AFRICAN INSTITUTE OF PROJECT PLANNING AND MANAGEMENT

P. O. BOX KENYA:

PROGRAM: POST GRADUATE DIPLOMA IN PROJECT PLANNING AND MANAGEMENT:

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AREAS OF CONCERN

- ***Definitions***
- ***Illustrations***
- ***Objectives***
- ***Aims***
- ***Conclusion***

References

I. *Massie, L. (1971). Essentials of Management, Practice Hall, Eaglewood Cliffs, N.J*

II. *Laurie M., (2007). Management and Organizational Behaviour, Pearson, New Delhi.*

III. *Rory burke. Project management ,planning and control techniques*

IV. *United Nations Industrial Development Organization (UNIDO).(1972). Guidelines for Project*

V. *Evaluation. New York. United Nations.*

Welheiser, J. G., &Gwin N. E. (2005) Preparing for the Worst, Planning for the Best. München: K. G. Saur

SOLUTION FOR ASSIGNMENT SEVEN

1. *Explain project life cycle process with suitable diagrams*

A project is an organization of people dedicated to a specific purpose or objective. Projects generally involve large, expensive, unique, or high risk undertakings which have to be completed by a certain date, for a certain amount of money, within some expected level of performance. At a minimum, all projects need to have well defined objectives and sufficient resources to carry out all the required tasks.

Therefore project life cycle is One method that has been used with some regularity in order to help managers conceptualize the work and budgetary requirements of a project is to make use of the idea of the project life cycle. The concept of the life cycle is familiar to most modern managers. Life cycles are used to

Explain the rise and demise of organizations, phases in the sales life of a product, etc. In a similar fashion, managers often make use of the life-cycle concept as a valuable tool for better understanding the stages in a project and the likely materials requirements for the project through each distinct phase.

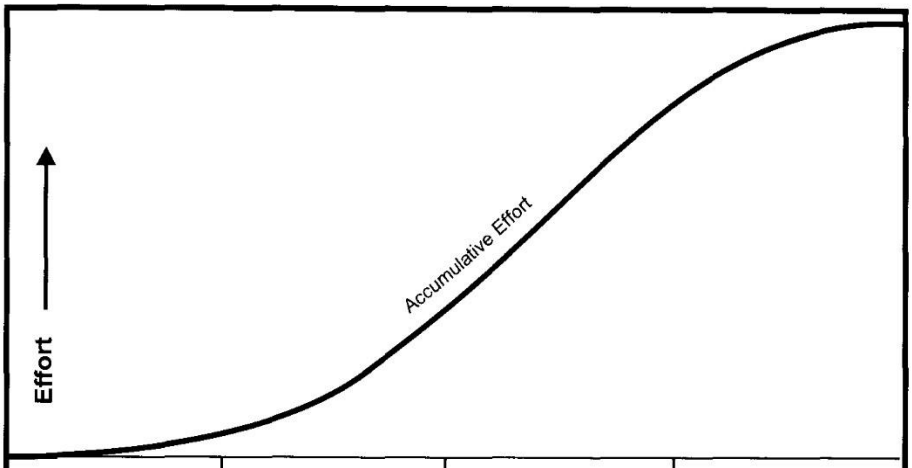
A project's life cycle has been divided into four distinct stages:

l. Conceptualization; the initial project stage. At this stage a project is determined as being necessary. Preliminary goals and alternatives are specified, as well as the possible means to accomplish those goals.

2. Planning; this stage involves the establishment of a more formalized set of plans to accomplish the initially developed goals. Among planning activities are scheduling, budgeting and the allocation of other specific tasks and resources.

3. Execution the third stage involves the actual "work" of the project. Materials and resources are procured, the project is produced, and performance capabilities are verified.

4. Termination; once the project is completed, there are several final activities that must be performed.



Concept	Design	Implementation	Commission
Input	**Input**	**Input**	**Input**
Problem or opportunity, project brief, project charter	Approval to go ahead, design and develop the product	Approval to implement project	Commissioning plan, notification of completion
Process	**Process**	**Process**	**Process**
Feasibility study	Design product, develop detailed schedules, WBS, CPM and budgets	Award contracts and issue instructions, procure equipment and services, make the product or solve the problem	Start-up and test the product. Has the problem been solved? Produce as-built drawings and operation manuals
Key Activities	**Key Activities**	**Key Activities**	**Key Activities**
Identify stakeholders cost benefit analysis	Modeling		
Hold Points	**Hold Points**	**Hold Points**	**Hold Points**
Output	**Output**	**Output**	**Output**
Feasibility study, Project proposal and Execution strategy	Baseline plan (design and schedule)	Certificate of completion	Closeout Report
Approval	**Approval**	**Approval**	**Approval**
Go / no go decision	To implement project	Ready to commission	Project accepted by client

Figure 3.2: Project Life-Cycle Components (for a typical project, using this as a standard proforma relate the components to one of your projects)

2. What are the roles of data collection and report in project completion?

1. *Impact on the lives: (impact is about more than the immediate outputs of interventions and their direct effects. It concerns the lasting and/or significant changes in the lives of women, men, boys and girls that have occurred as a consequence. These may be planned or unplanned, positive or negative. Say whether more or less people are benefiting than planned).*
2. *Changes in the policies, practices, ideas and beliefs: (Consider what, and whose, policies, practices, ideas and beliefs have changed or are changing. Changes may be in the institutions of the household, community, state or market and occur at a local, national or international level. Some changes will have been planned but others may have occurred more opportunistically or through informal means).*
3. ***Progress towards gender equality*** *Progress may be seen in terms of:*
   - *More equitable participation in decision-making processes in personal, social and political spheres.*
   - *More equitable access to and control over economic and natural resources and basic social services.*
   - *Fewer women suffering gender-related violent.*
   - *Gender stereotypes and discriminatory attitudes towards women and girls being challenged.*
4. ***Role of beneficiaries in the project*** *Consider the level of beneficiary involvement:*
   - *Beneficiaries control the project.*
   - *Beneficiaries take charge of some activities.*
   - *Beneficiaries are actively involved in project activities.*
   - *Beneficiaries are now taking up post project follow-up activities.*
   - *Beneficiaries are being asked their opinions or only provide information.*

For advocacy, campaigning, research and networking projects, think about beneficiaries level of engagement/control in planning and implementation, their involvement in lobbying and campaigning and whether space is being created for poor people to be involved in decisionmaking processes affecting their lives.

Where networks or alliances have been built or strengthened, consider whether this has contributed to poor people's involvement and influences.

9. ***Sustainability***

   Sustainability means the main changes achieved are likely to last, that activities can be sustained where necessary and/or that beneficiaries and their organizations have gained significant new capacities for pursuing their own development objectives.

   Think about the following dimensions of sustainability: economic/financial; social/ organizational; technological; environmental; political).

10. ***Cost effectiveness***

    Judging the cost-effectiveness of a project involves looking at the relationship between all the costs incurred (i.e. financial and non-financial resources from all sources) and the results achieved. It involves making judgments about the following:

- *Do the results of the project warrant the resources invested in it.*
- *Within this project, are their ways by which the same or greater results could have been achieved for a smaller investment?*
- *Could the resources invested have achieved more if used in a different way i.e. rather than on this project?*
- *Where it is possible to make comparisons, are there factors that have added to, or reduced, the costs of this project compared to similar ones?)*

3. What is organizational design? Explain your answer with examples

Organization design is the formal framework which establishes in advance the intent, the work plan, the means of ascertaining progress and the assumptions on which the project is based. The premise of design is simply that 'thinking a project through' will improve its chances of achieving something and that such effort needs to be invested before the project starts. A good project document will answer the following questions:

1. ***What** is the project expected to accomplish, if completed successfully and on time?*
2. ***Why** is the project being undertaken? What are the reasons for it? What is the project's underlying rationale?*
3. ***How** is the project to be implemented? What work is necessary in order to achieve?*
4. ***Who** is primarily responsible for the project implementation?*
5. ***Who** are the intended beneficiaries, the target group, who are expected to benefit from the project?*
6. *Within what period of **time** is the project to be carried out and the objective to be attained?*
7. ***What resources** are necessary to achieve the objective?*
8. ***What external factors** are necessary for project success?*

A well-designed project is usually characterized by a project document which is logical and complete the format outlined in these guidelines provides the planner with a place to put each item of information, and permits verification that all the essential points have been covered.

The process usually begins with the identification of a problem, followed by formulation of objectives, which spell out the decision, action or change in a target group or area which is expected to occur as a direct result of the undertaking.

4. Discuss the goals of project management and explain the methods of project selection

Project management is the planning and control of events that together comprise the project. Project management aims to ensure the effective use of resources and delivery of the project objectives on time and within cost constraints.

- *Lead ethically*
- *Develop strategic vision*
- *Build trust*
- *Encourage followership*
- *Anticipate and manage change*
- *Focus on leading people*
- *Communicate effectively*
- *Create high-achieving teams*
- *Lead in times of conflict*
- *Genuinely empower those around them*
- *Build an authentic organizational culture*
- *Foster social responsibility*
- *Develop and lead a diverse workforce*
- *Continually grow as a leader Effective management is a primary objective for leaders across the globe.*

5. Using examples explain the following

I. Project evaluation

Third, the utility of many evaluation systems is affected by the way the evaluations are organized at the project, sectoral, or national levels. The effectiveness of the M/E studies and who uses them depends on where the monitoring and evaluation units are located. Since monitoring systems are centralized, studies often respond more to the needs of central agencies than to those of implementing agencies and project managers. The way the evaluation is organized may also exclude project beneficiaries from the planning and use of the studies. Nongovernment organizations (NGOs) may also be excluded. Furthermore, many M/E systems limit themselves to the monitoring of project implementation and give little attention to the operational phase, the assessment of project sustainability, or the evaluation of project impacts.

Evaluations also suffer from problems of coordination between the many different agencies involved in a project and from the logistical problems involved in ensuring rapid transmission, processing, and dissemination of monitoring information. These delays create a vicious circle. Because project managers and local agencies receive little feedback on the monitoring information they prepare, they have little incentive to provide prompt and accurate information for central agencies. As a result, the information finally produced is even less timely or useful.

Monitoring is a source of power to those who control the system and a threat to agencies that do not have this control (Bamberger 1988b; Chelimsky 1988; Palumbo 1987). The potentially threatening nature of evaluation has had a destabilizing effect on M/E systems, since those agencies being evaluated have sought to limit the use of any data that affect their budgets and programs. Furthermore, central agencies may compete among themselves to control the systems. As a result of these pressures and conflicts, national M/E systems in South Asia had been unable to operate in their current form for more than three years (Ahmed and Bamberger 1989).

A fifth and pervasive problem is that the agencies and individuals whose support is essential for conducting the studies or using the results may have little incentive to cooperate. Monitoring and evaluation are often seen as threats because poor evaluation results may lead to budget cuts, staff reductions, or criticism from higher levels. New projects or inquiries may thus find it difficult to win approval. There are also those who believe that nothing positive will come from a favorable evaluation. In other cases, agencies may object to the additional work involved in collecting monitoring data—none of which they believe will be of any practical use to them.

The lack of incentives, on the part of potential clients, to use evaluation is further complicated by the short time perspective of most policymakers and managers. With a few exceptions (for a discussion of how evaluation data has been used by some policy analysts in Asia, see Lamb and Weaving 1992), they tend to be more concerned with immediate results than with long−term benefits and impacts. Yet, one of the areas in which evaluation can make a substantial contribution is assessing the long term. Consequently, there is a limited demand for many of

evaluation's potential products. For the same reason, there is often greater demand for studies which monitor inputs than for those which evaluate outputs. Earlier, we mentioned that there is some evidence of a growing interest in impact studies, but this still continues to be the exception in most countries.

A final complicating factor has been the lack of coordination between donor agencies. As a result, line ministries such as Agriculture, Irrigation, or Urban Development, which have received assistance from different donor agencies, may be required to operate several independent monitoring systems for projects that are technically development projects involve many kinds of agencies: international (donors, NGOs, and foundations); national and sectoral (central government ministries, financial agencies, line ministries, NGOs, and national consulting and research groups); project implementing agencies; and intended beneficiaries.
These groups are often referred to as stakeholders, for they all have an interest in the outcome of the project and in the orientation and use of the M/E studies. One of the biggest problems for the evaluation team is to reconcile the conflicting demands of these groups.

Stakeholders are concerned about whether there should be an evaluation, what should be studied, and how the results should be interpreted and disseminated. The evaluator must identify the principal stakeholders and understand their information needs to ensure the evaluation is focused on utilization. Different users have different perspectives, and the evaluator must often negotiate with stakeholders to reach a consensus on what is to be studied and must try to fairly reflect
some of these different points of view. Some writers believe the evaluator should be an objective and impartial outsider who applies rigorous (and value−free) research methods to provide objective answers to questions about how well a program has performed; others argue that the

6. What is expected of a project leader?

Project. *Project risk is generally associated with the adequacy and track-record of the concerned technology and the experience of the project's management. The chief mitigants in this area is the selection of contractors, developers and operators who have proven track records. Independent consulting engineers can play a role in assessing the technical feasibility of projects by making technical risks transparent to lenders.*

Customer. *The risk with customers is that demand for the product or throughput declines or widely fluctuates. Given the high fixed costs of infrastructure projects, it is difficult, if not impossible, for these projects to reduce costs to match lower demand. Thus, the chief mitigant against this type of risk is an offtake agreement, i.e., a contract which guarantees purchase of the throughput. Essentially, a project company agrees to sell a large share of its output (minerals, electricity, transportation services through a pipeline, etc.) to a customer or group of customers for an extended period of time. The price per unit of output can be fixed, floating or adjusted for inflation or other factors. The customer benefits from this arrangement by securing*

a long-term, guaranteed source of supply for the output, but generally forfeits a certain amount of flexibility

in sourcing. The project company benefits by eliminating or substantially reducing its marketing risk.

Supplier. *The general issue here is with securing supplies for the project - electricity, water, etc. - and, again, long-term agreements that guarantee that the project will have access to critical inputs for the duration of the project's life are the chief instruments used to mitigate the risk. The three critical dimensions of supply are quality, quantity and availability. Does the input*

meet the necessary quality requirements of the project? Can the project get enough of the input? Is the supply reliable or are interruptions likely? For pipeline projects, rights-of-way might also be considered critical inputs because without them the project company would not be able to build the pipeline.

Sponsor. *The project sponsor is typically an entrepreneur or consortium of entrepreneurs who provide the motivating force behind the project. Often, the project sponsor is an entrepreneur without sufficient capital to carry out the project. In other cases, the sponsor might have the necessary capital but is unwillingly to bet the parent corporation's balance sheet on a high-risk venture. The primary risks with sponsors revolve around the sponsor's experience, management ability, its connections both international and with the local agencies, and the sponsor's ability to contribute equity. Investors and lenders can mitigate these risks by carefully evaluating the project sponsor's track record with similar transactions.*

Contractor. *The principal construction risks are schedule delays and budget overruns. Standard & Poor's, in fact, "believes that it would be difficult for a project to achieve investment-grade ratings prior to substantial completion of the project and initial startup." Mitigating these risks involves scrutinizing the contractor, specifically the contractor's experience with similar projects, reputation in the field, backlog of other projects and cash flow. The primary method of putting the burden of successful completion on the contractor, as opposed to on the lenders and investors, is a turnkey contract. A turnkey contract essentially binds the contractor to finish construction by a specified date for a fixed amount. The completed project must also meet the agreed upon technical specifications as certified by an independent engineer before payment is made. Additional mechanisms to ensure compliance with schedules and budgets include performance bonus and penalty clauses in the construction contract. Penalties for delays can be severe, as much as $750,000 per tariff day. It is also important to review the contractor's bidding history. A contractor which has a history of consistently bidding too low presents a greater risk of cost overruns. Additionally, independent engineers can play a role in monitoring the project's progress and certifying that the contractor has achieved the milestones on schedule.*

Operating risk. *The operator is the company or entity charged with the responsibility of maintaining the quality of the assets that generate the project's cash flow. Of course, lenders and investors want to make sure that the assets remain productive throughout the life of the project,*

or more importantly from their perspective, the life of the loan or investment. Hence, operating risks center around the efficient, continuous operation of the project, whether it is a mining operation, toll road, power plant or pipeline. Contracted incentive schemes are one way to allocate this risk to the operator.

Product. *Product risks might include product liability, design problems, etc. The underlying risk here is unperceived risks with the product, e.g., unforeseen environmental damages. For instance, an electrical transmission project running through a populated area might carry the risk of affected the population through the detrimental health effects of the electro-magnetic radiation. Using older, tested designs and technologies reduces the risk of unforeseen liabilities.*

For instance, the Asian infrastructure developer Gordon Wu built his reputation by recycling one straightforward power plant design in his many projects instead of re-designing each individual project. Through using a tested design, Wu was able to not only reduce product and construction risks, but also to reduce design costs through economies of scale.

Competitor. *This risk is related to industry risk, however it focused more directly on resources with which the competitor might be able to circumvent competitive barriers. Exclusive agreements, offtake agreements and supply arrangements all contribute to defending a long-term competitive advantage.*

Funding. *The funding risk is that the capital necessary for the project is not available. For example, equity participants might fail to contribute their determined amount. Or, the underwriters might not be able to raise the target amount in the market. Another funding risk is re-financing which occurs if the duration of the initial funding does not match the duration of the project. Funding risks can also relate to the division between local and foreign currency funding. As funding is often the linchpin of project financings, it is difficult to reduce the risk of not finding the funding. The choice of an experienced financial advisor as well as seeking capital from a broad range of sources represent two ways to mitigate this risk. Also, it is sometimes possible to restructure transactions to delay drawdown dates or to change the amounts of foreign versus local currency.*

Currency. *There are two currency risks facing project companies. The first risk is exchange rate fluctuation, i.e., devaluation erodes the value of a contract or payment in the project company's home currency, or the currency in which it must service its debt. The second risk is currency controls, i.e., the sovereign government limits the project company's access to foreign exchange or curtails its ability to make foreign currency payments outside of the country. Another possible means of mitigating currency risk is to engage in a currency swap.*

Interest rate. *Interest rate fluctuations represent a significant risk for highly-leveraged project financings. Arranging for long-term financing at fixed rates mitigates the risk inherent in*

Floating rates. Furthermore, projects can enter into interest rate swaps to hedge against interest rate fluctuations.

Risk allocation. *Just as important as identifying the risks, is the need to allocate the risks to the parties that are most suited to control and address the risks. Thus, risk allocation is a form of risk mitigation at the macro level. If the wrong parties are responsible for risks they are not suited to manage, the entire structure is at risk. Therefore, the crux of every project finance transaction is the proper allocation of risk. It might also be the most difficult aspect of assembling a transaction. As one project financial advisor argues, "the most significant characteristic of project finance is the 'art' of minimizing and apportioning the risk among the various participants, such as the sponsors, contractors, buyers and lenders."*

How are the risks in a project finance transaction allocated? The principal instruments for allocating the risks and rewards of a project financing are the numerous contracts between the project company and the other participants. "While often the cause of delay and heavy legal costs, efficient risk allocation has been central to making projects financeable and has been critical to maintaining incentives to perform."

7. Discuss in detail the attributes of a project leader?

Individual focus. Almost all empirical and theoretical studies of project leadership implicitly assumes a perspective of leadership as synonymous with a single individual, a leader. There is a tradition in the project management field of viewing the project manager as an individual, a tradition which is strengthened by the current wave of individual project management certifications sweeping over the world. At the same time, current developments in leadership research emphasize teamwork and views of team leaders as facilitators, implying that important knowledge on leadership are to be found in the relation between team members rather than in the leader as an individual.

Traits and "pseudo-traits" focus. In accordance with the interest in project managers as individuals, there is also an interest in their personalities. If a project is led by one person, and that person is of vital importance to project success, then it is of course most interesting to find out what individuals that are suited for such a task. Individuals are therefore mostly treated as if they possessed certain traits, and some of the existing research does also explicitly use psychological methods to investigate traits in successful project managers. But there is also several examples of "pseudo-traits" in the literature, in the form of what good project managers should be able to do, or even what good project managers are supposed to do (cf

Barber &

The danger of an un-reflexive "pseudo-traits" approach is of course that people are seen as bearers of a simplified set of unchangeable qualities rather than as active and developing actors. Confusing what people are with what they do is rarely recommendable.

Project focus.

While one of the most important trends in the project management field is the moving of focus from single projects to multi-project management and project portfolio management, project leadership research remains focused on the single project as if that was the most important unit to lead. Today, both project managers and project team members often work in several projects in parallel, implying that the single project is no longer the relevant level of analysis. The continuing focus on single projects may also have dysfunctional consequences, such as conserving old autonomous ideas about project leadership that are not suited to modern

portfolio thinking, or maintaining the traditional group dynamics view of a project team as working together face-to-face throughout the project duration (in spite of the increased use of short-term specialists and virtual teams).

Lack of theoretical reflexivity. Insofar different schools of thought in the general leadership research literature are indeed drawn upon, they are usually treated as complementary evidence that can be used to inform the project management community on how to improve project leadership practices. At the same time, these schools of thought actually rest upon different scientific assumptions and in several cases they are in direct conflict with each other. For example, a leadership theory explaining project success out from leadership style can hardly be seen as complementary to one emphasizing personal traits in the individual leader or one viewing leadership as a process of group interaction. There is a clear need for conscious discussions on the foundations of research, instead of the usual implicit assumption that project management is a field in its own right that can formulate its own leadership theories.

Lack of empirical research. One evident consequence of the lack of thorough, theoretically informed research on project leadership, is that the empirical foundations of all the normative advice may become weak. In general, it seems that the better the theoretical foundation, the better the achieved empirical support for the conclusions. For example, the stream of research

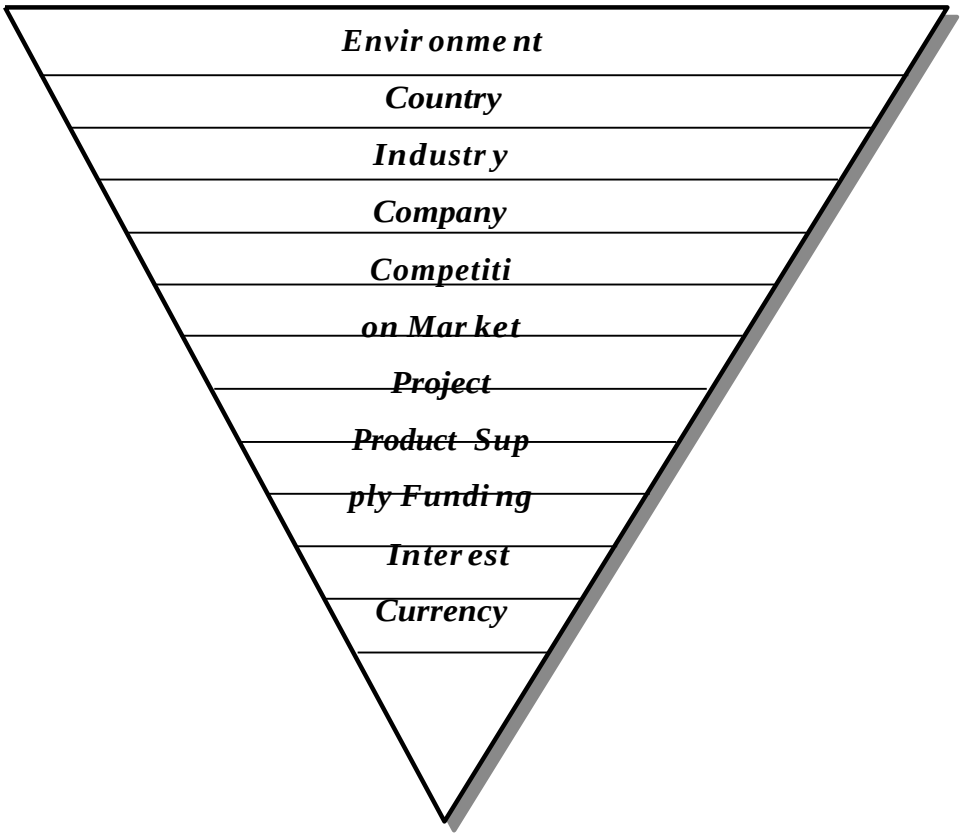
described above using Fiedler's situational/contingency perspective contains several quantitative studies of good quality. Otherwise, the field tend to rely on exploratory research (often made decades ago) mapping empirical patterns rather than testing theoretical hypotheses or

developing theory. Moreover, there are almost no existing qualitative studies of what project leaders do or what leadership processes that goes on in project teams.

To conclude this discussion, there is a need for more empirical studies on project leadership, based on thorough and well-founded theoretical reasoning. The range of theoretical schools within leadership research that can be applied to project leadership is also far wider than the current preoccupation with various aspects of contingency theory and leadership style. Moreover, a widened view and explicit discussions on the foundations of project leadership research can also contribute to a re-formulation of the project leadership ideals that fills the literature today, ideals that rather serve to re-masculinize work life than promoting new ways of working and living .

8. With the help of the risks and mitigants pyramid explain project financing

Risks and Mitigants Pyramid



Country. *Country risks cover the political economy. Examples of country risk include civil unrest, guerrilla sabotage of projects, work stoppages, any other form of force majeure, exchange controls, monetary policy, inflationary conditions, etc. The country risk in some cases serves as the ceiling for a project's risk rating. For instance, Standard & Poor's credit rating agency limits specific project ratings by the sovereign credit rating that the agency assigns the country. That is, no project, despite its particular circumstances, can have a higher credit rating than the country's credit rating. Specific mitigants might include political risk insurance against force majeure events or allocating risk to the local company. Involving participants from a*

broad coalition of countries also gives the project sponsors leverage with the local government.

Political. *These risks cover changes within the country's political landscape, i.e., change of administration, as well as changes in national policies, laws regulatory frameworks. Environmental laws, energy policies and tax policies are particularly important to pipeline projects. These risks are not confined to the most unstable regimes in the developing world. It is a mistake to simplify political risks into only the most drastic actions such as expropriation. In the political environment of the 1990s, these drastic actions are rare. Nevertheless, infrastructure projects in developing countries continue to face significant political risks, albeit in more subtle forms "such as price regulation, restrictions on working permits for foreign managers, renegotiation of contracts, and even buyouts."*

In a recent article in Harvard Business Review, Louis Wells and Eric Gleason cite an example in Thailand where the government "unilaterally ordered a private toll road opened and lowered the amount its foreign owners could charge in tolls." The local sponsor, Thai Expressway and Rapid Transit Authority obtained a court order to force the project sponsors to open the toll road at a lower. It would be a mistake to confine these political risks to the developing world. State regulatory bodies in the United States can be just as fickle with rate regulations for power plants as any foreign ministry of energy.

Mitigants include, again, political risk insurance as well as flexible tariff agreements that incorporate adjustments for these types of contingencies. An intimate acquaintance with the local political environment also increases a project sponsor's ability to foresee trouble spots.

Industry. *Competitive forces within the industry represent significant risks to the project. It is necessary for project sponsors to analyzes the potential risks that their particular project faces vis-à-vis global and local industries. The prices of substitute products, inputs and outputs are critical factors in determining the economics of the project. Other competing projects within the country or in the neighboring region have competitive implications for the project. Standard and Poor's checklist for competitive forces for pipelines provides an example of the types of industry risks that creditors emphasize:*

- *the influence of other existing or planned pipelines in the area;*
- *cost of transportation - the economics of the pipeline to the end users;*
- *substitutes - other sources of energy that could compete with the fuel being transported;*

- *the potential for other uses and/or users of the feedstock being transported by the pipeline, which could render the pipeline obsolete;*
- *present and prospective commodity price and supply situation;*
- *potential for supply disruptions and exposure to price fluctuations.*

The primary mitigant against industry or competitive risk is thorough industry analysis and insight into the industry's underlying dynamics.

9.What are the sources for finance for a project, discuss each in detail

Capital-intensive. *Project financings tend to be large-scale projects that require a great deal of debt and equity capital, from hundreds of millions to billions of dollars. Infrastructure projects*

tend to fill this category. A World Bank study in late 1993 found that the average size of project financed infrastructure projects in developing countries was $440 million. However, projects that were in the planning stages at that time had an average size $710 million.

Highly leveraged. *These transactions tend to be highly leveraged with debt accounting for usually 65% to 80% of capital in relatively normal cases.*

Long term. *The tenor for project financings can easily reach 15 to 20 years.*

Independent entity with a finite life. *Similar to the ancient voyage-to-voyage financings, contemporary project financings frequently rely on a newly established legal entity, known as the project company, which has the sole purpose of executing the project and which has a finite life "so it cannot outlive its original purpose." In many cases the clearly defined conclusion of the project is the transfer of the project assets.*

For example, in a build-operate-transfer (BOT) project, the project company ceases to exist after the project assets are transferred to the local company.

Non-recourse or limited recourse financing. *The project company is the borrower. Since these newly formed entities do not have their own credit or operating histories, it is necessary for lenders to focus on the specific project's cash flows. That is, "the financing is not primarily dependent on the credit support of the sponsors or the value of the physical assets involved." Thus, it takes an entirely different credit evaluation or investment decision process to determine the potential risks and rewards of a project financing as opposed to a corporate financing. In the former, lenders "place a substantial degree of reliance on the performance of the project itself.*

As a result, they will concern themselves closely with the feasibility of the project and its sensitivity to the impact of potentially adverse factors." Lenders must work with engineers to determine the technical and economic feasibility of the project. From the project sponsor's perspective, the advantage of project finance is that it represents a source of off-balance sheet financing.

Controlled dividend policy. *To support a borrower without a credit history in a highly-leveraged project with significant debt service obligations, lenders demand receiving cash flows from the project as they are generated. This aspect of project finance recalls the Devon silver mine example, where the merchant bank had complete access to the mine's output for one year. In more modern major corporate finance parlance, the project has a strictly controlled dividend policy, though there are exceptions because the dividends are subordinated to the loan payments. The project's income goes to servicing the debt, covering operating expenses and generating a return on the investors' equity. This arrangement is usually contractually binding. Thus, the reinvestment decision is removed from management's hands.*

Many participants. *These transactions frequently demand the participation of numerous international participants. It is not rare to find over ten parties playing major roles in implementing the project. The different roles played by participants is described in the section below.*

Allocated risk. *Because many risks are present in such transactions, often the crucial element required to make the project go forward is the proper allocation of risk. This allocation is achieved and codified in the contractual arrangements between the project company and the other participants. The goal of this process is to match risks and corresponding returns to the*

parties most capable of successfully managing them. For example, fixed-price, turnkey contracts for construction which typically include severe penalties for delays put the construction risk on the contractor instead on the Project Company or lenders. The risks inherent to a typical project financing and their mitigants are discussed in more detail below.

Costly. *Raising capital through project finance is generally more costly than through typical corporate finance avenues. The greater need for information, monitoring and contractual agreements increases the transaction costs. Furthermore, the highly-specific nature of the financial structures also entails higher costs and can reduce the liquidity of the project's debt. Margins for project financings also often include premiums for country and political risks since so many of the projects are in relatively high risk countries. Or the cost of political risk insurance is factored into overall costs.*

Another means of understanding project finance is to relate it to corporate finance. Kensinger and Martin draw this comparison,

> *Generally when a corporation chooses to undertake an investment project, cash flows from existing activities fund the newcomer; and management has the option to roll over the project's capital into still newer ventures within the company later on -- without submitting them to the discipline of the capital market.*
>
> *With project financing, by contrast, the assets and cash flows associated with each project are accounted for separately. Funding for the new project is negotiated from outside sources, and creditors have recourse only to the assets and cash flows of a specific project. As the project runs its course, furthermore, the capital is returned to the investors, and they decide how to reinvest it.*

Most actual projects probably fall somewhere between the two theoretical definitions. When evaluating a project, however, it is useful to think of it falling somewhere along a Corporate Finance-Project Finance Continuum. The following chart summarizes the key differences between the two types of financing.

10.What is the importance of looking at the sources of finance for a project

Government. *Though local governments generally participate only indirectly in projects, their role is often most influential. The local government's influence might include: approval of the project, control of the state company that sponsors the project, responsibility for operating and environmental licenses, tax holidays, supply guarantees, and industry regulations or policies, providing operating concessions.*

Project sponsors or owners. *The sponsors are the generally the project owners with an equity stake in the project. It is possible for a single company or for a consortium to sponsor a project. Typical sponsors include foreign multinationals, local companies, contractors, operators, suppliers or other participants. The World Bank estimates that the equity stake of sponsors is typically about 30 percent of project costs. Because project financings use the project company as the financing vehicle and raise nonrecourse debt, the project sponsors do not put their corporate balance sheets directly at risk in these often high-risk projects. However, some project sponsors incur indirect risk by financing their equity or debt contributions through their corporate balance sheets. To further buffer corporate liability, many of the multinational sponsors establish local subsidiaries as the project's investment vehicle.*

Project company. *The project company is a single-purpose entity created solely for the purpose of executing the project. Controlled by project sponsors, it is the center of the project through its contractual arrangements with operators, contractors, suppliers and customers. Typically, the only source of income for the project company is the tariff or throughput charge from the project. The amount of the tariff or charge is generally extensively detailed in the off-take agreement. Thus, this agreement is the project company's sole means of servicing its debt. Often the project company is the project sponsors' financing vehicle for the project, i.e., it is the borrower for the project. The creation of the project company and its role as borrower represent*

the limited recourse characteristic of project finance. However, this does not have to be the case. It is possible for the project sponsors to borrow funds independently based on their own balance sheets or rights to the project.

Contractor. *The contractor is responsible for constructing the project to the technical specifications outlined in the contract with the project company. These primary contractors will then sub-contract with local firms for components of the construction. Contractors also own stakes in projects. For example, Asea Brown Boveri "created a fund, ABB Funding Partners, to purchase stakes in projects where ABB is a contractor. Subscribers to the fund are a mixture of*

institutional investors focused on the energy sector, and the financing arms of big contractors." Richard Ingham, managing director of the project finance group at Chase Manhattan, argues that much of the infrastructure development "is being driven by the contractors which may ultimately view equity investment as a cost of doing business."

Operator. *Operators are responsible for maintaining the quality of the project's assets and operating the power plant, pipeline, etc. at maximum efficiency. It is not uncommon for operators to also hold an equity stake in a project. Depending on the technological sophistication required to run the project, the operator might be a multinational, a local company or a joint-venture.*

Supplier. *The supplier provides the critical input to the project. For a power plant, the supplier would be the fuel supplier. But the supplier does not necessarily have to supply a tangible commodity. In the case of a mine, the supplier might be the government through a mining concession. For toll roads or pipeline, the critical input is the right-of-way for construction which is granted by the local or federal government.*

Customer. *The customer is the party who is willing to purchase the project's output, whether the output be a product (electrical power, extracted minerals, etc.) or a service (electrical power transmission or pipeline distribution). The goal for the project company is to engage customers who are willing to sign long-term, offtake agreements.*

Commercial banks. *Commercial banks represent a primary source of funds for project financings. In arranging these large loans, the banks often form syndicates to sell-down their interests. The syndicate is important not only for raising the large amounts of capital required, but also for de facto political insurance. Even though commercial banks are not generally very comfortable with taking long term project finance risk in emerging markets, they are very comfortable with financing projects through the construction period. In addition, a project might be better served by having commercial banks finance the construction phase because banks have expertise in loan monitoring on a month-to-month basis, and because the bank group has the flexibility to renegotiate the construction loan.*

While not part of the project finance angel, the following components make the angel diagram even more complex.

Capital markets. *Major investment banks have recently completed a number of capital market issues for international infrastructure projects. Through the private placement market, the banks*

have successfully raised capital from institutional investors. As a consequence, many pundits are touting the capital markets as the instrument of choice for financing emerging markets transactions. The capital market route can be cheaper and quicker than arranging a bank loan. In addition, the credit agreement under a capital market is often less restrictive than that in a bank loan. Furthermore, these financings might be for longer periods than commercial bank lending; might offer fixed interest rates; and can access wider pool of available capital and investors such as pension funds.

The disadvantages of capital market financings include: the necessity of preparing a more extensive disclosure document; capital market investors are less likely to assume construction risk; the bond trustee plays a greater role; more disparate investors - not a club of banks; unlike bank debt, proceeds are disbursed in a single lump sum, leading to negative carrying costs.[22]

Credit agency ratings for project finance transactions, however, are making the capital market route much smoother by making credit evaluations more transparent.

Direct equity investment funds. *Private infrastructure funds represent another source of equity capital for project financings. Examples of these funds include AIG Asian Infrastructure Fund ($1.1 billion), Peregrine's Asian Infrastructure Fund ($500 million), Global Power Investments ($500 million) and the Scudder Latin America Infrastructure Fund ($100 million, with target of $600 million). These funds raise capital from a limited number of large institutional investors. Then their advisory teams screen a large number of infrastructure projects for potential investment opportunities. The funds typically take minority stakes of the infrastructure projects in which they invest.*

Multilateral agencies. *The World Bank, International Finance Corporation and regional development banks often act as lenders or co-financers to important infrastructure projects in developing countries. In addition, these institutions often based capital requirements; a general decline in commercial bank credit quality. See J. Paul Forrester.*

11.With the aid of the project finance structure discuss the various participants and their relevance

Financing vehicle	*Multi-purpose organization*	*Single-purpose entity*
Type of capital	*Permanent - an indefinite time horizon for equity*	*Finite - time horizon matches life of project*
Dividend policy and reinvestment decisions	*Corporate management makes decisions autonomous from investors and creditors*	*Fixed dividend policy immediate payout; no reinvestment allowed*
Capital investment decisions	*Opaque to creditors*	*Highly transparent to creditors*
Financial structures	*Easily duplicated; common forms*	*Highly-tailored structures which cannot generally be re-used*
Transaction costs for financing	*Low costs due to competition from providers, routinized mechanisms and short turnaround time*	*Relatively higher costs due to documentation and longer gestation period*
Size of financings	*Flexible*	*Might require critical mass to cover high transaction costs*

Basis for credit evaluation	*Overall financial health of corporate entity; focus on balance sheet and cashflow*	*Technical and economic feasibility; focus on project's assets, cash flow and contractual arrangements*
Cost of capital	*Relatively lower*	*Relatively higher*
Investor/lender base	*Typically broader participation; deep secondary markets*	*Typically smaller group; limited secondary markets*

II. Project finance: when and why?

Given the previous discussion the advantages of project finance as a financing mechanism are apparent. It can raise larger amounts of long-term, foreign equity and debt capital for a project. It protects the project sponsor's balance sheet. Through properly allocating risk, "it allows a sponsor to undertake a project with more risk than the sponsor is willing to underwrite independently." It applies strong discipline to the contracting process and operations through proper risk allocation and private sector participation. The process also applies tough scrutiny on capital investment decisions. By involving numerous international players including the multilateral institutions, it can provide a kind of de facto political insurance. Kensinger and Martin further argue that the finite life and fixed dividend policy aspects of project finance "mean that investors rather than managers get to make the decisions about reinvesting the cash flows from the project."

On the other hand, the financing technique also presents certain disadvantages. It is a complex financing mechanism that can require significant lead times. High transaction costs are involved in developing these one-of-a-kind, special-purpose vehicles. The projects have high cash flow requirements and elevated coverage ratios. The contractual arrangements often prescribe intrusive supervision of the management and operations that would be resented in a corporate finance environment.

THE END