two important sources for such information to indicate this growth. One of course is the survey of cost-benefit analysis by Prest and Turvey in the Economic Journal of December, 1965, where the authors have appended a bibliography of ninety different works in the field. The other is the survey of literature by A.C. Harberger on cost-benefit analysis for industrial project evaluation prepared in 1965 and published in 1968 under the United Nations auspices which also has an impressive reference material.


While benefit-cost analysis is thus a growing field, it has already attained the status of becoming almost a text-book at the hands of Mishan and others. As such the framework of benefit-cost analysis is now well-known as a tool of project evaluation. The degree of precision of the various aspects of the analysis has been continuously raised. As Dorfman aptly remarked in 1963 "when water resource specialists get together they no longer debate the relative importance of measurable and non-measurable impacts. They turn, rather, to such questions of technique as how to select an appropriate rate of discount, and how to estimate the benefits of a project by calculating the costs of alternative methods for providing an equivalent service." Over a decade has passed since Dorfman made this statement. Scholars have added to sharpen the tools, measure the benefits and costs more accurately, and more importantly, to help in the selection of rates of growth, rates of discount and prices. We may mention the works of Harberger, Little and Mirrlees, Otto Eckstein, Samuel B. Chase, and

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a host of others in general and in particular Edmar Bacha and Lance Taylor for their work on foreign exchange shadow prices and J.A. Seagreaves for his work on the discount rate.

Most of the authors' works have also been published through the U.N. Agency either directly or through OECD and ECLA or ECAFE. The publications not only cover a wealth of information on the problems associated with the application of the project evaluation techniques but provide valuable guidance for practitioners. Especially the techniques of project evaluation for underdeveloped countries throw light on the framework of benefit-cost analysis as well as methods of refining and employing the tools of the analysis.

With this wealth of information on benefit-cost analysis we feel that the framework of benefit-cost analysis is well established. In this work nothing more would be said on benefit-cost analysis.

**Benefit-cost Analysis:**

Benefit-cost analysis has been summed up admirably by Dorfman, by Prest and Turvey and by A.C. Harberger in their

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respectively works. It is essentially an exercise in welfare economics. Stated in simple terms it is used as a tool to determine maximum present value of all benefits from a project over all the costs. An 'investment' involves resource allocation or reallocation of resources. As a result some would have gained in the society and some might have lost. If those who have gained could compensate for those who have lost in the process the net gains are positive. The welfare has increased for the society as a whole and the 'investment' is worthwhile. In other words the benefit-cost analysis is an exercise in resource allocation - welfare maximisation matrix. In a real world the exercise is not simple.

A general starting point (for understanding why this exercise is not simple) is the Pareto optimality conditions. These conditions are met in a world of perfect competition, with consumers maximising utility and producers maximising profits. The optimal production (or most efficient way to produce output) by employing inputs is by equating the input prices and marginal productivities of the inputs. Similarly, there can be Pareto efficiency in location of outputs, in location of inputs, in choice, in effort, in trade and in production. All these are achieved if there is perfect competition in consumer market, in the producer and factor markets. The real world is one of imperfections.
When an investment programme is ushered into an economy, in order to ascertain whether the programme has increased welfare or not, one has not only to measure the increase in the welfare as well as increase in the sacrifice because of resource allocation but also one need to correct all of them for imperfections to measure the potential welfare under optimal conditions. It is not possible to correct all such imperfections and thus the benefit-cost analysis relates to second best optimisation.

Project Evaluation: Public Versus Private Investment Project:

We need not dwell upon this aspect at great length. Private investment projects are evaluated in terms of the maximisation of profits i.e. a project is worthwhile if the sum of all the net annuities (from an investment programme) discounted at a (high) interest rate (which is called the present value) is greater than the capital cost. There are other variants and alternatives. Project evaluation in the public sector is also essentially similar.¹ But the elements which make up both numerator and the denominator in the calculation of benefit-cost ratio undergo changes because they are corrected and adjusted figures. In the businessman's calculations they are private returns and

private costs; in the benefit-cost analysis they are social benefits and social costs. It is by rare coincidence only that private marginal benefits equal social marginal benefits and private marginal costs equal social marginal costs.

If markets are perfectly competitive and the welfare is optimal throughout the economy, there will then be an equality between social rate of time preference and social rate of return. Projects in the public sector are selected in a world of imperfectly competitive markets and unequal distribution of income. There is a further problem of discounting the output and cost streams from a given project in terms of a social rate of discount. Social rate of return would refer to the ratio of adjusted returns minus adjusted costs to investment.

The Exercise: ¹

It must now be fairly clear that benefit-cost analysis is a tool of evaluating government investment programmes. The object is to maximise welfare. In the benefit-cost jargon this means maximising the present value of all the benefits less the costs. This exercise, therefore, involves

¹What follows hereafter in this section is largely based on the 'Cost-benefit Analysis - A Survey' (Prest and Turvey, 1965). It also includes such further developments which took place since then.
It involves at least four distinct steps:

(i) Enumeration of all benefits and all costs,

(ii) Valuation of all benefits and all costs,

(iii) Discounting with a bias for social preference, and

(iv) Reckoning of constraints.

Enumeration of benefits (costs) should take into account direct, indirect and intangible benefits and externalities.

Valuation involves choice of prices, adjustments for imperfections, computation of surpluses, effects of collective goods and imputation of values wherever imperfections cause deviations.

Discounting for the purpose of finding the present values requires choice of a rate of interest consistent with the social rate of time preference. It would also require the computation of social opportunity cost and adjustment for risk and uncertainty.

Constraints relate to Government policies regulating prices and budgetary impositions on capital expenditure.
We may add such legal restrictions as are essential in the matters of accounting procedures such as allowance for depreciation, appropriation of surpluses and capital obligations.

Enumeration:

Enumeration should start, according to Prest and Turvey, with a project definition in relation to its (project) effects on supply or demand. Every project has some impact on the supply side or demand side which should be considered in calculating benefits or costs. Another major aspect is the presence of 'externalities'. Externalities relate to both benefits and costs; they are defined as 'generation of benefits not paid for by the recipients and of costs not borne by those who occasion them'. While private enterprise may not take care of them, they cannot be ignored by the society. Moreover, the market prices (at which project services are sold and factors are bought) would not reflect the externalities fully. In this direction the final counting is now settled to "changes in physical production possibilities and satisfaction of consumers." But those effects which occur through prices need not be considered. In other words the benefit-cost analyst should consider only the value of increments in outputs arising from an investment and not increment in value of existing assets.
This would mean that benefit-cost calculation is in terms of a given set of prices.

A basic problem in considering benefits — even when they are direct — is that some of them are partially technological in the sense of raising productivity and partially pecuniary in raising incomes; consideration of both is essential.

Secondary benefits or 'spill over' benefits also could be technological or pecuniary. A direct benefit from a project may be increase in output. An indirect (secondary or spillover) benefit would be the increased activities because of the increase in output like trade, transport, millers and bakers' activities and so on. These are described as 'stemming' secondary benefits. There can be 'induced' secondary activity such as those products which are sold as inputs to the direct beneficiaries. In input-output language these are called forward and backward linkages. There is much criticism about the way they are treated in some applications of benefit-cost analysis. For if the market prices sufficiently reflect their scarcity values there is no need to count them.

A final item in counting which poses problems is the economic life of a project. Though this is in the ultimate
analysis a subjective process a number of elements affect the life like physical length of life, technological changes, shifts in demand and emergence of competing products.

Within the above dimensions of the problem, enumeration of both benefits and costs is to be made. It is not difficult to list the benefits from a project. But it should be clear that they should be measurable in terms of money. It is often true of costs also.

Valuation:

Next is valuation. This is really a complex problem. For in evaluating projects our concern is with the generation of future streams of outputs and costs. Often these are looked upon as streams of additional goods and sacrifices. Therefore in valuing benefits or costs the emphasis is on relative prices. Often constant price reckoning is recommended. Whatever price is considered as relevant the same price must be used as the basis for benefits and costs. In general, market prices may be used except (i) where project investment is itself large enough to affect the prices and (ii) wherever rental elements are involved in factors prices and finally (iii) where prices of other products - used as inputs in the project - may rise because of the investment project.
Valuation is impeded under all imperfectly competitive conditions. Monopolistic and other imperfections - in goods or factor markets - call for correctives to market prices. The simple idea involved here is that they cause a divergence between social and private benefits and costs and would not reflect true scarcity values of goods (benefits) and factors (costs) and therefore would adversely affect resource allocation. Extensive work has been done in this field and many alternative methods have been suggested to impute prices.

It is generally agreed that if monopoly is not uniform throughout the economy and if there is monopoly of the public sector enterprise whose behaviour is like a private monopolist there is no efficient resource allocation. Therefore prices should be adjusted.

Monopolistic behaviour may occur at any stage in production hindering output. This is particularly true in the case of processing industries. For instance if paper industry is divided into pulp manufacturing and paper manufacturing and if there is monopoly in the latter stage it would easily affect the former. Similarly in petrochemicals.

Trade unions may push up wages in the face of unemployment.
Lastly there are many utilities where average costs are greater than marginal costs over substantial areas of output. If prices are set according to short-run marginal costs there can be losses to the concern. There is no satisfactory solution here.

In all such cases correctives must be provided to the market prices which enter both on benefits and costs sides. It may be the calculation of rents or producers' surplus and consumers' surplus in reckoning final benefits or derivation of shadow or accounting prices. There is an extensive literature on shadow prices. These prices are imputed or corrected or book value prices of factors which enter more on the cost side. As under imperfect market conditions – due to controls and regulations or due to monopoly – the prices do not reflect true scarcity value and as such to achieve optimality (or increased welfare) true values are to be computed. Several techniques are also suggested. They vary from the sophisticated linear programming to arbitrarily chosen values: An area which has attracted most attention is 'foreign exchange shadow prices'. A notable work in this field is that of Edmar Bacha and Lance Taylor. As they state at the very outset

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these methods are based on static classical foreign trade theory. The economists have suggested three more or less distinct approaches to estimating shadow exchange rate, which need not necessarily give the same result.\(^1\) These are that

1. the foreign exchange shadow price should reflect the value in terms of welfare to the economy of an additional rupee,

2. the shadow price should reflect the opportunity cost of a rupee in other uses,

3. the shadow price should be the equilibrium exchange rate with varying assumptions about what the equilibrium rate may be.\(^2\)

Several alternative shadow prices are given to meet these requirements.\(^3\)

For other factors, shadow prices can be calculated by taking prices or price relationships in markets for similar

\(^{1}\)Ibid., p. 218.  
\(^{2}\)Ibid., p. 222. (The word 'rupee' is used for 'dollar')  
\(^{3}\)We do not want to repeat all that is said in this paper. There are four alternative formulas for calculation of shadow price of foreign exchange, of which the authors themselves have preferred two of them which use world prices and represent the cost of producing foreign exchange. Such shadow exchange rate must be recalculated from time to time to account for elasticities and tariff changes.
products or for the same products in other countries.¹ They may also be computed as implied by Government choices.

In short, shadow prices are calculated to allow for considerations which are not reflected in those market prices. There are as many critics of shadow prices as there are proponents, if not more. As McKean² has stated "shadow prices from a pretend economy have a good chance of being no more relevant than shadow prices from the economy on Mars." More generally he states (for valuation) "there is nothing wrong or right about these values from the economist's point of view, any more than there is anything wrong or right about a taste for oranges or castor oil."³ In other words the problem is "the inapplicability of investment decision rules derived from a perfectly competitive state of affairs to a world where a competitive situation no longer holds."⁴

Taxation and controls also lead to divergence of market prices from social costs and benefits. Similarly unemploy-

²Ibid., p. 50.
³Ibid., p. 48.
ment effects may have to be adjusted. If employment creation is an object of a project, benefits must be adjusted.

Lastly valuation becomes extremely difficult in the benefits conferred with collective goods – facilities or services that are freely available to all comers without user charge,¹ either because to assess a charge on each occasion of use would be excessively cumbersome or because use is not voluntary or even clearly definable (Light house, Police patrolling, etc.). They are not marketed (Defence expenditure, Anti-malaria programme, etc), and valuation is not possible. Similarly in the case of intangible benefits valuation would have little meaning since beauty is not quantifiable.

On the whole valuation of benefits is much more difficult than of costs.

Choice of Discount Rate:

We now turn to the choice of a discount rate; it is the rate which reduces prospective benefit-cost streams to their present worth or it indicates the highest rate of return from a project which maximises benefits. Choice of

discount rate is yet another field which has attracted a large number of scholars. The essence of the analysis is choice of a social time preference rate. We may add at the outset here that most of us are stuck up with the problem of interest elasticity of investment in general.

Which rate? A single average risk-free long-term rate may be used. One need not adjust for risks. This may not reflect the marginal productivity of investment or it may not even be equal to the social time preference rate. This is obviously long-term Government bond rate. All problems of interest rate determination come upon us to explain why we chose this. Government intervention in the capital market may be a very important reason why the bond rate is what it is.

Some people question if any market determined rate is suitable or sufficient to equate community decisions, even under perfect competition. It is argued that social time preference attaches more importance to future than private investment hence social time preference rate may be lower. There are other problems of intertemporal conflict as project costs and benefits affect future generations also.

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Some have suggested that the actual social rate for choice should be the growth rate of the economy and hence on the basis of the marginal capital output ratio one can determine the rate of investment. Thus the social rate of discount would equal the marginal productivity of investment. It is both elegant and impracticable.

Further it is suggested that the Government should take action to push the interest rates down to social time preference rate. Otherwise different agencies like public sector and private sector use different rates of discount. The result would be misallocation of resources and inefficient operation.

Social opportunity cost rate at the level of government's borrowing rate may also be considered.

Then there is the problem of uncertainty attached to investment. This can be largely overcome by choosing a higher discount rate. Kenneth Arrow has suggested that the risk for government investments is marginal. However, Prest and Turvey argue that public investments are not

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always free from uncertainty and allowance may be made in the measurement of benefits and costs, about life of investment and the discount rates.

When all is said we must ask what is done in practice when so many projects are in operation. The practitioners have one way of choosing: arbitrarily. Often it is a summary or an average of the ruling rates or sometimes a non-committal round figure like 10 per cent representing the opportunity cost of capital in private sector.

J.A. Seagreaves\(^1\) has provided a method of calculating social rate of discount which seems operationally significant as it takes into consideration the basic factors affecting the social rate of discount. It is as shown below:

1. Take (i) yield on class A corporate bonds
2. Add (ii) risk premium for Government portfolios
3. Add (iii) corporate profit and property taxes
4. Get (iv) marginal productivity of capital
5. Deduct (v) adjustment for added savings
6. Get (vi) social rate of discount in money terms
7. Deduct (vii) adjustment for expected inflation
8. Get (viii) social rate of discount in real terms.

\(^1\)Seagreaves, Op.Cit.
He has worked out social rate of discount showing two limits, lower limit and upper limit, for the year 1969 and illustrated the practicability of the method. ¹

Constraints:

Coming to constraints: they are mainly physical, legal, administrative, distributional and budgetary.

The physical constraints relate to production function, i.e., to inputs and outputs of the project.

The legal constraints are specification of the framework within which the project has to work. They are such legal restrictions as are exercised in matters of accounting procedures, allowance for depreciation, appropriation of surplus and capital obligations.

The administrative constraints are the limits to which the project affairs can be handled efficiently.

The distribution constraints relate to income distribution consideration. Benefits and costs of project investment have distributional effect. Whether the benefit-cost evaluation of project investment should consider the dis-

tribution effect of it within the evaluation criterion is a debatable question. Being related to the 'potential Pareto improvement' and not to the notion of maximising or increasing total utility\(^1\) (i.e. related to pure economics and objective aspect of welfare economics alone) the consideration in benefit-cost evaluation should be that of efficiency and not of equity. The resulting distribution effect can be dealt with more efficiently by Government fiscal and pricing policy. However there is a limit to flexibility of fiscal and pricing policy in dealing with distribution effect on account of political factors.\(^2\) Further, such measures themselves influence the benefits and costs of the project. All this contains a plausible idea. The way out suggested by Prest and Turvey viz., consideration of income distribution effect as distribution constraint seems acceptable and the efficiency evaluation of project would thus be subjected to such distribution constraint.

\(^1\)Mishan, E.J., 'Elements of Cost-benefit Analysis', p. 23. However, it is agreed upon to state such distribution effect and its nature in the benefit-cost analysis. See: p. 16.

The budgetary constraints are mainly in relation to capital expenditure of the project. They are about (in terms of) the yearly provision, the sources from which such amount would be made available, the conditions required to be met, etc.

All the above constraints are the restrictions to the project working and therefore the benefits and costs are influenced by them. Subject to these constraints the investment criteria summed up by Prest and Turvey are as follows:

**Investment Criteria:**

Where no projects are interdependent or mutually exclusive where starting dates are given and no constraints are operative the maximisation of benefits less costs of projects can be expressed in any of the following four equivalent ways to make project selection.

1. Select all projects where the present value of benefits exceeds the present value of costs

Or

\[
\frac{b_1}{(1+i)} + \frac{b_2}{(1+i)^2} + \ldots + \frac{b_n + s}{(1+i)^n} > \frac{c_1}{(1+i)} + \frac{c_2}{(1+i)^2} + \ldots + \frac{c_n}{(1+i)^n}
\]
2. Select all projects where the ratio of the present value of benefits to the present value of costs exceeds unity;

Or

\[
\frac{b_1}{(1+i)} + \frac{b_2}{(1+i)^2} + \ldots + \frac{b_n + s}{(1+i)^n} > 1
\]

\[
\frac{c_1}{(1+i)} + \frac{c_2}{(1+i)^2} + \ldots + \frac{c_n}{(1+i)^n}
\]

3. Select all projects where the constant annuity with the same present value as benefits exceeds the constant annuity (of the same duration) with the same present value as costs;

Or

\[ b > c \]

4. Select all projects where the internal rate of return exceeds the chosen rate of discount;

Or

\[
\frac{b_1 - c_1}{(1+r)} + \frac{b_2 - c_2}{(1+r)^2} + \ldots + \frac{b_n - c_n}{(1+r)^n} = 0
\]

if \( r > i \)

where,

- \( b_1, b_2, \ldots, b_n \) = series of prospective benefits in years 1, 2, \ldots, \( n \);
- \( b \) = constant annuity with same present value as \( b_1, b_2, \ldots, b_n \);
\[ c_1, c_2, \ldots, c_n = \text{series of prospective costs in years 1, 2, \ldots, } n; \]
\[ c = \text{constant annuity with same present value as } c_1, c_2, \ldots, c_n; \]
\[ s = \text{scrap value;} \]
\[ i = \text{appropriate rate of discount for annual compounding;} \]
\[ r = \text{internal rate of return.} \]

All the formulas compare benefits and costs of the project and, properly interpreted, lead to the same conclusions. What is most important in benefit-cost analysis, as Dorfman observed, is the decision about what benefits to be included in enumeration and how they should be valued objectively.¹

Nature and scope of the project, type of the data available and the objectives to attain will influence the project evaluation in this regard.

Concluding Remarks:

The benefit-cost analysis as a method of project evaluation is upheld as well as severely criticised. There are critics who see a bleak future of its application. But, though it is developed in the field in which Government operations are similar in nature to private business, it is

also now applied to evaluation of health programme, of programmes of research and development and of recreational facilities. However there are areas where it should not be applied. We cannot for instance evaluate planning in India with benefit-cost tool. For planning has induced structural changes and altered the whole complex of relative prices and outputs in the economy. For such evaluation we may have to use some type of general equilibrium analysis. Its use is further constrained by lack of relevant data. The tools of project evaluation like benefit-cost analysis seem to be bogged down under the heavy pressure of inadequate information in the underdeveloped countries where the tools are most useful. As is revealed by our work project evaluation would be most fruitful if precise information is readily available.

However sceptical one may be towards benefit-cost analysis one has to accept the fact that it has finally provided an operational framework which reveals relations which are important to a rational decision-making. As a result those who are responsible for making selection and administration of projects will be provided with better insight into the situation which was not previously avail-

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able to them. It is essentially a practical tool of decision-making, if critically applied, leads to a substantial improvement in political decision-making and project planning. Marglin points out "benefit cost analysis is an aid to implementation of the strategy of development, not a substitute for strategy."¹ The responsibility of arriving at a strategy lies with politicians and administrative experts. Their experience, strength of judgement and intuition will determine their final decision. The economic analysis reduces the vagueness and helps them to arrive at decisions more objectively.

Our Approach:

Now we pass on to our more important preoccupation which we may describe as 'our approach' to the problem of project evaluation and investment analysis in the public sector in our thesis. While we have the framework of benefit-cost analysis as a guide we have made a number of departures for various reasons.

As Marglin has observed, "benefit-cost analysis in Indian planning ought to differ from its American cousin on both counts." These two counts are that firstly benefit-cost analysis of the American type is under an unplanned

economy without any stated social objectives which are to be achieved and secondly benefit-cost analysis was no tool of planning. On the other hand it was used as a means of justification of a project. In a planned economy with growth as an objective function project selection has a greater meaning. Moreover in an underdeveloped economy each project has its impact on structural changes which would make for extreme limitations on benefit-cost analysis being applied to the projects. This has been observed by Prest and Turvey in their ‘survey’. But at the same time, they hasten to add that benefit-cost analysis as an evaluation method has significance in underdeveloped countries as the countries suffer from shortage of capital.¹

Now it is needless to emphasis that the money values of the benefits and the costs are but a poor representation of the benefits and costs flowing from an infra-structure industry like electricity supply. Subject to this constraint we have attempted valuation of the benefits and costs in money terms. Our method of projection has been slightly different from the traditional one.

Firstly, we have taken data relating to the performance of the project (GEB) for the first twelve years and

calculated the social rate of return.

Secondly, on the basis of the performance the future benefits as well as costs are calculated. In our view this has merit because the uncertainties attached to the benefits and costs in future are many more than in a more developed economy. Such a projection based on performance data can tone-down the magnitude of uncertainty at least for two reasons: (i) The twelve years period has witnessed an unbroken record of excess of demand over supply: This is further supported by the planned programme of industrial development. (ii) The social rate of return is satisfactory and compatible with the rate of returns expected by expert bodies on such investment.

Thirdly, we have emphasised the impact of electricity supply industry on the State of Gujarat. The impact has been measured in relation to the two most significant sectors from the point of view of the economic growth, viz., industry and agriculture and with reference to two significant components of growth, viz., employment and income. The social benefit consideration in the context of the total economy is thus limited to this impact study only. In this, it may be further pointed out, that the analysis relates to one year for which fairly comprehensive data are available.
Fourthly, the financial analysis begins with the study of nature and behaviour of GEB's costs as well as revenues. The financial viability and profitability are studied through the long-run financial analysis of GEB's investments. Here we have depended upon the break-even analysis to show the time period when the surpluses will be generated.

Fifthly, it is well-known that valuation is the most difficult problem in project evaluation in general and benefits and costs in particular. The correctives are provided to measure true benefits and true costs. In a sense this is a problem of social versus private valuation. On the benefit side the valuation of consumers' surplus has posed a major problem. The price discrimination is expected to take care of consumers' surpluses. But with inelastic demand it can seize only a small part of consumers' surpluses. We do not depart from this basic approach and we have tried to show and estimate the consumers' surplus as the difference between consumers' total valuation for the products sold to them and the actual payments made by them for the products. The measure of consumers' surplus is based here on 'quantity into price' approach.

1The general belief is that valuation of benefits is more complex than that of costs. See: Prest and Turvey, Op.Cit., p. 729.
Sixthly, on the cost side we have abstained from providing correctives to the items like material purchased, bulk-power purchased, foreign exchange component of capital and wages. Each one of them merits some explanation. Materials are purchased at their market prices. Bulk-power purchased is from third party. Foreign exchange component of capital is not only small but it is 'tied' to the project. Therefore it does not command any other value. Most of the labour is skilled labour and unskilled labour is negligible. As such wages can be taken as competitive in character. The depreciation in our analysis is calculated on the basis of conventional economic life of the assets. The fuel cost is still subject to negotiations and the probability is it would not depart from the market price.

Assumptions and Adjustments:

As explained earlier the analysis relates to second best optimisation. Further it is based on the method of partial equilibrium analysis and uses comparative statics. All the assumptions applicable to them, therefore, follow here also.

In an empirical study of this nature a number of adjustments have to be made to the data and calculations. In our financial analysis, the social rate of return
analysis and the impact analysis we show the various adjustments we have made to arrive at our conclusions. All throughout the analysis and in the estimation procedure, we tried to be biased in the direction of understating the situation. For what we are having in our mind is the feasibility of application of what one derives from the analysis in terms of policy decisions.