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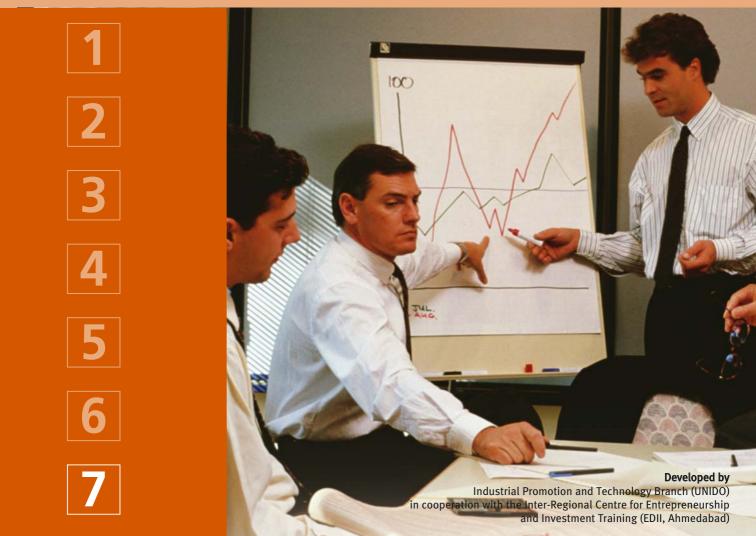
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INVESTMENT PROJECT PREPARATION AND APPRAISAL TEACHING MATERIALS

Module 7



Project Appraisal

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

INVESTMENT PROJECT PREPARATION AND APPRAISAL

IPPA Teaching Materials

Project Appraisal

Module 7

Developed by

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MODULE 7 – PROJECT APPRAISAL

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INTRODUCTION

PROJECT APPRAISAL



Why is appraisal of an investment project a good idea? There are really two options. selected А project can be for implementation based upon intuition or on reason. In fact, there really is no alternative - even those who decide what to do based upon intuition are, in effect appraising. We humans are natural appraisers, even to the extent of deciding whether to go to the beach on a sunny day rather than doing some household chore. In this case the scarce resource is time and the payoff is satisfaction of one

need or another.

Commitment of scarce resources: In the case of investment projects the scarce resource is capital. Usually this does not come easily. The future of investors and other participants in the economy is determined by how effectively capital resources are employed.

Expectation of future benefits: Capital is invested to produce future benefits. Participants should be assured that the project is a good, if not the best, use of the capital available for providing future benefits.

Inherent uncertainties: Risk is a key element of appraisal. Any project is subject to risk (we may go to the beach only to find that it is raining by the time we get there). The idea of the 'certainty equivalent' deals with this issue. One project may have a reward of 100 with a probability of 50% and 50% probability of no reward, while another with the same investment requirement may have a reward of 75 with a probability of 90% and a 10% probability of no reward. Which is the better choice? The answer will not be the same for all decision-makers.

PERSPECTIVES OF PARTICIPANTS

F	PERSPECTIVES	
	* INVESTORS	
	* FINANCIERS	
	* REGULATORS	5
	* GUARANTORS	s
	* SUPPLIERS	1

Each participant in a project development should appraise it from a particular point of view, according to criteria that are relevant to its interests. Every participant, even within a group of investors, has different criteria. For example, a young investor may look for long term results while an older investor may seek quick returns. Investors, financiers, regulators, guarantors, suppliers - all have interests to serve, either private or public.

Project studies may be geared to the general audience, but appraisal is very specific. If one of the interested parties, say the financier, appears to be the most difficult obstacle it would be helpful if the study is particularly thorough in regard to the project's ability to service debt.

When decisions vary among participants, additional steps may have to be taken to illuminate the project's strengths and weaknesses if promoters wish to pursue the matter. In fact, separate studies dealing with the particular concerns of essential participants may have to be performed to bolster the cause of promoters.

PARTICIPANT	Investor	Financier	Regulator	Guarantor	Supplier
MARKET	1	2	2	1	2
TECHNOLOGY	1	2	2	2	2
FINANCE		-			
Return	1	2	2	2	2
Liquidity	2	1	3	1	1
Debt service	2	1	3	1	2
ECONOMY	3	3	1	3	3

PARTICIPANTS' CONCERNS

This presentation is not intended to be the definitive answer to what should be most thoroughly covered in an appraisal report for a particular party interested in a project. The idea is that each type of participant has a different set of priorities. All are interested, to some extent, in all aspects of the project but the emphasis would differ for the appraiser commissioned by any one of them.

Individuals and organizations involved in any specific project will have their own

criteria. Investors are generally interested in the rate and timing of financial benefits; financiers in the reliability of debt servicing; regulators in the degree to which local, regional or national objectives are served; guarantors in the degree of risk of having to cover obligations; suppliers in the project's viability as a long-term client.

SPONSOR'S PERSPECTIVE



Is this a good project for the sponsor? In the appraisal process similar questions can be asked by each of the participants (financiers, guarantors, etc.).

Is the project compatible with other investment activities? How does it fit in with the sponsor's/investor's portfolio, other interests and abilities?

Is the project potentially bankable? Is there sufficient backing for financiers to provide the necessary long and short-term

credits?

Does the project make the best use of the sponsor's resources? Can the sponsor's resources be used in some other activity to better advantage?

Does the sponsor have the capacity to energize the project and to retain its momentum in the face of obstacles to growth?

Necessary ingredients for a successful investment project include the skills of entrepreneurship and commitment. If the sponsor lacks these characteristics, or is 'spread too thin', then the impediments to successful realization of the project may be not be manageable.

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PARTNERS' PERSPECTIVES

When it comes to the point of project appraisal, and particularly the price of entry, i.e. what proportion of the total equity is to be provided by each partner for a particular share of the enterprise, there are decidedly differing viewpoints. The important point is that there are differing perspectives. Role playing in this kind of encounter, taking the position of the 'opposition' is a good way to resolve these kinds of issues.

Local partner: The foreign partner is looked upon as a relatively affluent individual or group that can afford to pay more for participation than would be expected by a local investor. Some justifications for this view are: "He can afford it"; "The exchange rate is wrong"; "He wants our market".

Foreign partner: The local partner is regarded as the beneficiary of the foreign partner's business acumen and application of resources. Although there must obviously be some level of confidence in the abilities of the local partners, it is

tempered by something like "if they are so smart, why aren't they so rich?" Some of the concerns that may enter the minds of foreign partners are: "Political and economic risk"; "Low purchasing power in the market place"; "Uncertain future earnings"; "Workers' demands"; "Book value is irrelevant" (and probably is).

FOREIGN INVESTORS' CONCERNS

FOREIGN INVESTORS' CONCERNS
POLITICAL SITUATION
ECONOMIC TRENDS
MONETARY AND FISCAL POLICY
SOCIAL LEGISLATION AND EVOLUTION
LABOR CLIMATE AND AVAILABILITY
DEMOGRAPHICS
FINANCIAL SYSTEM
ATTITUDE TOWARD FOREIGN DIRECT INVESTMENT (FDI)
INFRASTRUCTURE (communications, transportation, energy)
LIVING CONDITIONS
> INTERNATIONAL PROFILE

In addition to financial prospects, prospective foreigner investors, without benefit of familiarity with culture and history, are more inclined than local investors to consider the following issues in their project appraisal process, seeking clear and unambiguous understanding:

Political situation: Political stability and orderly transition of political power that are conducive to a healthy business climate.

Economic trends: Economic growth, as it affects prospects for political stability, for strong domestic demand, and also for availability of domestic credit.

Monetary and fiscal policies: Monetary policy - expansionary policy often carries the threat of domestic inflation; contraction in the money supply, on the other hand, may create problems of credit availability and higher interest rates. Fiscal policies that reflect economic need rather than special interests. Expenditures consistent with revenues to avoid over-stimulation.

Social legislation and evolution: A high degree of responsibility for the enterprise to participate in social welfare programs can be interpreted negatively. However, if properly conceived and administered, the social welfare program can be regarded favorably in terms of a healthy and educated work force and political stability. Emerging economies may experience new demands for social welfare programmes - their history and development are of concern to foreign investors.

Labor climate and availability: Inadequate economic distribution mechanisms can lead to conditions of labor unrest, may be regarded unfavorably. Astute foreign investors would regard the existence of legal and administrative worker protections as potentially enhancing the qualities of the work force. Heavy-handedness with regard to workers by the political authorities is generally regarded as a serious problem. A highly skilled and plentiful workforce reduces problems of recruitment and training.

Demographics: Population trends - numbers, age and income distribution - and migrations that affect the product line (e.g. increasing urban populations of middle class consumers) are of concern in regard to demand .

Financial system: The characteristics of the banking system - efficiency, consistency, transparency, regulation; efficient, transparent and regulated capital markets.

Attitude toward foreign direct investment: Ease with which investment proposals are reviewed by regulatory and licensing authorities; welcoming attitude for FDI as expressed by administrative and legislative actions, liberal policy toward currency convertibility and repatriation of profits.

Infrastructure - communications, transport, energy: FDI is often connected with operations in the investor's home country. Not only is infrastructure development important for project operations, but it must also be compatible with the infrastructure features at the investor's operating base.

Community facilities, living conditions: Quality of living conditions for sponsors, managerial staff and work force.

International profile: Image of the country in terms of its foreign relations and domestic practices - harmonious membership in the international community, participation in normal and unfettered trade relations, adoption of internationally acceptable legal and judicial standards, protection of intellectual property rights.



MACRO-MICRO APPRAISAL

Appraisal can be carried out from the point of view of the project or the national economy.

Investors are generally concerned primarily with the project as a business entity. How well it performs in regard to their criteria is of paramount importance. There may be concern for the impact on the general economy, but usually only in regard to maintaining an accommodating external environment. The appraisal of investors or their agents deals essentially

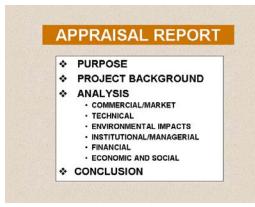
with the issue of commercial profitability. This is the *micro level* of appraisal. For relatively small projects, with little national impact, this is probably as far as appraisal goes in the investment decision process.

When the project is either large enough or otherwise strategically significant for the national economy, appraisal at the *macro level* may be warranted. Appraisal of 'national profitability' measures the project's contribution to national objectives, such as the contribution to national income, distribution effects and job creation.

For a detailed discussion on Micro Appraisal, refer to the Module on Financial Analysis.

For a detailed discussion on Macro Appraisal, refer to the Module on Economic Analysis.

APPRAISAL REPORT



The scope of an appraisal report is consistent with the content of a feasibility study. The appraisal report should be prepared in view of the criteria of the client, or the audience that the client wishes to address. It may be necessary to prepare alternative reports for various interested parties, as their interests and criteria may differ substantially.

Purpose: What is the intent of appraisal? Who is the client, what is the scope and what are the perspectives? The scope, for

example, may be limited to determining if a joint venture proposal is workable and in the local partner's interests.

Project background: This should describe the genesis of the project, who are the participants and what arrangements have been established with other institutions.

Analysis: Analysis should be consistent with its purpose (see above). Some of the main features may be (depending upon client and purpose): assessment of commercial and market aspects; soundness of the marketing plan; capability of the technical design to produce and deliver the required output of finished goods; compatibility of the project with the environment; adequacy of institutional and managerial aspects, personnel availability and capabilities; a financial plan that demonstrates adequate liquidity over the life of the project, returns to meet criteria, and acceptable levels of risk. If the project has impact on the national economy the report may include information sufficient for regulators and licensors to render a decision.

Conclusion: Taking all the above factors into account, the report should include a statement regarding the overall acceptability of the project according to the client's criteria (investor or other participant). For the investor it should outline how the project fits into satisfaction of other activities and goals.

COMMERCIAL/MARKET APPRAISAL



The appraisal report may answer the following types of questions regarding the market and commercial viability:

Sound business concept? Is the basic business concept sound? Is there a need to be filled and a viable plan to fill it? Will the plan work in the proposed environment and considering the likely countermeasures of competition? **Market for product/service**? Does the study demonstrate that there is sufficient market for goods and services to be produced?

Marketing strategy viable? Is the marketing plan logical and workable? Is the information infrastructure adequate for carrying out the marketing plan?

Sales projections realistic? Are the sales projections based upon a realistic assessment of the target market? Are estimates of market share market penetration attainable?

Viable distribution plan? Is there a workable system for delivering project output to the market that will continue to the planning horizon?

TECHNICAL APPRAISAL



- PROCESS TECHNOLOGY ACCESSIBLE?
- SUSTAINABLE UNDER OPERATING CONDITIONS?
- QUALITY DEMANDED BY MARKET?
- * RELIABLE INPUTS TO PLANNING HORIZON?
- * ADEQUATE TECHNICAL PERSONNEL?

Technology issues deal primarily with physical viability. They are relevant to the concerns of all participants - the 'body' of the industrial organism has to function adequately for the 'mind' to be effective. Some of the technology issues that the appraisal report may assess are as follows:

Production at competitive prices? Can the technology produce the planned output at competitive prices?

Process technology accessible? Is the selected process technology available? Is any further development required that has not been demonstrated to function effectively at least at the pilot or prototype stage under operating conditions?

Sustainable under operating conditions? Is it clearly demonstrated that the technology will be able to function over the long run under conditions at the plant site? Will operating personnel be able to manage? Are parts and services available?

Quality demanded by market? Does the process assure the quality demanded by market? Are the qualities of inputs of adequate standards? Will there be an acceptable level of rejected output based upon quality standards?

Reliable inputs to planning horizon? Is sufficiency of materials and other inputs assured over project life? Are supplies and price estimates reliable?

Adequate technical personnel? Are there sufficient technical personnel (managers, engineers and skilled technicians) available? Will competition for their services be an insurmountable problem?

ENVIRONMENTAL APPRAISAL



- DO IMPACTS INDICATE FUTURE REGULATORY ACTIONS?
- DOES THE PROJECT SATISFY ECONOMIC AND SOCIAL CRITERIA?

The project must operate within constraints of the external environment regulatory, statutory and in some cases socially responsible approaches to its physical, economic and social and other dimensions. These issues may be of concern to participants and to inhabitants of the region in which the project operate.

Do process emissions and effluents exceed regulated standards? Do any emissions and effluents to be generated by the process exceed regulated

standards? If so, are there measures of mitigation to bring emissions to acceptable levels? Are the impacts on habitats acceptable to regulatory authorities; are inhabitants likely to object to emissions if they are not yet aware of the impacts, and what measures are included in the plan for dealing with public opposition?

Are products environmentally acceptable? Are the product features environmentally acceptable? Does operation or use of the product or its disposal create environmental impacts that may be of concern to users, to the general community or to national authorities?

Do impacts indicate future regulatory actions? In the absence of emissions standards, do impacts indicate future regulatory actions? Does the nature of the process or product cause concern about regulatory actions that might require design modifications? What impact will such anticipated regulation have on the project in terms of capital expenditures and modifications to operations and costs?

Does the project satisfy economic and social criteria? If the client is a licensing, regulatory or statutory authority it may be necessary to assess the degree to which economic and social criteria are satisfied. This appraisal may link physical, economic and social impacts. For example, if the physical environment is to be adversely affected, monetary valuation of the degradation may be included in the economic analysis framework. Some impacts may be assessed qualitatively. (See National Perspectives and Macro-Micro Context of Investment Decisions for more comprehensive discussion of external environment).

INSTITUTIONAL/MANAGERIAL APPRAISAL



Once again, to use the biological analogy, the appraiser has to examine both body and mind of the organism. A perfect body - the facilities and systems that comprise the physical business entity - will not function properly without adequate direction.

CompetentEntrepreneur,Implementationmanagement,Operationsmanagement?Isthere acompetententrepreneurleadershipfortheproject?Isthere an

individual or group within the organization that can provide the necessary intelligence, energy and commitment to overcome obstacles that are surely going to appear? Are there competent managerial skills identified with the capacity to build and operate the enterprise?

Organization capable of executing necessary functions? Does the organization structure make sense. Are all functions allocated within the structure to maximize synergies and minimize interferences? Does the structure provide the functions and interactions necessary to execute implementation, operations and marketing plans?

FINANCIAL APPRAISAL



Financial appraisal is often multidimensional. The interests of stakeholders differ - investors, financiers, guarantors, regulators, political bodies. Appraisal should be matched to the interests of the particular client, or clients. It may be prudent to tailor the appraisal to the audience. The issues identified that should be covered in the appraisal report are of varvina interest to participants (see above).

Financial appraisal is particularly

significant in the appraisal process. It is essentially the 'bottom line' that investors - the key players - focus on.

Major finance issues to be addressed in the appraisal report:

Adequate financial resources to planning horizon? Does the financial plan demonstrate that there are adequate financial resources from internal and external sources to cover all project phases - planning, implementation and operations (and decommissioning when necessary)?

Adequate returns to the investor? Does the study demonstrate with a sufficient degree of confidence that returns to investors will be adequate to meet their criteria?

Financial criteria of other participants satisfied? Does the study satisfy financial criteria of other participants that the project will be able to meet its financial obligations?

Financial risks and risk sharing acceptable? Are the elements of risk and probabilities of undesirable outcomes acceptable to participants? Are all risks considered and within acceptable limits?

Financial structure acceptable? Does the financial structure satisfy the criteria of investors, lenders and guarantors? Are the provisions of equity and debt financing satisfactory in terms of liquidity and financial risks such as inflation and potential fluctuations in interest rates and exchange rates?

ECONOMIC APPRAISAL



Appraisal in regard to the impact on the national economy may be undertaken if the project is considered be of significance. The basic issue is whether or not resources committed to the project are efficiently allocated.

Consistent with development goals? Does allocation of necessary resources to the project provide positive impacts on national development goals such as: increased national income, distribution effects, regional development plans,

technological advance, security, etc.?

Positive impact on macro-economic indicators? Does the project have positive impact on GDP, balance of payments, trade balance, national revenue stream?

Satisfy economic rate of return criterion? Is the economic rate of return in excess of the social rate of discount?

Appraisal of the investment project from the national perspective is carried out in the framework of Economic Cost Benefit Analysis (ECBA), which looks at inputs and outputs in terms of their impact on the national economy, and externalities, effects that are a consequence of the project but that do not have direct impact on financial performance. (See Economic Analysis and Technical Analysis, Environmental Impact).

CAVEATS FOR THE APPRAISER

	CAVEATS FOR THE APPRAISER
0	WRONG TIMING
٥	NON-OPTIMAL FINANCING
	 INSUFFICIENT WORKING CAPITAL
	HIGH LEVERAGE
٩	OVER-ESTIMATED MARKET POTENTIAL
Ŷ	UNDER-ESTIMATED CAPITAL COST
Ŷ	UNDER-ESTIMATED COMPETITION
۰	PLANNED CAPACITY INCONSISTENT WITH MARKET
٥	UNIDENTIFIED SOURCES OF SKILLED PERSONNEL
۰	INADEQUATE INFRASTRUCTURE
۰	PROJECT DESIGN ALTERNATIVES
٠	INEFFECTIVE PLANNING

"Many a slip 'twixt the cup and the lip". Some ideas for the appraiser - what can go wrong:

Wrong timing: The economic trend in decline; the economy in the descent phase of the business cycle; the product life; lateness in regard to activities of competition; too long a delay for repair/modernization investment; commencement of project implementation before funds have been secured.

Non-optimal financing: Cost of capital too high (e.g. greater than the return on capital); excessive debt service load during the early part of the operations phase; too much weight on interest rates and not on total financing package (fees, discounts and commissions may increase the effective interest rate); too heavy reliance on debt financing with insufficient internal funding; heavy taxation resulting from lack of synchronized financing costs (interest, amortization) and depreciation.

Insufficient working capital - may not be a secure line of credit to cover needed cyclical working capital requirements; inadequate financing for expanding operations.

High leverage - too high reliance on debt for the capital structure, leading to excessive debt service and risk of default.

Overestimated market potential: Estimates of market size and the ability to capture market share may be unrealistic. Often assumptions are made about capturing market share without a workable strategy. The result is over-estimation of the revenue stream.

Under-estimated capital cost: Assumptions about pricing of capital goods and production inputs based upon current conditions that may not prevail over the life of the project. A prevalent problem is inadequate planning for working capital.

Underestimated competition: Little or no analysis of competition; assumption that competition will stand still in the face of a new player; lack of awareness of potential countermeasures that may thwart the best laid plans.

Planned capacities inconsistent with market: Failure to match capacity to market; succumbing to equipment suppliers' predilection to foist on unwitting investors capacity that is inconsistent with demand and market potential.

Unidentified sources of skilled personnel: Assumption of availability of suitably skilled personnel - local managers and technicians may lack experience in the industry, or the skills necessary to deal with advanced technology selected by the project designers.

Inadequate infrastructure: Deficiencies in support services and infrastructure; in one case a factory was constructed that required large quantities of electrical power without awareness that the nearest substation was several km distant.

Project design alternatives: Insufficiently studied alternative solutions (often in relation to environmental protection). There is a tendency for project designers to become locked into a perception of the project in its early stages, without adequate attention to market, technology and financial alternatives. Location and site selection based on non-commercial preferences.

Ineffective planning: Planned expansion too rapid. Problems in implementing new technologies overlooked.







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