

# Feasibility study

## Lecture 4

# Feasibility study

- This is the study of a proposed project to indicate whether the proposal is attractive enough to justify more detailed preparation
- A feasibility study is part of the process of project identification, preparation and selection
- It involve the process of appraising projects or group of projects and then choosing to implement some of them
- This is an extremely important stage in project management

# Feasibility study

- Key factors looked at in a feasibility study:
  - Availability of adequate market
  - Growth potential of the project
  - Investment, operation and distribution costs
  - Demand and supply factors
  - Social and environmental conditions

# Feasibility study

- A feasibility study should contain the following analyses:
  - Commercial /market analysis
  - Technical analysis
  - Organization/administrative analysis
  - Financial analysis
  - Environmental analysis
  - Economic analysis
  - Socio-political analysis

# Commercial/market analysis

- The commercial aspects of a project include the arrangement for marketing output produced by the project, and the arrangements for the supply of inputs needed to built and operate the project
- On the output side, careful analysis of the proposed market for the projects production is essential to ensure that there will be an effective demand at a remunerative price e.g questions to be asked include: where will the products be sold?, is the market large enough to absorb the new production without affecting the price?, if the price is likely to be affected, by how much?, what share of the total market will the proposed project supply?, are there appropriate facilities for handling the new production.

# Commercial/market analysis

- On the input side, appropriate arrangement must be made for farmers to secure the supplies of fertilizers, pesticides, and high yielding seeds they need to adopt new technology or cropping patterns, or new animal husbandry practices.
- The questions to be asked include: do market channels for inputs exist?, and do they have enough capacity to supply new inputs on time? What about the financing of suppliers of inputs and credit for the farmers to purchase these supplies?

# Commercial/ market analysis

- The commercial aspects of the project also include arrangements for procurement of equipment's and supplies.
- The questions to be asked include: are procurement procedures such that undue delays can be avoided ?, are there procedures for competitive bidding to ensure fair prices? Who will draw up the specifications for the procurement?
- The commercial aspects also include distribution arrangements including warehousing and storage arrangements
- *Market analysis* can be achieved through: descriptive approach, price efficiency technique or industrial organization technique

# Technical analysis

- The technical analysis concern projects inputs (supplies) and outputs (production) of real goods and services
- It is extremely important, and the project framework must be defined clearly enough to permit the technical analysis to be thorough and precise
- The other aspects of project analysis can only proceed in light of the technical analysis
- Good technical staff are essential for this work, they must be drawn from consulting firms or technical assistance agencies abroad
- Technical analysis may identify gaps in information that must be filled either before project planning or in early stages of project implementation

# Technical analysis

- Technical analysis gives an indication of the capacity of operations within the project
- It also include the quality of machinery and equipment's
- There should be provision for maintenance of the machinery and equipment's
- The location and layout of the project is also part of the technical analysis
- This also include appropriateness of technology – this will depend on the level of development in the community

# Technical analysis

- Technology should be examined at two levels:
  - The technology used must be suitable for the realization for a specific objective of a given project
  - The technology must also be examined for suitability according to the prevailing socio-economical environment

# Organizational analysis

- A whole range of issues in project preparation revolves around the overlapping institutional, organizational, and managerial aspects of projects
- These factors clearly have an important effect on the project implementation
- Frequent questions asked is whether the institutional setting of the project is appropriate and, whether the socio-cultural patterns and institutions of those communities that the project will serve must be considered
- E.g. does the project design take into account the customs and culture of the farmers who will participate? Or will the project involve disruption of the ways in which farmers are accustomed to working?

# Organizational analysis

- For projects to be carried out successfully, they need to relate properly to the institutional structure of the country and region
- This may include structure of companies, partnership and other organizational set up
- Other factors may include the projects manpower requirements, transportation of machinery, maintenance and commissioning e.g for the turn key projects
- Terms and conditions which are adhered to by contactors must be carefully weighed to ensure that they are in line with the overall project objectives

# Financial analysis

- The financial aspects of project preparation and analysis include the financial effects of a proposed project on each of its various participant.
- In agricultural projects, the participants include farmers, private sector firms, public corporations, project agencies and perhaps the national treasury.
- A major objective of the financial analysis of farms is to judge how much farm families who are participating in the project will have to live on.

# Financial analysis

- The analyst will need budget projections that estimate year by year future gross receipts and expenditures, this should include the costs associated with production and the credit repayments farm families must make to determine what remains to compensate the family for its labour, management skills and capital.
- The analyst of farm income will also permit assessment of incentives for farmers to participate in the project?, what will be the probable change in farm income?, what will be the timing of this change?, how likely are price changes or fluctuations that could affect farm income severely enough that farmers will refuse to run the risk of participating in the project?, what will be the effect of subsidies arrangements on farm income, and what changes in government policy might affect the income earned by farmers? will new subsidies be needed to provide sufficient incentives for the project to proceed.

# Financial analysis

- An analysis of the financial aspect of the project administration will also be needed. The questions to be asked include: what investment funds will the project need and when?, what will be the operating expenses when the project is underway?, will these expenses depend on budget allocations or will the project produce sufficient revenue to cover for its administration costs?
- There must be a clear evidence that the project will have a net gain if it has to be feasible
- All the initial project costs as well as the operation costs should be carefully considered

# Economic analysis

- Economic analysis is basically concerned with the following:
  - How to identify effects of a proposed project to the society
  - Quantification of the effects of the proposed project
  - Pricing of costs and benefits to reflect their values to the society
  - In economic analysis, shadow prices are used while in financial analysis the market prices are used

# Economic analysis

- The economic aspects of project preparation and analysis require a determination of the likelihood that a proposed project will contribute significantly to the development of the total economy and that its contribution will be big enough to justify using the scarce national resources it will need
- The point of view taken by economic analysis is that of the society as a whole
- The financial and economic analysis are thus complementary – the financial analysis takes the viewpoint of the individual participants while the economic analysis take the viewpoint of society
- However, because the same discounted cash flow measures are used in financial analysis to estimate returns to a project participant and in the economic analysis to estimate returns to society, confusion between the two analysis always arises, but there are three important distinctions between the two analyses approaches

# Economic analysis

- First in economic analysis, taxes and subsidies are treated as transfer payments i.e the new income generated by a project include taxes the project can bear during production, and any sale taxes buyers are willing to pay when they purchase the projects products
- These taxes , which are part of the total projects benefit are transferred to the government which acts on behalf of the society as a whole and are not treated as costs
- Conversely, a government subsidy to the project is a cost to the society, since subsidy is an expenditure of resources that the economy incurs to operate the project
- In financial analysis, such adjustments are normally unnecessary, since taxes are usually treated as a cost and subsidies as a return

# Economic analysis

- In financial analysis, market prices are normally used.
- These takes into account taxes and subsidies and from these market prices, comes the data used in the economic analysis
- In economic analysis, however, some market prices may be changed so that they more accurately reflect the social or economic values
- These adjusted prices are called as shadow or accounting prices

# Economic analysis

- In economic analysis, interest on capital is never separated and deducted from the gross return because it is part of the total return to the capital available to the society as a whole, and additionally, it is this total return including interest that the economic analysis is designed to estimate
- In financial analysis, interest paid to external suppliers of money may be deducted to derive the benefit stream available to the owners of capital, but interest paid to the entity from whose point of view the financial analysis is being done is not treated as a cost, because the interest is part of the total return to the equity capital contributed by the entity, and hence it is part of the financial return that entity receives

# Social analysis

- We have mentioned that projects should consider the social patterns and practices of the clientele the project will serve
- More frequently, project analysts are expected to examine carefully the broader social implications of proposed investments
- Social consideration should be carefully considered to determine if a proposed project is responsive to national objectives e.g the case of creating employment opportunities , and also issues that are dealing with income distribution within the society
- For social reasons, when governments what to emphasize on growth in particular regions, they would encourage projects that can be implemented in these areas

# Environmental analysis

- Pollution
- Environmental degradation

# Further reading

- Economic analysis of Agricultural projects; second edition: J. Price Gittinger