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EVALUATION OF THE

INDUSTRIAL PRODUCTION PROJECT

AND OTHER INDUSTRIAL SECTOR PROGRAMS

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## I. Introduction

### A. Background and Purpose of Evaluation

The framework for the evaluation of USAID/Cairo program modes in Egypt's industrial sector is described in Appendix 1 of this report. It sets forth the macro economic and strategic basis for our evaluation and contains the following salient points:

- Egypt must supplement existing sources of foreign exchange through the development of efficient tradeable goods industries in the commodity, producing, industrial and agricultural sectors in order to sustain favorable economic performance trends.
- The industrial sector can play a key role in sustaining Egypt's economic performance.
- However, many constraints exist which inhibit the role the sector can play. These range from constraints on private sector investment to underutilization of public sector capacity.
- Egypt has made progress toward removing some of these constraints and USAID wishes to support further efforts in this area.
- To that end USAID's involvement began in an unstructured way seeking large economic investments that could absorb the high level of funds provided to Egypt.

At this point in time USAID has made significant intervention in the industrial sector and wishes to capitalize on the lessons learned from those experiences. Specifically, it seeks to evaluate these current modes of project and non-project support to the industrial sector in terms of:

- Purposes/objectives
- Manner in which the projects were to work
- Accomplishments to date

Based on this evaluation USAID wishes to develop other options for supporting the Egyptian industrial sector which is consistent with USAID strategy. This primary evaluation will be followed by a second phase during which other program options will be more fully explored and where we will actively seek to establish a working dialogue among USAID, appropriate Egyptian ministries, policy makers, company chairmen and various influential institutions. The purpose of this initial evaluation was therefore to provide some base line data to act as a point of departure; to analyze both processes and outcomes so as to identify as many variables as we could which influenced USAID's projects to date; and to provide a sense of direction for future interventions in the industrial sector which will have both macro and micro level impact.

#### B. The Approach

Our primary focus in this evaluation was on the Industrial Production Project (I:P). This project was analyzed in terms

of its stated and implied objectives, the design of project activities and assumed causal linkages, and its execution and its progress to date. The evaluation was analytic in nature and was based on the following sources:

- Documentation review
- Interviews-individual and small group
- Workshop discussions

In addition the evaluation team attempted to begin a dialogue among the various groups involved in the project. This approach was taken for several reasons. First, we believed it was essential that the various groups needed a better understanding of each other's strengths and limitations; second, the dialogue was a useful way for the various groups to begin to challenge some of their own assumptions and attempt to articulate their point of view in ways more focused than had occurred in the past; third, we believe it was an essential way to generate as many realistic yet creative ideas about how the IPP should be restructured, or whether it should continue to be funded; fourth, the team believed that this evaluation should act as a basis for the more intensive and comprehensive dialogue that must occur during the second phase of this project. We attempted, therefore, to extend our role as consultants beyond solely providing advice to one of acting as a catalyst for ideas from the various decisionmakers in this project.

### C. Limitations

The constraints of time and schedules limited the scope of this work. These constraints included the absence of some key people to be interviewed or participate in workshops, the time in which to conduct the evaluation which precluded us from interviewing a broader range of company chairmen, and the availability and accessibility to data and documents. However, these constraints do not alter the project's findings in a substantive way. Rather, we suggest caution in projecting the findings to a broader population than this survey suggests.

### D. Outline of the Report

The remainder of this report consists of five chapters. Chapter II describes in summary form the major factors which had an impact on the Industrial Production Project. Chapter III focuses on the specific findings of our evaluation of the IPP and addresses the areas of project goals, policy and design, and project execution. Chapter IV contains our conclusions and recommendations concerning the IPP; while Chapter V describes and assesses other USAID program modes in the industrial sector. Chapter VI is a description of various mechanisms available to USAID to use in structural reform and acts as a framework for phase two of this evaluation/assessment of USAID's interventions in Egypt's industrial sector.

## II. Summary of Major Management Issues

The Industrial Production Project was designed to improve the Government of Egypt's process for planning and allocating scarce investment resources. Our evaluation of the project in terms of goals, activities and outcomes has led us to conclude that major problems exist in the execution of the project and that there is a need to restructure the project. The project has become a major drain on the managerial resources of the Government of Egypt, individual company chairmen and USAID without providing substantial improvements to industrial productivity because none of the subprojects have been implemented.

The causes of the problems for delay are varied, and it is both impossible and inappropriate to identify any single cause for the current situation. Therefore, our approach to the evaluation attempted to identify a sequence of variables which when viewed as a whole present the major issues which had an impact on the project. We believe that the various decisionmakers should also assess the project as a whole before attempting to revise any single portion of the project, or to abandon the project completely.

Detailed support for our assessment is contained in Chapter III. However, our evaluation of the IPP project has resulted in the following brief description of our findings and conclusions.

The IPP project was designed on an incomplete assessment of need and without a clear strategy in mind.

In our discussions and review of documents it appeared that when the project was first designed there was no clear strategy for industrial development. In the aggregate there was a demand for investments in rehabilitation of plants and equipment but no definitive criteria as to how the limited resources of the IPP could be effectively applied to the situation. In addition it was not clear what institutional, as opposed to individual, dialogue occurred between the Government of Egypt and USAID to identify any clear thrust of the project. As a result it appears that alternative options for channeling funds into the industrial sector were not fully explored. The absence of a strategy, however understandable it is in light of USAID's minimal experience in Egypt at that time, nonetheless set the stage for future problems in the project.

• The limited assessment and other factors resulted in unfocused goals and objectives.

The incomplete assessment of the problems confronting Egyptian industries led to goal and objective statements which were not at times consistent or were so broad that it was not clear where project resources should be allocated. For example, it appears that the institutional capacity/building goal (for GOFI) seemed to compete with the objective of providing service and

equipment directly to the individual companies. The efforts expended on the former often detracted resources from the latter.

In addition there seem to be a number of informal or implied objectives which were not clearly shared between GOFI, USAID and the companies. An example of this is the objective of structural reform in pricing, employment and other policies. These implied objectives often took precedence over the formal ones to the detriment of project execution.

- The unclear statement of goals resulted in the design of a project which had uncoordinated and diverse components.

The design of the project with four major components reflected the need to meet a broad array of goals (stated or implied). Since the goals of the project were not effectively linked, each component appears to be an end in itself aimed at targets of opportunity. For example, the training component is not closely linked to either the environmental or capital assistance components except in terms of subject matter.

Furthermore, these four components of the project were to be implemented by three separate contractors; yet the design of the project did not ensure that coordination would take place. At this time there are two contractors working on the capital/technical assistance and environmental improvement components and the need still exists to link their activities in a more structured way.

- The design of the project did not adequately define the role of key decisionmakers and in fact contributed to role conflict.

4 The varied components of the project and the lack of specific direction for the activities of the project we believe caused a role conflict between USAID, GOFI, the contractor and company chairmen. For example, it was not clear to us whose interests the contractor was supposed to work for. In some cases the contractor was viewed as a "de facto" GOFI acting in the role of GOFI towards the company. In other cases the contractor was asked to be an advocate for the company in responding to GOFI or USAID review procedures. The contractor viewed itself as being paid by one party and working for another party.

Furthermore, the role and relationship between GOFI and USAID was not clear to us. For example, it appeared that USAID's project review procedures in fact placed USAID in a decision-authority relationship with GOFI. This role appears to be contrary to the stated aims of the project for developing a decisionmaking capability with GOFI. When a decisionmaking body is always subject to review and it is not permitted to experience success or failure of its own investment decision, it will not be able to effectively learn how to make decisions. The dilemma caused by the need for USAID to protect its investment while simultaneously assisting GOFI in its decisionmaking processes (assuming they needed and wanted it) set the stage for an inevitable conflict between the organizations.

The role of GOFI in relation to the other parties involved

in the project was also unclear. In fact, depending on circumstances, GOFI acted in several different roles simultaneously. First, it was in a competitive role with the companies. According to the project design, GOFI was considered a client or beneficiary of management assistance and training, and in fact would have had to compete with the companies for scarce resources in the project. Simultaneously, GOFI had the role of decisionmaker or allocator of project resources. In that case GOFI could choose or select who from their own staff received training or who from the companies could attend. It was not clear to us how an ultimate conflict of interest could be avoided. Finally, GOFI by the nature of its charter was supposed to assist companies on technical and administrative matters and in essence be a spokesman for the company. These three roles, imposed on GOFI by the design of the project, created a situation whereby it was difficult to balance conflicting expectations. As such, the motives for certain activities were suspect.

The design of the contract also created role conflict for the contractor. Not only was it unclear as to who was the contractor's "boss" (USAID, GOFI, the companies), the design of the project had an element in it which may have created some perception problems. This involved the "right of first refusal" for subproject contract work. There is no evidence whatsoever to suggest that the contractor worked in its own interest, but that element of the project most likely put the contractor at a

disadvantage in terms of making some technical recommendations concerning subprojects.

From our assessment we conclude that the design of the project created unclear roles among the various parties and resulted in dysfunctional role conflict.

- The role conflict between and within the various key decisionmakers tended to emphasize the dissimilarities between the groups. As a result, the needs of the public sector companies were neglected.

Through our interviews and discussions we found that, because there is misunderstanding as to the proper role of each organization, each key decisionmaker tended to emphasize the differences with the other groups. None of the groups seemed to be fully aware as to how each operated in the project and what were the concerns of the other. For example, subproject selection criteria was not effectively shared among the group and consequently disputes arose as to different selection criteria. The differences in time perspective between GOFI and USAID was stressed as a problem yet no compromise seemed to have resulted, while in fact both parties contributed to delays.

While the key parties spent a great deal of time dealing with their dissimilarities because of a lack of understanding of each other's problems (such as the ability to review feasibility studies in a short time) and did not focus on mutual areas of

concern, the needs of the public sector companies were neglected: projects were delayed, managerial assistance was minimally provided, and no training programs were instituted.

The emphasis on the dissimilarities between the groups inhibited their ability to effectively communicate and tended to focus the groups' attentions on procedures rather than results.

A prime intended result of this project was to rehabilitate and modernize the productive capacity of public sector companies. Yet the groups tasked to carry out that became so focused on procedures such as procurement and contracting that their communication with each other seemed to focus on the trivial rather than discussion about broader, more results oriented issues.

This in turn reinforced each other's negative perceptions and tended to widen the gap of understanding.

As procedural issues became more important, these crowded out other investment decision-making criteria.

The lack of effective communication between the parties and the lack of understanding of various investment criteria (e.g., economic rate of return vs. financial, \$10 million limitations versus social/political benefits) tended to focus investment decisions for subprojects on rigid numerical criteria while implicit criteria were not openly addressed. The project had a built in dilemma. It was attempting to introduce a rational

decisionmaking process in a social organizational setting which functions on the basis of personal trust and friendship. Emphasizing one extreme to the exclusion of the other seemed to generate situations where decisionmakers used numbers to justify either extreme position. For example, if a project was to be rejected because USAID did not want to invest in a heavily subsidized project, then it may have been more effective to state that reason rather than using less than 15% FRR as the sole reason for rejection.

Similarly, GOFI should accept that in many cases it is essential to have more detailed financial, marketing and engineering information to base their decisions on investment. It would seem that the approach to investment decisions did not always seek the middle ground where the interests and motives of each party could be met.

As a result of the relationships between limited assessment of need, unclear goals, ad-hoc project design, role conflict and procedures over results, the project has not achieved its stated objectives.

To date 13 projects have been designed, 2 management assistance studies have been completed, and some \$600,000 has been spent on equipment. People in all organizations have been frustrated by the project and all seem ready to accept necessary changes. In fact, we found that all parties at one time or another attempted to improve the process. The fast track approach to feasibility studies is one example of that effort. We found that the time is right for

needed organizational and project oriented change by all concerned

The project has, in fact, had some benefits which could be used to restructure the program to achieve its intended results.

We believe that the project has had some positive outcomes which should be capitalized on. These include:

- . A better awareness of the problems facing Egypt's industrial sector.
- . Experience in conducting feasibility studies and the constraints on them.
- . A shift toward more discussion of structural reform and the impact on firm level performance.
- . Greater experience with procedural issues which could result in more compatibility between the USAID and GOE systems.
- . A contractor who is more knowledgeable about working in Egypt.
- . A greater base of project officers in USAID to manage the system.
- . Development of awareness on the part of GOFI for better feasibility studies.
- . An opportunity to restructure the program in light of a more realistic and focused industrial strategy

These issues were intended to provide the evaluation team's assessment in broad terms so that when specific elements are addressed in the following chapter, the reader will have a system perspective concerning the Industrial Production Project.

### III. Evaluation of Industrial Production Project (IPP)

In this chapter, the goals of the IPP are presented and analyzed, and the major components of the IPP are described. Each of the IPP components are evaluated in terms of whether they are satisfying a need in the industrial sector, whether appropriate criteria are used to select the projects, and whether the intended effects of the IPP are being realized. This chapter begins with broad concerns about the policy formulation process and how the goals for the IPP were established. The capital assistance, management assistance, training, and environmental pollution control components of the IPP are then analyzed in detail and conclusions and recommendations are presented.

#### A. Goals of the IPP

The primary goal of the IPP is to increase productive capacity and growth in the Egyptian economy through the rehabilitation of capital equipment. A major purpose of the IPP, as stated in the project paper, is to improve the institutional capability of the Ministry of Industry (MOI) to rationalize the industrial sector, primarily its method of allocating resources. The project activities to support the achievement of that purpose include training and technical assistance.

In our discussion with the various parties involved and from our review of documentation, we found that there was not a clear agreement as to the purpose of the project. For example, the chart on the following page illustrates a broad range of both stated

<u>Goal, Purpose, Objective</u> <u>Raison d'Etre</u>	<u>Stated/ Implied</u>	<u>Causal Linkage Assumption</u>	<u>Comment</u>	<u>Achievement to Date</u>
1 Increase GOE national income	Stated	•Productive public sector enterprises induce economic growth		1
2 Improve GOE capability to increase efficiency and output of industrial sector.	Stated	•Capability translates into action	Definition of <u>capability</u> non-existent -- instruments to apply capability not stated, e.g., policy reforms vs. resource allocation	2
3 Improve institutional capability of MOI to plan and manage resource allocation	Stated	•Resources not allocated efficiently •Both MOI and companies are central to resource allocations and other institutions (e.g., DIB) will not lead to broad BOE capability	•Companies minimally involved Present system in GOFI and Ministry of Planning mirrors public sector planning process in developed countries	3 Minimal achievement
AND				
4 Companies to plan and manage resource allocation	Stated	•Also companies have resources to allocate and in themselves can influence broad resource allocation		4 No achievement formally Informal companies have better capability but no authority
AND				
5 Improve environmental effects of selected plants	Stated	?	Not certain of causal link to overall goal	5 No achievement
6 To train GOFI and company people (100)	Stated	Trained people are in position to make allocation decisions (selection) Trained people are unconstrained in applying what was learned	Training should be targeted to groups who will use it	6 No formal training to date Some problem oriented learning has taken place
7 To modernize, rehabilitate and expand industrial plants (15-20)	Stated	Modernized plants lead to effective allocation or are caused by effective allocation of resources		7 13 major company investment projects identified
8 To provide technical and management assistance to GOFI/companies	Stated	Technical assistance focused on problems will increase productivity	Technical assistance not systematically pursued	8 2 production improvement projects

<u>Goal, Purpose, Objective Raison d'Etire</u>	<u>Stated/ Implied</u>	<u>Causal Linkage: Assumption</u>	<u>Comment</u>	<u>Achievement to Date</u>	
9 To teach AID pro- curement procedures	Implied	No causal linkage assumed	Objective essentially pro- tected U.S. interests under Foreign Assistance Act (FAA)	GOE/GOFI/MOI and companies aware of AID procurement procedures	9
10 To teach U.S. en- gineering design criteria and U.S. equipment procure- ment procedures	Implied	Information gathered for design useful to company to improve operations	Possibly overwhelmed Egyptians and may have had negative learning impact Some positive side effects have taken hold	Learning has taken place Unable to quantify	10
11 To lead to struc- tural reform in issues such as pricing, employ- ment, investment	Implied	Structural reform has a greater potential to result in increased efficiency	No evidence to suggest project used examples of effect of policies on subproject per- formance to promote structural reform	None evident	11
12 To develop a suf- ficient number of projects in a pipeline so invest- ment choices can be made on economic criteria	Implied	Supply of alternatives will stimu- late demand for more rational decisionmaking	Typically there is a lack of well designed projects for donor agencies to consider	Intended result not achieved Well studied pro- jects overwhelmed by others	12
13 To obligate large amounts of USAID money	Implied	No causal linkage assumed	Sometimes creates conflict between start up time of project and need to expend money rapidly	Minimal amount disbursed	13

and implied objectives ranging from developing an institutional capacity to plan and allocate resources, to rehabilitation/modernization of selected plants, to influencing structural reform. Stated goals are those which are articulated in formal documents and ostensibly act as the formal end results which one seeks to achieve. Implied goals are those which are not formally stated but which in fact act as a basis for decision. Implied goals often represent the hidden agendas of various decisionmakers. The stated or implied objectives do not appear to be linked in direct manner. For example, the goal of structural reform should have been stated clearly and included as part of the decision criteria for investments if in fact those structural issues could be directly or indirectly related to productivity. The effect of this initial unclear statement of the goals and direction of the project has a negative effect on project design and execution.

B. Policy Formulation and Program Design

To accomplish the stated goals of the IPP, four component parts were designed. These included:

1. Capital assistance to public sector companies for rehabilitation of capital equipment.
2. Technical assistance in the identification, appraisal and preparation of capital assistance projects, as well as technical and management assistance

to companies to improve productivity at the firm level.

3. Environmental projects to improve the environmental effects of selected industrial plants.
4. A training component to upgrade the technical and managerial competence of GOFI and public sector companies' staff.

The first of these components has the most direct link to the primary goal of IPP to achieve productivity improvements and contribute to economic development. Technical and management assistance and training were principally provided to improve the institutional capability of the Ministry of Industry and public sector industrial companies to plan and manage resource allocation and to design and implement capital assistance projects.

The environmental component is the least related to the goals of the IPP because there is no established link between environmental improvement projects and productivity or economic development.

Although environmental concerns have a high social value, their relationship to capital assistance projects is tenuous and remote in terms of contributing to the economic development of Egypt. Further, by their very nature, environmental projects are difficult to assess because the benefits of the projects

often cannot be quantified. Thus it is difficult, it not impossible, to compare and evaluate environmental projects with capital assistance projects.

Based upon our review of the program files and materials and interviews with AID officials, it is clear that the IPP was hastily put together without a thorough review of the policy options available to AID and without sufficient attention given to the details of designing the program. Although the lack of time and AID mission resources contributed to this situation, the consequences of inadequate planning for a program of this size and complexity are felt throughout all phases of the program. As an example, the selection criteria may not be clear to the parties involved, and misunderstandings about the objectives of the program may lead to considerable delays in its implementation.

Policy analysis of the industrial production strategy for the economic development of Egypt should have identified the essential components of industrial production. Discussions, communications and agreement about the primary goals of the policy should take place at various levels in AID and also with the affected parties of the policy -- ministries of the GOE and companies in the industrial sector of the economy. The policy analysis and program design of an economic development program such as the IPP should contain at least the following ingredients:

- Strategy papers containing discussion and analysis of the major Egyptian economic problems and potential

- solutions to them;
- Communication and discussion of strategy papers with affected parties in the GOE and the economy;
  - Discussion and agreement among affected parties concerning the primary goals of the industrial policy;
  - An analysis of the program modes that could be used to attain the specified policy goals, e.g., loan guarantees and management assistance;
  - Selection of the program mode(s) to efficiently attain program goals;
  - Discussion of these program modes among the affected parties;
  - Development of the program design for simplicity and directness to establish the roles and responsibilities of the involved parties;
  - Communication and discussion of the program design among the involved parties;
  - Design of an implementation plan that ensures consistency in the application of funds and flexibility in administering the project.

When these analyses, designs and discussions are not present, the general result is a program that is overly complex, aspiring to accomplish too many goals, containing program components that do not contribute to the policy sought, and extremely difficult to administer. Often conflicts among the goals arise, leading to

delays and confusion in the implementation of the program.

### C. Project Execution

In this section the findings of the evaluation are presented for the four principal components of the IPP: (1) capital assistance; (2) technical and management assistance; (3) environmental pollution control projects; and (4) training. For each component, the following concerns are addressed:

- what was intended to be achieved.
- what was actually achieved.
- the major issues that surfaced in the evaluation that require consideration by USAID in developing and pursuing its industrial strategy.

#### 1. Capital Assistance

##### a. Intended and Actual Effects

The lynch-pin of the IPP is its credit assistance mode for investment projects which provides the most direct link to increasing productivity in the industrial sector of the Egyptian economy. Capital formation is a tried-and-proven vehicle for increasing productivity and in turn contributing to economic development. Therefore, the IPP was designed to identify industrial projects that were viable economically and to provide new capital through credit assistance, thereby contributing to the economic development of Egypt.

An implicit goal of the IPP was to provide this credit assistance in as close an approximation to commercial conditions as

possible. This was understood by all the parties to the project — the public sector companies, GOFI, the Minister of Industry and USAID. Not only would the companies pay a rate of interest that would reflect the scarcity of these credit resources, but they would also have to provide financial and technical information that would describe the feasibility of the project in a business-like way. The information required would include market, financial engineering and economic analysis of the project, and technical assistance would be provided to the companies in the preparation of the studies by GOFI through a contractor.

Another goal for the IPP that has been implied is employment creation. A section of the feasibility studies was devoted to the employment impact of the projects. However, given the general approach of the IPP to put new equipment and new technology in the production process (with the limitation that the projects be rehabilitations and not new construction), the anticipated employment creation effects of IPP would be expected to be minimal. In fact, it is likely that in some cases there may be an employment reduction due to the introduction of new technology. These projects, however, would have a positive effect on the productivity of workers and also have a tendency to increase their wages.

Although a complete evaluation of the IPP must wait until all projects have been fully implemented and to estimate their individual and collective impact on the productive capa-

city of Egypt, it is possible to assess the intended effects of the IPP and their likely effects at this time. Some of the effects are short-term by nature and other effects can be anticipated without waiting until the program has been fully implemented.

The IPP has a number of goals and objectives that were specified above. Under the IPP these goals were to be expedited by targeting the credit assistance to the following:

- rehabilitation of old and obsolete capital equipment in public sector companies;
- segments of the industrial sector or particular firms that were bottlenecks in the economy (or potentially were bottlenecks);
- projects which could be implemented speedily to have a visible and immediate impact upon the economy.

Thus far, the IPP has been directed to rehabilitation of equipment in the public sector. There is such a substantial need to upgrade the capital stock in the Egyptian economy that it has been relatively easy to identify rehabilitation projects. There has also been success in identifying some projects which would alleviate potential bottlenecks<sup>\*</sup> in the economy. One example of such a project is the Egyptian Company for Refractories which would produce larger quantities and better quality refractories for major industries in the Egyptian economy.

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\* "Bottlenecks" is used in the broad economic context here. In a narrower sense of the word, it refers to the production process of a firm and as such implies a "target of opportunity" approach for the IPP.

The notable area where progress has been lacking in the IPP has been in its implementation. Although the IPP was intended to speedily provide funds to the companies, delays have been common at all stages of the IPP. The causes of these delays are presented below. Although the IPP originated in fiscal year 1978, as of today only one company has received even partial payment of funds for the equipment for the company's project. This is a major shortcoming of the IPP to date.

b. Identifying the Need for Funding and Actual Demand

The need for capital assistance for rehabilitation of the old and obsolete equipment in the public sector firms of Egypt is well known. Observers, commentators and analysts all agree that there is a substantial need to replace old equipment in the industrial sector with newer technology to achieve greater efficiency and output. GOFI had the responsibility of identifying the need for rehabilitation of equipment projects from among the 116 public sector companies. Initially, GOFI informed all the public sector companies of the IPP by letter, and described the general purpose of IPP and some of the limitations put on the projects in order to qualify. GOFI also talked to company chairmen about this new AID program.

Over 30 responses were received by GOFI, totalling in excess of £130 million, in response to the initial letter. At the initiation of the IPP, the need was far in excess of the original \$70 million obligated for the IPP.

Although there are other ways of establishing the need for capital assistance under the IPP, one of which being advertisement in the newspaper or trade press, the needs that surfaced through the letter-application approach are probably a good indication of the original need for this type of capital assistance for public sector firms.

The actual demand for the IPP consists of those projects which, after appropriate feasibility studies, showed adequate economic rates of return. In other words, the actual demand includes those projects that exceed the opportunity cost of capital for a productive enterprise in Egypt. The required 15% economic rate of return was the benchmark chosen as the required return for the IPP, and it appears reasonable although some could legitimately argue that the rate might be too low in Egypt's current inflationary environment.

On the basis of economic rate of return — the best indicator of actual need and usefulness of a project — more projects exist than there are available funds. This leads to several observations that are addressed in more detail throughout this section:

- there is considerable need for rehabilitation projects for public sector companies in the industrial sector;
- that there is not a bottomless pot of other foreign funds available for financing these projects;
- on several occasions the \$10 million cap on the size of the project has been used as a rationing device for

limiting the funding of projects.

In conclusion, the need and actual demand for capital assistance under the IPP is large and it definitely exceeds the available funding.

c. Feasibility Studies

From the inception of the IPP, feasibility studies were to have an important role in determining which projects were to be eligible for funding under IPP. These feasibility studies were to develop technical, economic and financial information that would be compared with project criteria to determine which capital equipment projects met the standard for funding. Furthermore, having McKee-Kearney provide technical assistance to GOFI and the companies undertaking the feasibility studies was intended to enhance the capability of the participants to perform such on their own and to incorporate them into their decisionmaking process.

To date 13 feasibility studies have been made. The first eight studies were extensive, detailed studies that took long periods of time to complete. In some cases, the feasibility study took over two years to finalize from the beginning of the study until all parties agreed to accept the final version. Company chairmen generally thought that the time devoted to the first eight studies in the IPP was too long and it delayed the project substantially. The total cost of the first eight studies was \$1,568,682 — an average of \$196,085 per study. In late 1980, a "fast track" system for the feasibility studies was created which

was designed to streamline the process and to develop much less detailed studies of the proposed projects. The five "fast track" studies that have been performed since that time have had an average cost of \$27,030. Notably, the projects designed for fast track were by-and-large relatively simple equipment procurements not on the original list proposed by GOFI.

Based upon our review of the feasibility studies and interviews with affected parties, there are a number of positive and negative aspects of the feasibility studies (the first eight). The positive points are:

- .. Detailed specifications of the equipment to be used in the project.
- A way of providing company chairmen with a knowledge of new and appropriate technology for the equipment to replace the obsolete production.
- A thorough financial assessment of the project and its impact upon the business.
- A number of marketing studies that provided new ideas and market opportunities for several products, and in some cases, by-products of the new equipment project.

The negative aspects of the feasibility studies included the following:

- The studies took too long to complete and to get agreement on.

- In some cases, the studies presented too many technical design considerations, especially when companies were knowledgeable of the technology and had staff expertise in the area.
- Economic analyses were insufficient on some studies, and estimation procedures were not regularized.
- Sensitivity analysis on price, quantity and cost of capital variables should have been expanded.
- Economic impact portions of studies were not needed and the important economic information would be captured by the economic rate-of-return calculations.

The length of time to complete the original studies was a major factor in moving from the full scale feasibility studies to the "fast track" system. The new system has effectively dealt with the concerns about delays, but it also raises another set of concerns:

- Are there sufficient analyses to make appropriate decisions?
  - Is there adequate information upon which to judge the feasibility of complex projects?
  - Does the process shift emphasis to projects with easy procurement?
  - Should project applications be treated the same?
  - Does the process screen out complex capital investments?
- These issues point out the need for flexibility in determining

the depth of study necessary before a project decision can be made. Some of the strong points of the full scale studies are lost in fast track, e.g., extensive marketing studies. However, an extensive marketing study is not appropriate when all the output of the project is going to be consumed in a well-established local market. These are just some of the compelling reasons to have flexibility in assessing the need for feasibility studies. Not all projects require full scale studies. However, complex projects should not receive "fast track" treatment if sufficient information for deciding on a project is to be developed. Preliminary screening can provide guidance concerning the amount of information and analysis that needs to be developed in a feasibility study.

In several feasibility studies, the treatment of "shadow prices" and their estimation raised questions from the affected parties. The approach to be used in these estimations should have been established and agreed upon by all parties before the studies were undertaken. There still exists the need to establish agreement among the affected parties concerning this issue.

In the vast majority of projects, the most sensitive variables were the economic variables of price, quantity and cost of capital. Since these variables are volatile, they need further sensitivity analysis to provide an indication of different values upon the calculation of economic rates of return.

The employment impact analysis provides little useful

information for the decisions made on project selection. The employment impact of the IPP is not a realistic outcome of a program limited to rehabilitation. Furthermore, that analysis never entered the decisionmaking process on any of the projects in a meaningful way.

The selection criteria for the IPP projects were poorly specified and changed during the life of the IPP. This has led to some wasted studies. The specific criteria to be used for these decisions should be made explicit and the rationale for them made known to all the affected parties, as will be discussed in more detail in the following section.

Finally, there is very little evidence to suggest that the feasibility study process enhanced the capability of GOFI and the companies to perform such studies and incorporate them into their decisionmaking process. First, GOFI's and the companies' decisionmaking processes have not appreciably changed in this regard. Second, and most importantly, GOFI and most of the companies were already familiar with full-scale feasibility studies, some required by other donor agencies and some which they had commissioned for their own purposes. Being exposed to the McKee-Kearney feasibility studies have not significantly enhanced their awareness to the worth of such a process.

d. Decision Criteria

Throughout the project, particularly in its early phase, AID decision criteria for providing loans and grants for capital

rehabilitation projects were not based on a consistent framework and were not clearly specified to the key participants in the process (i.e., McKee-Kearney Joint Venture, GOFI and the companies). This was a major contributing factor in (a) GOFI's confusion in their initial selection process as to what projects would be appropriate for AID funding, (b) lack of an effective AID screening process before costly and time consuming feasibility studies were undertaken, and perhaps most importantly, (c) confusion and uncertainty by GOFI and the companies over some of AID's decisions and policies. In this section we examine both the stated and apparently unstated decision criteria used by AID throughout the project and the consequences of their use.

Stated Criteria. AID's initial criteria for capital assistance, as stated in the project paper, were:

- Financing will be provided only for plant equipment and services needed to rehabilitate and modernize existing industrial facilities, and the completion of projects or expansions already underway.
- No subprojects requiring over \$10 million will be financed.
- A minimum internal economic rate of return (ERR) of 15% is required.

From discussions with AID officials, the \$10 million figure was not arrived at from any analytic base, but rather from the assumption that rehabilitation projects should most likely be less

than \$10 million and that projects under that cap could be approved without involvement by AID/Washington. Further, this limit was intended to reflect total AID capital assistance for the project (both loans and grants). The logic behind requiring a 15% ERR was to insure that selected projects met an adequate rate of return in excess of the opportunity cost of not using those funds in another productive enterprise within Egypt.

GOFI's criteria, on the other hand, in selecting projects for IPP capital assistance (as provided to us by GOFI) were:

<u>Criteria</u>	<u>Weight</u>
• How much the project can match the purpose of the U.S. grant and loan	30
• National priority for the project's sector and the project's products	15
• Necessity of project replacement according to age of equipment	10
• If the project was previously in the National Five-Year Plan and also has local currency budget	10
• Importance of the project for the progress of the company	10
• Date of application of the project to GOFI	10
• Other national priorities (e.g., exports, import substitution, balance of payments, employment, and other social concerns)	15

The single most important factor to GOFI, with a weight of 30%, was the likelihood of the project meeting AID's decision criteria as they understood those criteria to be.

The brief and somewhat vague specification of AID's initial criteria, and more importantly the apparent lack of detailed specifications provided later on by AID, led to confusion on the part of MKJV and GOFI as to what was an acceptable project for AID. For example, no clear distinctions were made as to what constituted a rehabilitation project as opposed to the replacement of outdated equipment with new facilities. Further, confusion resulted as to whether the \$10 million limit represented total AID assistance (loans and grants) or was a limit on just AID loan funds per project.

This confusion led to some projects being selected for feasibility studies which clearly did not meet the intent of the initial criteria. For example, four of the eight initial "full" feasibility studies were for projects requesting more than \$19 million in capital assistance and involving the construction of new plants and considerable increased capacity. These large requests were not discovered until well into the feasibility study because of the lack of any AID screening process prior to undertaking the feasibility studies whereby projects could at least be examined against the criteria in a gross sense. Two of these four projects have since been approved by AID for capital assistance and the other two rejected for reasons to be described in more detail

later on.

In the course of the project and in conjunction with the move to "fast track" studies, it became apparent that there was a need for more clearly defined criteria to eliminate some of the problems encountered in the past and as a means to allocate a limited budget for capital subprojects. The criteria that developed, in addition to those already stated by AID, were articulated in Amendment II of the project paper:

- The Financial Rate of Return (FRR) must be at least 15%.
- Total FX financing requirements of an individual subproject should be modest, with smaller activities being favored and a limit of one subproject per company.
- Individual public sector company requesting each subproject must be well managed.
- Subproject implementation should be capable of proceeding quickly, with preference being given to those activities involving a direct procurement of equipment, and for which buildings and infrastructure are already in place.

The stated rationale behind such criteria was that in order to achieve IPP objectives a proposed subproject should be "financially sound, of low cost, easy to implement, and with a well managed company." The appropriateness of these criteria for project

*Quick test ?*

approval, in particular that of the FRR in evaluating public sector investments, will be addressed shortly.

Of the thirteen projects considered for capital assistance under the IPP, two projects have been rejected by AID. The principal reasons given to GOFI and the companies for these rejections are (1) the FRR was less than 15% (4.4% and 4.8%) and (2) the amount of capital assistance requested exceeded \$10 million (\$26.6 and \$21.7 million). In both cases the low financial rates of return were due entirely to the well below world market prices that the companies receive for their outputs because of strict GOE price controls.\*

The rejections of these two projects, coming over two years after initial project selection and over one year after completion of feasibility studies, has caused considerable confusion and concern by GOFI and the companies in two main respects. First, GOFI and the companies do not understand the strict limitation of \$10 million for these projects when other IPP projects have been approved for funding in considerable excess of \$10 million. Further, they feel at least inflation should be taken into account in applying an overall dollar limit since the \$10 million limit has remained constant from the program's inception in 1978.

Second, and more importantly, GOFI and the companies are

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In fact, in the case of the cottonseed oil project for the Egyptian Salt and Soda Company (ESSCO) an assumption was made in the feasibility study that the price received for the oil would be more than twice the actual controlled price (which is only one-sixth of the world market price), in order for the project to meet its debt service requirements. If this assumption was not made, the FRR would have been even lower than 4.4%.

perplexed by the use of a strict 15% FRR criteria for public sector projects whose principal outputs are highly subsidized in the Egyptian economy. The FRR is not a useful criterion to use in the evaluation of public sector projects whose costs for inputs and prices for outputs may be highly influenced by government pricing policies. In such cases prices do not properly reflect the true marginal cost or value of the project's inputs and outputs. In these circumstances the economic rate of return (ERR), using appropriately calculated shadow prices, is the only appropriate internal rate of return measure to use in project appraisal.

Both IPP projects that were rejected by AID were highly placed on the Ministry of Industry's priority list. Both projects had ERR's in excess of 15%. In fact, the cottonseed oil project's ERR was estimated at 44.5%, which ranked it as fourth highest of all IPP subprojects based solely on the ERR.\* These two rejections on the grounds of an insufficient FRR certainly have not led to an enhanced awareness of and an appreciation for the proper use of financial and economic analysis in project appraisal, which was one of the principal goals of the feasibility study process.

Unstated Decision Criteria. From a review of the IPP capital subproject files, IPP project covenant reports and discussions

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\* Of the eight "full" feasibility studies conducted under the IPP, the ERR varied from approximately 16% to 60%. Only in three cases was the FRR slightly greater than the ERR because of price subsidies for inputs to the production process.

with AID officials, it is apparent that whether or not a project involved highly subsidized outputs was a contributing factor in AID's funding decision. This criterion does not appear to have ever been clearly communicated to GOFI or to the Ministry of Industry. Instead the use of a 15% FRR requirement may have been used to ensure no AID funding for projects involving highly subsidized outputs. The goal being sought by such a policy appears to be structural reform of the Egyptian economy through gradual elimination of price subsidies.

Whether or not this is a useful policy for AID's long-term industrial strategy in Egypt is beyond the scope of the phase one evaluation. This policy should and will be more closely examined in phase two. It is important to consider, however, that such a policy within the context of the IPP may be detrimental to the goal of rehabilitating public sector industry and enhancing productivity, which after all was the *raison d'etre* of the IPP. Moreover, pursuing such a policy within the IPP is particularly counterproductive if it is perceived as part of a hidden agenda and not clearly specified at the outset.

Conclusions. AID's decision criteria for capital subprojects under the IPP have not been clearly specified or consistently applied. As a result (a) some projects were initially selected by GOFI for consideration under IPP that were inappropriate from AID's standpoint, (b) there was a lack of any screening process by AID before costly and time consuming feasibility studies were initiated.

and (c) there was confusion and uncertainty on the part of GOFI and the companies as to the reasons for some of AID's rejections of projects.

In future capital project evaluations AID should (1) clearly specify all decision criteria early on, (2) use such criteria to screen out potential projects as much as possible before resources are spent on large-scale studies, and most importantly (c) should develop a set of criteria that are consistent within a broad policy framework for AID in Egypt.

e. Need for Policy Analysis of Credit Assistance

The credit assistance mode of the IPP could have had different characteristics than those specified in the program. That is, credit assistance could have been given in the form of loan guarantees rather than the 13 percent, 15 year loans granted under the program. Nonetheless, the credit assistance granted under the program contributes to the primary goal of the program to increase productivity in the Egyptian economy and at the same time provides investment funds at rates close to what they are in the market. (This does not imply that the interest rates under the IPP are competitive international rates, but they appear to be in line with what is currently available at the commercial and private banks in Egypt. Also, depending upon the quality of the data used to construct Egypt's Consumer Price Index, CPI, the real interest rate is probably negative.) In this situation the discipline of the marketplace can coexist with

the primary goal of the program to increase productivity in the public sector of Egypt.

However, throughout the life of the IPP, another policy thrust was being pursued by USAID. This was the desire on the part of AID to have GOE cut back on its use of subsidized prices as a policy tool. This USAID policy did not become a formal part of the IPP, but it did become an informal goal and appears to have been used as a major criteria for not funding projects even though the projects had an economic rate of return substantially in excess of 15 percent. As discussed earlier this example of conflicting goals of the IPP led to misunderstandings among the involved parties and has led to some confusion within AID about the appropriate criteria to be used in judging projects.

Although the elimination of price distortions in the economy caused by government subsidies would have beneficial economic effects, these effects are not linked as directly to increased productivity as credit assistance projects that have high economic rates of return.

These observations raise important policy issues that need to be discussed in phase two of the IPP evaluation and analyzed in the context of structuring program options for USAID under its current industrial strategy.

f. Alternative Sources of Investment Funding for the Public Sector Companies

The 116 public sector companies under the Minister of

Industry (MOI) have access to several sources of credit funds to meet their financial needs. The operations budget for each company is prepared by the MOI, and the investment budget is prepared by GOFI. The materials presented in this section address the investment and financial funds of the public sector companies, but their operations budget are not included.

Investment funds are allocated by GOFI to the companies, and the sources of the funds can be classified into three categories:

- Investment funds from the GOE which are in the local currency, i.e., £;
- Investment funds from the GOE which are in foreign currencies and represent foreign currency reserves of the GOE;
- Investment funds from foreign sources — all in the form of foreign credit arrangements (these include World Bank Credit, U.S. aid, German credit, etc.).

Under current institutional arrangements, the public sector companies have access to other forms of credit, including funds from commercial banks (usually in the form of a line-of-credit), supplier credit, and the ability to borrow from other public sector companies. Although lines-of-credit are generally used to meet seasonal needs, they can be rolled over and used as a method of investment finance.

From information provided by the Minister of Industry, the

three sources of investment funds to the companies can be compared. Over the last six years, local currency has represented about 55 percent of the total investment in public sector funds; approximately 20 percent of the funds are foreign exchange provided by GOE; and the remaining 25 percent are foreign credit assistance from bilateral and multilateral arrangements. Some of the foreign credit assistance is USAID funds, for example, from the CIP. The table on the following page presents this information by the public sector companies for the years 1976 to FY1980/81. Total investment for FY1981/82 was £496 and the budgeted figure for FY1982/83 is £568. A more detailed table of the investment funds for six sectors of industry is also presented, as is a table showing terms and conditions of recent foreign loans.

An issue that has been raised as part of the IPP evaluation is the importance of IPP as a source of financing/technical assistance to GOFI and the public sector companies relative to such other sources as budget transfers, retained local and foreign exchange earnings, domestic and foreign bank borrowing, and assistance from other bilateral and multilateral aid sources. The IPP funds obligated to date have been \$145 million, and there was a general intention for the IPP funds to be disbursed for capital equipment over a three to four year period. In rough order-of-magnitude terms, such a program would disburse \$40 million annually and would compare with the total public sector company investment in the following way:

TOTAL INVESTMENT IN PUBLIC SECTOR COMPANIES  
OF THE MINISTRY OF INDUSTRY AND MINERAL WEALTH

Year	(£ - millions)				(percent of total)		
	£	Foreign Currency	Foreign Credit	Total	% £	% Foreign Currencies	% Foreign Credit
1976	130.6	44.3	54.1	229	57	19.4	23.6
1977	151	56	94	301	50.2	18.6	31.2
1978	213.3	48.7	80.1	342	62.4	14.2	23.4
1979	240	63	126	429	55.9	14.7	29.4
TS1980 <sup>1</sup>	123	42.9	50.1	216	56.9	19.9	23.2
FY80/81 <sup>2</sup>	237	99	105	441	53.7	22.5	23.8

<sup>1</sup> In 1980, these accounts shifted from a calendar year basis to a fiscal year basis. The figures presented are for the transition semi-year between bases.

<sup>2</sup> FY is fiscal year, covering July 1 to June 30.

Source: Ministry of Industry

TOTAL INVESTMENT BY INDUSTRY SECTOR  
IN PUBLIC SECTOR COMPANIES OF MINISTRY OF INDUSTRY  
(1976-1981; in ₹ millions)

Sector	FOOD		TEXTILE		CHEMICAL		METALLURGICAL		MINING		ENGINEERING		OTHERS	
	Total	Foreign Cur. & Credit	Total	Foreign Cur. & Credit	Total	Foreign Cur. & Credit	Total	For. Cur. & Credit	Total	For. Cur. & Credit	Total	For. Cur. & Credit	Total	Foreign Cur. & Credit
1976	25.9	9.2	58.2	32.8	47.2	27.4	77.21	23.8	5.8	-.3	10.4	3.4	4.3	1.5
1977	31.4	12.2	64.2	32.9	95.6	59.	78.2	36.1	8.7	-.6	19.4	7.8	3.5	1.4
1978	44.	15.8	73.7	35.6	76.4	34.8	113.5	21.5	9.6	1.4	18.2	7.1	6.1	1.7
1979	58.	25.1	115.3	73.6	94.	44.7	106.8	26.1	2.2	8.3	26.6	7.5	12.3	3.5
TS1980 <sup>1</sup>	29.1	9.7	51.	29.3	49.9	24.2	72.4	23.6	8.3	1.6	10.4	3.7	4.1	-.5
FY80/81 <sup>2</sup>	68.5	26.9	132.4	82.6	89.4	46.7	97.7	31.1	22.9	9.7	23.5	6.1	6.8	1.1

<sup>1</sup> In 1980, these accounts shifted from a calendar year basis to a fiscal year. The figures presented are for the transition semi-year (TS) between bases.

<sup>2</sup> FY is fiscal year, covering July 1 to June 30.

Source: Ministry of Industry

TERMS AND CONDITIONS OF RECENT FOREIGN LOANS

Lending Country or Bank	Repayment Period	Grace Period	Rate of Interest Per Year	Commitment and Service Fees	Remarks
International Bank for Reconstruction and Development (World Bank)	15 Years	4 Years	10 %	3/4% Year	- Repayment period includes also grace period - Fee % is calculated on the unused loan
	10 Years		8.2%	3/4% Year	
International Finance Corporation (IFC)	50 Years	10 Years		3/4% Year	- Service Expenditure is calculated on the used loan
African Development Bank	14 Years	3 Years	7% + 1%	3/4% Year Legal Commission	
Deutsch Bank for Reconstruction (West Germany)	50 Years	10 Years	0.75%		
Japan	30 Years	10 Years	3-3½%		

Investment and IPP Funding

(FY 1980/81)

	<u>Total Investment</u>	<u>Foreign Credit</u>
FY 1980/81 (£ millions)	441	105
Ave. Annual IPP Funding (£ millions) <sup>1</sup>	40	40
Percent IPP	9%	38%

<sup>1</sup> This is a hypothetical example since only a small fraction of IPP funds have been disbursed to date.

No IPP funds were disbursed in FY1980/81.

Of the total investment taking place in public sector industrial companies, a program the size of the IPP may appear to be a small portion, but 9 to 10% of the total investment could be used as a significant leverage point with some degree of success. A 10 to 1 leverage ratio has been used effectively on several U.S. programs intended to create a partnership between the public and private sectors of the U.S. economy, e.g., the Urban Development Action Grant program. That leverage could become more intense if the IPP targeted the funds to one or a selected few segments of the industrial sector companies, such as chemicals and metallurgy.

As a portion of the foreign credit available for investment in public sector firms, funding the size of the IPP would represent a sizeable fraction of approximately 40%. A sizeable portion of the foreign credit for investment is from USAID's Commodity Import Program (CIP), so the combination of the IPP and the CIP represents a very large fraction of the foreign aid that is avail-

able for investment in public sector companies.

In our interviews with company chairmen, we were able to gather certain information about other sources of credit funds available to these companies. Since our interview sample was not randomly drawn, we are not able to generalize about the sources of funds to all public sector companies, but the information does provide some insights. In general, each company had a line-of-credit at a bank that could be drawn up to meet its seasonal, inventory, or at times, short-term investment needs. The line-of-credit was generally in the range of 10 to 30% of the annual sales of the companies, and all of the companies we talked to had not exhausted their credit in the last several years. Most companies were well below their credit limits. These funds were available at a 13 to 15% rate of interest, and they were short term.

The companies had some supplier credit available to them, but the amount depended very much upon the established business relationship between the company and the supplier. In one case, very attractive terms were available from a foreign supplier and the loan was supported by the foreign government at very favorable terms. Supplier-provided training can also be negotiated in the contract, and this was an attractive feature to some company chairmen. In general, however, this source of credit was small compared with the standard line-of-credit available through the local banks of Egypt.

Finally, our interviews with company chairmen pointed out

a mixed reaction of how AID credit programs compared with the procedures to qualify for other sources of foreign aid. Some companies have had very good experience with AID programs such as the CIP and some aid programs from foreign banks. Other chairmen expressed dismay concerning the time delays in the IPP but mentioned that other foreign aid programs had taken longer and were more cumbersome.

## 2. Technical and Management Assistance

The original project paper of the IPP called for technical and management assistance to individual public sector firms to improve productivity and enhance product quality. This assistance was intended as distinct from any technical assistance provided to companies in preparing complete feasibility studies for capital subprojects. Amendment I of the project paper later added direct management assistance to GOFI as another sub-component of the IPP.

In this sub-section we discuss the management assistance components of the IPP with regard to both (a) assistance provided to individual public sector firms and (b) assistance provided directly to GOFI.

### a. Management Assistance to Companies

Management assistance was intended for public sector companies with the stated goal being to eliminate production bottlenecks, improve production techniques and enhance product quality. The assistance was to be provided to companies both with and

without capital assistance subprojects as a means to increase productivity at the firm level without necessarily providing for new capital investment.

Project Outcomes: Intended vs. Actual. Management assistance to companies was originally intended to be a significant part of the IPP program given the recognition that (a) such assistance would improve the productivity of existing plants, and (b) was needed in support of the capital development program of the IPP in making productive use of new equipment. Furthermore, it was intended that management assistance to specific companies would lead to increasing the management capability of those companies in the long run.

Initially \$2.2 million was allocated for AID grants for technical assistance (including management assistance to companies and technical assistance for feasibility studies). This was later expanded to \$6.6 million with \$2.1 million ear-marked solely for management assistance to companies. It was intended that McKee-Kearney Joint Venture (MKJV) would provide the bulk of this assistance on a work order basis with management and industrial specialists called in as needed.

In actuality, however, this component of the program was very slow to develop and has resulted in very little accomplishments to date. It was not until mid-1980 that MKJV was authorized by AID and GOFI to survey candidate companies that had requested management assistance. As a result

of this effort, five companies approved scopes of work for management assistance not related to IPP capital subprojects. Of these, only one study (cost of approximately \$50,000) has been completed and another has recently begun. The other three have been awaiting GOFI approval for more than one year. One company (TRENCO) has identified needs for management assistance in conjunction with a capital development subproject under the IPP. However, no work has yet been performed. These projects and their current status are briefly described below:

<u>Company</u>	<u>Type of Assistance</u>	<u>Status/Outcome</u>
Sugar Company	Improve inventory management and control.	Completed study 6/82. Well received. Most recommendations implemented.
NASCO	Improve material flow and handling.	Began work 4/82, to be completed 7/82.
MICAR	Improve production flow and set up a product development department.	Company approved scope of work. Awaiting GOFI approval.
KAHA	Develop strategy for management and capital development.	Company approved scope of work. Awaiting GOFI approval.
Cairo Metal Products	Improve product scheduling and maintenance and set up a product development department.	Company approved scope of work. Awaiting GOFI approval.
TRENCO	Improve management information systems in support of approved capital development project.	Being competitively bid. In proposal evaluation process.

In the two projects in which work has been performed, i.e., the Sugar Company and NASCO, the work has been well received by com-

pany officials, although in the case of NASCO it is too early to give final judgment. Both projects were designed to lead to cost savings and improved productivity at the firm level. In the case of the Sugar Company, one of Egypt's largest industrial enterprises, this objective clearly appears to have been met with the company receiving tangible benefits through large reductions in inventory investment.

With regard to the broader objective of building an institutional capability within the firm for improved management, the results of the work accomplished to date are much less clear. Management assistance under the IPP has focused specifically on problem-solving, and through such efforts only indirectly on building a capability within the firm. In the case of the Sugar Company in particular, their inventory problems were well known to them before the study. What they valued was receiving an outside opinion on how best to solve some of the problems. It is highly questionable in this case whether any increased institutional capability resulted from the MKJV study, or whether any enhanced capability was even needed.

. Evaluation. In examining why so little has been accomplished to date under this sub-component of the IPP, we focused on three areas of concern: (1) how companies were made aware of the services and projects identified; (2) the underlying need and demand for such services; and (3) the role of key participants in the implementation process, in particular GOFI as the

GOE implementing agency.

From discussions with representatives of GOFI, AID, and MKJV it is apparent that management assistance did not receive very much attention early on in the project. The majority of time and resources were spent in developing the capital assistance component in terms of identifying projects and developing feasibility studies. Emphasis within GOFI (whose primary role within the Ministry of Industry is the management and allocation of the capital investment budget) was clearly on developing the capital assistance component of the IPP to replace and rehabilitate old equipment. As a result, there was no concerted effort by GOFI, nor by AID, to identify or advertise the services provided under the management assistance sub-component of IPP.

Over time companies were made aware of these services through individual contacts and meetings with GOFI officials. Others were made aware through individual contacts at AID. Few companies, after having been contacted initially by GOFI, showed an active interest in the management assistance being offered. GOFI officials felt this was due to reluctance by some to admit the need for management assistance and the reluctance by others to use a U.S. consultant exclusively in advising on Egyptian business practices.

The few companies that had requested management assistance, and who had approved scopes of work by early 1981, clearly ex-

pressed a demand for these services. In fact, those companies for which some work has been done or for which work seems imminent (i.e., Sugar Company, NASCO and TRENCO) aggressively pushed for this work to be performed. Furthermore, from discussions with company chairmen from other public sector firms who were not involved with the management assistance sub-component of IPP but who were involved in capital assistance subprojects, there appears to be demand for management assistance particularly in the areas of finance, accounting and management information systems. Although the need for management assistance is clearly recognized by many public sector companies, issues concerning how to create and meet the existing demand still remain; for example, the need to advertise management assistance and whether or not qualified Egyptian consulting firms should be sought and used more frequently.

Perhaps the single most important cause for so little accomplished to date stems from GOFI's apparent decision in early 1981 to postpone approval of any work orders for management assistance then being proposed. In fact, nothing was approved by GOFI until the NASCO study in March 1982.

There appear to be three reasons for this delay of more than one year in the initiation of management assistance to companies:

1. In late 1980 and early 1981 the Ministry of Industry was reassessing GOFI's role in the investment decisionmaking process; possibly

toward a role as that of a project analysis consultant only.

2. At the same time there was reluctance by GOFI to use MKJV as an exclusive contractor under the IPP.
3. Change in the leadership at GOFI in early 1981 increased GOFI's emphasis on the acquisition of capital equipment and reduced priorities given to management assistance.

. Conclusions. Although management assistance to companies was intended as a significant part of the IPP program, very little has been accomplished to date. Two major reasons for so few achievements are (1) management assistance was initially given very little emphasis relative to capital assistance subprojects, and (2) long delays resulted from the time an initial set of projects were approved by the companies until GOFI approved any work orders.

With regard to the current set of IPP management assistance projects underway and planned for the near future, we recommend continuation in the current mode to achieve the benefits that have been projected. However, in planning for management assistance for both public and private sector firms in the future, three major issues that surfaced in the phase one IPP evaluation should be carefully assessed in phase two:

1. The current mode of management assistance

under the IPP focuses on problem-solving at the firm level, which only indirectly may have an effect on improving the management capability of the firm to deal with future problems. To the extent that enhancing management capabilities is a primary goal being sought to improve long-term productivity within Egypt, AID must assess whether or not to continue isolated problem-solving assistance or rather incorporate such assistance into other AID programs (e.g., Management Development for Productivity) that focus directly on improving management capabilities.

2. Creating sufficient demand for management assistance services may require greater advertising and an expanded role for qualified Egyptian consulting firms in providing management assistance.
3. Currently, GOFI is the key implementing agency regarding management assistance sub-projects. Given the delays experienced to date, GOFI's role as the implementing agency should be carefully assessed. Because of GOFI's emphasis on major capital investments, which stems from their primary role within the Ministry of Industry, it is questionable

whether GOFI should have any role in direct management assistance to companies other than perhaps having input in the identification of projects and in coordination with capital assistance subprojects.

b. Management Assistance to GOFI

Project Outcomes: Intended vs. Actual. A major purpose of the IPP was to improve the institutional capability of the Ministry of Industry to "rationalize" the industrial sector and to plan and implement projects. To help meet these broad goals management assistance was provided, at the request of GOFI, in the form of a full-time "In-House" consultant furnished by MKJV to the Deputy Chairman of GOFI and his immediate staff. The specific intent of the "In-House" consultant, as articulated in Amendment I of the project paper, was to:

- . Help GOFI and other organs of the Ministry of Industry to improve their management systems and organization control.
- . At the request of GOFI, improve production management practices at the plant level.
- . Analyze labor structure of existing firms and advise on improvements in labor utilization.
- . Help GOFI develop an effective management training program that can be used to upgrade management capabilities in manufacturing firms.

- Assist GOFI in strengthening its methods and procedures for investment project analysis, presentations to and relationships with international and domestic financial institutions on the one hand and with the industrial sector on the other.
- Take part in design of scopes of work for feasibility studies, as well as monitoring and evaluating them.
- Assist GOFI in improving its system for resource allocation to the industrial sector.

The consultant arrived in late 1979 and appears to have worked effectively with senior GOFI officials for approximately 15 months until early 1981, when as mentioned earlier, (a) the Ministry of Industry began to reassess GOFI's role in the investment decisionmaking process and (b) change in leadership of GOFI occurred that decreased GOFI's priorities and interest in management assistance. During the consultant's 15 months, he assisted GOFI largely as originally intended in the project paper. During this time he:

- Developed program plans to improve GOFI's methods of annual allocation of industrial investments (approximately £500 million).
- Recommended efforts to enhance management information systems.

- Analyzed competitive proposals and facilitated negotiations on the float glass project.
- Completed requirements for industrial loans through GOFI from the World Bank.
- Assisted GOFI in the search for Joint Venture relationships

In addition to the role of the internal consultant, MKJV had made some inroads for providing special assistance to GOFI and other agencies of the Ministry of Industry before all work was suspended by GOFI in early 1981. These were:

- Consultations with GOFI Construction Engineering Department managers in early 1981 to assist GOFI to provide civil engineering sub-contracting services to industrial companies.
- Initial discussions and proposal to design a "pilot" program to improve the process of selection and assessment of industrial projects suitable for participation by foreign firms. GOFI chose not to implement the project.
- Initiated discussions and proposal to assist the Engineering Industrial Design Center (EIDDC) to provide preventative maintenance services on a continuing basis to industry. No work order was issued.
- Initiated discussions and proposal to assist the Industrial Control Center (ICC) for the Ministry of Industry to improve its assigned services to industrial companies in quality control and industrial standards. No work order was issued.

• Evaluation. It is apparent through discussions with senior officials within GOFI that there is a difference of opinion regarding the need for and utility of some of the services provided and proposed by MKJV for improving management within GOFI and the Ministry of Industry. Some officials believe the work provided by the internal consultant was very useful in meeting the broad goal of improving the capability within the Ministry of Industry to plan and implement projects, particularly the work begun by the consultant to develop plans to improve GOFI's annual allocation of industrial investments. Furthermore, the proposals for special assistance described earlier were worked out in close consultation with and at the request of the intended recipients. On the other hand, it is apparent by the decisions made not to go ahead with the proposed special assistance projects and by the suspension of the internal consultant's role within GOFI, that others in upper management felt there was no strong need for such services and placed their emphasis elsewhere.

Conclusions. It appears to us in reviewing the nature of the actual and proposed work of MKJV, that this work was consistent with the broad intent of the IPP program to improve the institutional capability of the Ministry of Industry to "rationalize" the industrial sector and to plan and implement projects. However, there is currently no solid consensus within GOFI and the Ministry as to the need for and utility of such assistance in the future. As a result, no work has been undertaken in this regard for the past year, nor is any planned for the future.

Given the lack of consensus and support within GOFI, any effort by AID within the current IPP mode to provide such assistance does not appear warranted at this time.

### 3. Environmental Projects

#### a. The Present Need and Pre-IPP Efforts

The need for environmental pollution control projects in Cairo, Alexandria and in industrial complexes and villages elsewhere is evidenced by a deterioration of the quality of lakes, streams, seashores and open dumps affecting health, food production and tourism. The need for the establishment of model facilities for control of air, liquid and solid waste is becoming more critical, given plans for rapidly expanding the industrial base and an increasingly educated public's awareness of sanitation, health care and environmental pollution problems.

In 1962, the Government passed antipollution Law 93, setting limits and standards for effluents with fines for exceeding these limits, after a reasonable allowance of time for correction. Moreover, GOFI now requires approvals for new industrial facilities to be based on studies and funding for adequate pollution control facilities. Municipal authorities are also expressing concern to companies about pollution. An identification of industrial pollution sources and an attempt to ~~prioritize~~ them was carried out by a Camp-Dresser-McKee study of the Alexandria area in 1977. This start was further expanded by the environmental activities under the IPP.

b. USAID Activities

To assist the GOE in a pollution control program-USAID is funding through grants and loans from allocations in the IPP the following:

- 1) Environmental specialist consulting services to the GOE through GOFI
- 2) Studies of selected, high priority pollution problems in Egyptian industrial plants with recommendations on equipment and action necessary to control the pollution.
- 3) Procurement, installation, and operation assistance on equipment
- 4) Worker and management level training to keep the facilities in effective control of pollution
- 5) Include in the scope of all studies of new or rehabilitation of existing industrial plants adequate consideration of pollution control facilities.

A specialist from the U.S. Environmental Protection Agency was assigned for 18 months to GOFI, where a joint effort identified 85 industrial polluters and evaluated them as to their priority for clean-up. A resident contractor was to assist GOFI in the further identification and implementation of projects, originally intended to be in place by early 1980. In fact, although the contract was won by Weston in May 1980, the contract was not signed until August 1981, and the team arrived only in the spring of 1982.

GOFI established an Environmental Control Unit under the

head of the Central Department of Construction, and assigned four engineers full time to the unit to work with the contractor, consultant and companies, particularly on project feasibility studies.

Approximately 20% of the current \$145 million obligated to the IPP has been allocated to the environmental project. The initial budget was about \$5 million in 1978, increased to over \$16 million in Amendment I of December 1979 and in July 1981 Amendment II added \$10 million primarily for adding cement plants to the project. The rationale for these increases was that upon initial investigation the pollution problems were much greater than had been anticipated and the cement plants had not been included originally. Our review of projects and tour of public sector company plants tends to support this need.

The contractor has estimated that up to \$200 million could be required for pollution abatement from the 85 plants identified by GOFI and the EPA consultant which would allow the present budget to provide about a 13% start on this national problem. It is expected, however, that this project would have a multiplier effect by providing models of pollution control facilities, expanding GOEs and companies' technical expertise, and establishing training centers for operations and maintenance.

There have been no project feasibility studies carried out to date but selected project work orders, as follows, have been prepared with several approved for the contractor to start work:

	Est. Cost	
Establish Weston Cairo Office	\$ 1,549,236-	
Laboratory Layout & Design	16,732	- AID approved
Egyptian Salt & Soda	73,446	"
Egyptian Starch & Yeast	168,205	"
Extracted Oils Co.	86,056	"
Misr Chemical Co.	131,935	For approval
El Nasr Tanning Co.	134,381	"
Egyptian Leather Co.	116 577	"
El Nasr Fertilizer Co.	138,609	"
Cement Projects Survey	33,000	"
Egyptian Sugar & Distillery	13,332	"
Egyptian Sugar & Distillery	53,552	"
National Spinning & Weaving	In progress	
Misr Beida Dyers	"	
Dyestuff & Chemicals Co.	"	
Edfina Foods	"	

In addition to the above projects which come within an allocation of \$16.1 million there is an allocation of \$10 million for unidentified cement plant pollution control projects.

c. Selection of Projects

The system of selection of projects for environmental control is unclear and should be improved. There is an application checklist given in Project Paper Annex I-3 that does not seem to have been used. An industrial plant waste characteristics rating form, developed by the EPA consultant and GOFI, was used to give a comparative rating of the 85 polluting industries, i.e., best to worst considering air, waste water and solid wastes, but did

not include pertinent details on the application checklist Annex I-3. Furthermore, selection was to be made jointly by USAID and GOFI, but the EPA consultant to GOFI made the decision for USAID. An arbitrary decision was apparently made by GOFI to select a group of industries in the Alexandria area with emphasis on reducing pollution in the El Mex industrial area; however, this may not have the multiplier effect on industry in general that more diverse "model" projects would have.

It was found during company interviews and further discussions with GOFI that some companies on the list did not believe they had a pollution problem. In this case a preliminary diagnostic study should be made to determine if there is a problem before conducting a full study as set forth in approved work order. The contractor claims to have had no input to the selection of projects. Yet, one of the most striking of the polluters as reported in Amendment I of the project paper, item D-2.12, has not appeared on any list of high priority projects, raising additional concern about the project selection process.

In summary, project selection seems to be an area with the greatest need for improvement on environmental projects. The criteria for project identification, selection, feasibility study implementation, plus technical assistance, training and management should be promptly established with some agreement by all parties concerned. Also, since the environmental project section

of the IPP is just gaining momentum and studies have yet to be made, a strong work flow system should be established on a project-by-project basis to maintain a pre-established schedule and reduce delays and costs.

d. Tradeoffs: Environmental vs. Economic Considerations

The review of the environmental component of the IPP raises the important issue of the appropriateness of including environmental control within a program aimed at productive investment.

In many cases there will be materials of value recovered from pollution abatement facilities, but the majority will show a negative financial return with the possible exception of cement plants which should have a positive return from the value of the product recovered. Therefore, there is little rationale for these projects in the IPP, no basis for comparing pollution control projects with capital assistance projects, and no comparison and prioritizing of the pollution control projects. The procedures and criteria for allocating a sizeable portion of the IPP budget to pollution projects are not in evidence.

Pollution control is not related in any systematic way to economic development or productivity — the primary goals of the IPP. This line of reasoning does not imply that pollution controls do not have discernible and large social benefits. It does imply that these benefits do not systematically and directly contribute to the productive capacity of the Egyptian economy as is the case for capital investment. In fact, it has been shown

in numerous cases and situations that pollution control has been very costly and has detracted from the productive capacities of economies.

Pollution control projects under the IPP, although assessed by feasibility studies, are not subjected to the criteria specified for the capital equipment projects. The benefits of the pollution control projects are not quantified, and rates of return to these projects are not calculated. Thus, it is not possible to compare capital assistance projects with pollution control projects to make program choices among them. In other words, there are no specified criteria to systematically make judgments concerning the worth of a pollution control project and a capital assistance project. This suggests that budgetary allocations to these two activities should be made at a higher level in AID and not within the context of a project review for the IPP.

For the pollution control projects themselves, there is an attempt to determine the degree of need for the project. However, in the selection process for these projects, rankings have not been made and final decisions made on the basis of those results.

In summary, although the pollution control projects represent a large fraction of the IPP, there are no criteria nor procedures for choosing it over other projects and for determining the portion of the IPP budget to be devoted to pollution control.

e. Recommendations

Regardless of the locus of AID environmental programs, several

lessons can be drawn from the IPP experience to date:

1. Building Model Projects. Project multiplier effect should be enhanced by structuring such a program around a successful environmental project in each sector of industry, i.e., cement, chemicals, food processing and tanning.
2. GOE Regulations. Investigate the actual use/effect of Law 93 of 1962 as to how well it is being enforced, what penalties/fines, if any, have been imposed and determine ways and means for making the law more effective.
3. Selection Criteria. Improve the current project selection criteria to include social, economic and multiplier effect considerations in addition to degree of pollution and location considerations.
4. Environmental Considerations on Other Projects. Have the environment project expertise developed in GOFI, contractor, consultant and companies available to projects from other funding sources.
5. Operations and Maintenance Training. Consider the application of training and management assistance funds, to educate company personnel concerning the efficient operation and maintenance of pollution control facilities.
6. Feasibility Study and Implementation Criteria. There is a need for a clearly defined, understood and agreed upon scope of work after a project is selected and moves into the work order stage.

7. Coordination with Other Environmental Projects.

Since GOFI and the Ministry of Industry are responsible for only certain areas of industry, there should be an approach to standardization of criteria and techniques used for environmental projects under ministries controlling other areas of industry. (A start in this direction is evidenced by cement plants being included in the IPP through GOFI even though controlled by Ministry of Housing.)

8. Work Flow Plans. Each subproject should have a work flow plan from selection through preliminary evaluation, feasibility study, implementation, commissioning, tied in with any training and management assistance related projects. This should improve timing by clearly indicating action required by whom and when, providing a means for follow up and expediting progress.

9. Occupational Environment. This major element of environmental improvement, aimed internally at the workers in plant, has not yet been addressed. Workers will be encouraged to maintain higher standards if management insists on reducing spills, better dust and fume collection, better maintenance to reduce noise, improved drainage, repair leaks, clean up scrap piles in plant yards and add an environmental safety campaign.

10. Companies' Education on IPP. Chairmen and/or work managers

interviewed in some companies requested more information on what programs the IPP offers and how to go about applying and following through on obtaining assistance. This was particularly true of some companies who had applied for capital rehabilitation projects but also required help from training and environmental projects and vice versa. Perhaps a simplified one or two page explanatory document could be written.

11. Counterpart Training. Although spelled out as a goal of projects in the IPP, counterpart training in GOFI and in companies seems to have been largely ineffective to date. A stronger attempt must be made to involve both GOFI and the companies in the project selection, feasibility assessment, and implementation of environmental projects.
12. Because of the continued complaints from GOFI and the companies regarding the use of "in-house" contractor personnel who are viewed as insufficiently expert or inexperienced, and therefore incur additional cost, special efforts should be made to ensure the use of skilled personnel from industry.

#### 4. Training

The objective of this activity was to provide training in Egypt to approximately 425 mid-level professional employees from MOI agencies and public sector companies likely to be directly

involved in planning rehabilitation and modernization projects. The services will be provided over a three year period: one third of the training will be offered in Alexandria and two-thirds in Cairo. The program covers four topics: Economic and Project Analysis; Industrial Project Implementation; Industrial Operations; and Environmental Protection. The work was to be executed in three stages: needs assessment and course design (first six months); course presentation (21 offerings over 2½ years); and an individual follow-up program. A Host country fixed price contract for the amount of \$1.65 MM is being negotiated between GOFI and AUC in which the payment schedule lends itself to contract deliverables.

There has been no formal training conducted under this component of the IPP. The chronology of events on the following page details the time and events which have taken place since March 2, 1979 when the initial CBD notice was issued. Our assessment indicates that GOFI, the Minister of Industry and the selected contractor are still negotiating some issues.

Our evaluation of the implementation process of this component of the IPP underscores the basic fact that while key decisionmakers discuss details, the public sector companies still have not received the services of this component. Discussions between the key decisionmakers have centered on such issues as the amount of money to be spent on lunches for the participants, internal disputes among the contractor's staff, the use and disposition of vehicles, and the need for detailed cost breakouts.

TRAINING COMPONENT OF INDUSTRIAL PRODUCTION PROJECTChronology of Events

2. Mar 1979 - CBD notice with 31 Mar 79 deadline for submitting
- 10 Sep 1979 - GOFI prequalifies 5 firms out of 12
- 13 Sep 1979 - AID approves shortlist; recommends change to scope of work and deadline for proposal submission <sup>14/0</sup>
- 1 Dec 79
- 15 Sep 1979 - RFP sent to 5 firms with deadline of 1 Nov 79
- 22 Oct 1979 - GOFI extends deadline to 12 Nov 79 via telex to companies
- 27 Nov 1979 - 4 companies submitted proposals; AUC selected by GOFI
- 27 Nov 1979 - AID concurs; instructs GOFI to initiate contract negotiations IAW AID Handbook II
- 16 Dec 1979 - Firms notified of decision; AUC notified of selection
- 5 Jan 1980 - AUC/GOFI begin negotiation
- 22 Mar 1980 - GOFI notified by AUC president that AUC unable to reach internal agreement to conduct program and states that it cannot meet contract requirements
- 31 Mar 1980 - AID advised by GOFI of AUC decision; GOFI seeks AID approval to negotiate with second ranked firm
- 10 Apr 1980 - AID send letter to GOFI pointing out advantages of AUC (training and office facilities and organizational continuity of instructional staff); suggests that GOFI keep these factors in mind when negotiating

with second contractor; also suggests approach for dealing with those issues

- I May 1980 - GOFI letter to AUC describing discussion conducted on 21 Apr in which Salah El Sayed said would arrange solution to internal AUC problems
- 27 May 1980 - Salah El Sayed letter to GOFI stating his Graduate Management Program would be willing to handle project training
- 2 Jul 1980 - Letter from F.T. (presume Frank Thomas of McKee-Kerney) to R. Williams saying GOFI pleased with status of negotiation
- 11 Jan 1981 - GOFI forwards to AID draft contract with AUC; AID begins review process
- 15 Feb 1981 - AID letter to GOFI; reviewed contract and raised a number of issues including a requirement under Handbook 11 for more detailed cost information
- 19 Feb 1981 - GOFI letter to AID recounting 15 Feb 81 meeting at which GOFI stated that cost of contract was reasonable when compared with similar programs in Egypt; GOFI did not want to go into details of price because that would mean a need to renegotiate with AUC and further delay
- 28 Apr 1981 - AID letter to GOFI regretting that AID cannot approve contract because reasonableness of cost must be made on AID analysis of cost data
- 24 Nov 1981 - AID letter to GOFI accepting contract with AUC

It does not appear that the contractual process was ever delayed over substantive issues such as course content, participant selection or teaching methodologies.

Our evaluation shows that there is a need for the type of training indicated but that some concerns exist as to:

- approach and orientation of the training;
- the linkage with other project components;
- the appropriate contractual arrangement.

Based on our discussions with company chairmen, our assessment of the overall IPP and our past experience with training programs in Egypt, we believe that the major thrust of this training must be problem oriented and aimed at specific companies serviced under the IPP. This has been addressed in the scope of work for the contractor, but a review of the courses as they are developed must emphasize this point.

The training program should be formally linked to the other components of the project in such a way as to ensure that the subcontractors are not acting at cross purposes. A rationale for selection of both companies and individuals must be developed by the contractors, company chairmen and GOFI, with the prime focus on selecting those participants who will actually be able to use the skills acquired.

The contractual arrangement is cumbersome and may create a conflict in GOFI. Since GOFI is one of the intended users of the training program, we recommend that the contract be structured

so as to preclude any one organization or company from having a monopoly over the selection process. One such mechanism would be a direct USAID/American University Cairo contract. Under this situation GOFI and the companies would compete directly for access to the program.

The training component can play an important part in the success of the IPP. No training has taken place to date; however, there is an opportunity to view these three years as a basic needs assessment which has developed a base of information to review the appropriateness of the courses and to use the feasibility studies and the overall lessons from the management of the IPP as an excellent introduction to the process of investment decisionmaking.

#### IV. Conclusions and Recommendations

In this chapter recommendations are presented with regard to the existing components and funding of the IPP; issues that surfaced in phase one evaluation of the IPP that need to be addressed explicitly in phase two; and some policy options for IPP that should be analyzed in phase two in the context of policy options that could be pursued under the overall USAID industrial sector strategy.

##### A. Recommendation for IPP

Our review and assessment lead us to the overall recommendation to continue with the IPP projects currently under consideration for funding and to exhaust the \$145 million of obligated USAID funds for the projects that are currently approved for funding or currently in the pipeline. We believe that the original goal of speedily providing credit assistance for rehabilitation of capital equipment in public sector companies is a worthy objective that will yield many economic benefits. The emphasis should be placed upon "speedily" in order to quickly demonstrate that these funds are being used in the industrial sector of Egypt and to make the IPP very visible in the Egyptian economy. Any improvements in the IPP that will enhance this immediate goal of implementing the projects should be pursued vigorously.

In particular, we believe that the current funding obligations and contractual obligations of the IPP should be met in order to quickly implement these capital equipment projects. A

workable and agreeable procurement procedure needs to be established immediately to expedite the acquisition of equipment for projects that have already been approved for funding. Once the procurement procedure is in place, a large number of the approved projects will be placed in operation and provide visible testimony to this USAID project for the economic development of Egypt. However, between the present time and the completion of phase two of the IPP evaluation, we recommend that no new work orders be developed concerning any of the four components of the IPP. This potential delay is a matter of a few months and it is appropriate to await the outcome of the discussions and deliberations concerning industrial sector strategies that will take place in the next several months, which will include options for the future of IPP as a part of an overall industrial strategy.

B. Issues that Need Attention in Phase II

During our evaluation of the IPP in phase one, many industrial sector policy issues have surfaced that need to be discussed, developed and refined in phase two. Each of these issues requires further elaboration, discussion, and analysis — all of which are well beyond the scope of phase one. Thus, we present here a consolidated listing of such issues:

- Credibility of USAID established as a project oriented group in pursuing structural reform in Egypt.
- The tradeoffs between immediate productivity gains in the Egyptian economy vs. longer-term structural reforms.

- The tradeoffs between direct economic development strategies and institutional change.
- The relative emphasis of the USAID industrial sector strategy on the public sector vs. private sector.
- The advantages of using the banking system for capital assistance loans rather than government-to-government loans.
- The relative advantages and disadvantages of institution building vs. a project problem-solving approach.
- Determining the real demand for new and rehabilitation investment in the public and private industrial sectors of the Egyptian economy.
- The strategic advantages of targeting capital assistance to selected industrial sectors rather than providing project assistance on a broad basis.
- Articulating what criteria should be applied to project or program selection.
- Determining an efficient process for creating consistent and acceptable criteria to be used in judging the worthiness of projects within an overall policy framework.
- Determining role as technical reviewer on projects.

#### C. Policy Options for IPP

Based upon our evaluation of the IPP, we believe that several policy options are available for the future of the IPP, and they should be included in the policy analysis in phase two.

The following policy options are illustrative at this point and are intended to be included as part of a larger number of options available to USAID as part of its overall industrial-sector strategy in Egypt:

- Discontinue the IPP after the currently obligated funds have been exhausted and begin a new program, to be defined in phase two, of industrial sector development that includes the public and private sectors.
- Continue the IPP as is, but focus on resolving procurement procedural issues so as to avoid any delays in implementation.
- Continue with a streamlined IPP focused solely on capital assistance, with other components of the IPP (such as technical and management assistance, training and environmental projects) incorporated as parts of other AID industrial projects (or as new projects in case of the environmental component). Further, plan for an orderly transition of the program over a two or three year period from its current funding mode into a mode that uses appropriate banking mechanisms that are developing in the Egyptian economy. (The limitation of the IPP to public sector companies should be lifted as the transition is made.)

V. Other AID Program Modes

As part of the IPP evaluation, Coopers & Lybrand was asked to review AID's other program modes affecting the industrial sector. An evaluation of these modes was not intended; rather, the purpose of the review was to place the IPP in the context of AID's concurrent programs and to lay the preliminary groundwork for Phase II's broad reassessment of AID's industrial strategy. The following discussion thus briefly describes several key programs — the CIP, DIB, PIE Fund, Industrial Productivity Improvement and direct project assistance — and their relationship to the IPP. Table V-1 shows the relationship among AID programs to the industrial sector.

A. Description

Commodity Import Program. The Commodity Import Program (CIP) was initiated in FY75 with a loan of \$150 million for the purpose of providing balance of payments assistance. Through FY81, about \$2.1 billion have been obligated, an average of over \$300 million a year. The program originated as a government-to-government loan but gradually moved over to a grant, with the FY82 request of \$350 million totally grant funded. Through FY81, food items accounted for 21.5% of purchases; raw materials 41.6%; and capital equipment 36.9%. Generally capital loans do not exceed \$10 million although exceptions have been made.

For several years, CIP credit was available to the private as well as public sectors; beginning in FY82, the private sector portion will be transferred to the new Production Credit Project.

TABLE V-1

## AID ASSISTANCE TO INDUSTRIAL SECTOR

Program Service	IPP	CIP	DIB*	PIE**	IPI			Direct Projects
					MDP	ITAP	Voca.*	
Training								
Companies	x	x FY82			x		x	
Financial Institutions			x	x				
Feasibility Study	x							x
Loan	x	x	x	x				x
Technical/ Management Assistance	x	x FY82	x (to DIB)		x	x		
Environmental Study & Equipment	x							

\* Principally Private Sector

\*\* Exclusively Private Sector

Each ministry makes a suballocation of foreign exchange to public sector firms. Once a firm has received its allocation, it deals directly with AID in preparing specifications, the IFB and mutually selecting the bidder. Once AID approval is received, the company opens a letter of credit through a bank, or receives a letter of commitment from AID. Private sector firms apply to a participating CIP bank, which reviews the request as it would any other loan transaction. AID monitors the procurement process as it does for a public sector firm.

CIP users are not required to prepare a feasibility study, nor is any rate of return specified. For equipment purchases over \$1 million for use in expansion or alteration of a physical facility, AID prepares an "Activity Justification Paper," usually four to six pages in length. Included is a description of the planned activity and the proposed procurement, the technical soundness, a "development review" and related AID activities. At one point AID/Washington suggested including economic and financial analysis. AID/Cairo responded that such information must

be obtained from the purchasing activity. It is doubtful whether they can collect data and we can analyze it within the time frame allowed for preparing justification papers. We also doubt necessity of preparing detailed and "conclusive" economic/financial analyses of CIP transactions... however economic/financial considerations are addressed under our current procedures as available information permits.

Repayment terms had been generous through FY80, when private sector traders paid 10% and end users 6%; the public sector

paid 5% for industrial machinery with repayment varying from 3-10 years (foodstuffs were paid in c . Beginning in February 1982 , interest rates were raised to .12% for private traders and 10% for end users; the public sector rates were raised to 5-10%. \$150 million of FY82 funds are targeted for capital equipment items in the GOE investment budget, with particular emphasis on the transport and basic human needs areas. Another \$150 million is reserved for commodity purchases in intermediate/consumable categories. The final \$50 million is reserved for the Trade Financing Facility, which finances the difference between U.S. commercial interest rates and subsidized rates available to foreign suppliers.

Development Industrial Bank. In 1976 AID initiated a \$32 million government to government loan to be reloaned to the newly formed Development Industrial Bank (DIB). The purpose of the loan was to provide foreign exchange for industrial production relending, and to support the evolution of a modern and efficient private industrial sector. \$31.5 million was to be reloaned to industry at 10% interest, for up to 15 years with a grace period of three years, with the remaining \$500,000 to be used for operational improvements within the bank. At least 65% of the AID loan was to be reloaned to the private sector. The ceiling for any one borrower was \$5 million.

In 1978, AID added a \$2 million grant for the purpose of improving the institutional capability of the bank. The grant

provided management assistance (a full time senior advisor and consulting services to review the organization, operation, personnel and management information systems of the bank; training; and equipment — a mini-computer and related software, calculator etc.)

The DIB matches its pool of foreign exchange to the needs of its loan applicants. Originally, the bank could independently approve AID-financed loans only up to \$250,000; this was changed to \$500,000 and last year to \$1 million. The DIB sends AID a report of those loans made under the ceiling, not requiring AID's approval. Once AID has approved the loan, the bank draws up legal documentation and assists the client in obtaining import licenses. AID-financed loans must be used only for U.S.-origin goods. Originally all goods were to be shipped by U.S. carriers; recently this has been amended so that loans under \$1 million are exempt from the requirement (offset against CIP food and commodity shipments).

Formal feasibility study requirements were not specified for AID-financed loan recipients. The studies are prepared by the DIB and applicants, and contain information on the firm's cash flow, working capital, market demand, employment and balance of payment effect, etc. The only explicit decision criterion mandated by AID was a minimum 15% financial rate of return.

Private Investment Encouragement Fund. The Private Investment Encouragement (PIE) Fund was established in 1979 with a \$33 million grant to start in FY80. The fund's goal was to increase private sector productivity by providing medium/long term credit to finance new and modernized facilities in larger sized private companies. As planned, credit would be channeled to banks through a new institution in the Ministry of Economy, serving the role of an investment bank. In addition to the provision of longer term credit to the private sector, key outputs of the project included encouraging banks to provide more long term lending of their own and building institutional capacity within banks in project appraisal and implementation skills. The latter would be fostered through training programs for bank staff, with training fees paid by the participating banks. According to the original schedule, the first subproject was to be approved in January 1980 and the first cycle of training in April 1980.

Loan and project criteria were explicitly spelled out: a feasibility study was required showing a minimum economic rate of return of 15%, and the financial rate of return was to "exceed the effective cost of funds." Loans of \$350,000-5 million could be made, not to exceed 50% of the total project cost, with 7-12 year repayment using the prevailing interest rate as decreed by the Central Bank. Certain agricultural sectors were excluded from eligibility, as well as products "likely to cause injury

to U.S. producers" and police and military equipment. AID and the Fund would jointly approve subprojects.

Industrial Productivity Improvement. This program combines three projects designed to assist individual firms increase their productivity. Table V-2 compares the IPI to the IPP. The Management Development for Productivity (MDP) program was initiated in FY80 with grant funding of \$8.5 million. The project goal is to increase industrial organizational effectiveness with an emphasis on productivity, by improving management in public and private sector business organizations and by increasing the supply of, and demand for, management development services. Large and medium scale industry are expected to participate. The program will focus on selected subsectors, such as the food processing industry. Promotion of the program is explicitly built into the contract. Although the primary emphasis is on training, consultant services are an important adjunct; consultants will help to identify management problems and will follow up throughout the training process, calling in outside experts as needed. The contractor will report directly to AID rather than to a GOE implementing agency, although an advisory committee will participate, especially in promotion and dissemination.

The Industrial Technology Application for Productivity component was initiated in FY81 with a \$10 million grant with the goal of increasing productivity and employment through increased industrial productivity and expansion of the industrial

Table V-2

CHARACTERISTICS OF PROJECTS FOCUSED ON  
INCREASING PRODUCTIVITY AT THE FIRM LEVEL

<u>OBJECT</u>	<u>DIAGNOSTIC</u>	<u>SERVICES</u>	<u>REFERAL</u>
Management Development for Productivity	Selects firms from specific sector, diagnose problems which company and consultants identify that are impeding productivity. Focus generally on management problems but able to recognize others.	Selects critical mass of company managers in each company. Provides management training to group and teaches around identified problems. Provides consultancy services to group and company over period of one year to help resolve management problems identified in diagnostic.	Can call in outside expertise if problem is beyond capability of staff. Can refer to sources beyond local and foreign who have expertise in management. Firms can be referred into project by other sources.
Industrial Technology Application	Firms are provided diagnostic service aimed at technology base of company. Problems/opportunities are identified and discussed with company. Focus generally on technology but able to recognize others.	Provides diagnostic service to identify problems/opportunities. Provides technological information and consultancy to resolve problems. Develop institutional capacity.	Has information systems on resources available to client. Can call in local and foreign expertise. Can refer to other AID Science & Technology projects or projects associated with management/vocational training, etc.
Vocational Training for Productivity	Diagnoses productivity hindrances which can be resolved by training intervention. Able to identify management/technology problems as well but focuses on training. Assesses industrial manpower needs on a broader scale. Performs job/task analysis in firms to develop appropriate curriculum.	Provides vocational training response to AD-HOC problem oriented needs of company. Develops capability to provide services within PVTO system. Orients system to industry and upgrades services.	Diagnostic can refer to other projects when training is not problem. Regional Council can market package of projects.
Industrial Production Project	Provides overall diagnostic services to company. Performs feasibility studies.	Funds purchase of capital equipment. Provide technical advice. Can provide management assistance.	Can bring in expertise assistance in special areas.

sector. The program has the dual purpose of assisting public and private firms to make more productive use of technology and to institutionalize Egyptian capacity to provide such assistance. A new unit — ITAP — within an existing organization — the Engineering and Industrial Design Development Center (EIDDC) — will work with companies, through diagnostic studies, and consultant services. The types of problems ITAP will work on include high levels of machine down time, product rejection, and materials and energy wastage. Potential clients include, but are not limited to, companies participating in the MDP which may have identified technology problems in the course of their training.

The Vocational Training for Productivity component was initiated in FY81 with a \$17.5 million grant. The program shares ITAP's goal of increased productivity and employment, through developing a user-oriented vocational training program in two regions; by strengthening companies' ability to design and implement training programs; developing and testing a variety of training techniques. The program also seeks to build management and training skills within the implementing agency, the Productivity and Vocational Training Department (PVTD). Ideally, the program will be closely linked to the MDP and ITAP, e.g., by identifying the management skills needed for effective follow up of training and by identifying the training needs introduced by new technology. Like the MDP, a sectoral approach (textiles and food processing) is envisioned, although special attention will be given to the private sector.

Direct Project Assistance. Since 1976, AID has provided \$304 million to four major industrial projects. During the same period, five other similar direct projects have been considered but not funded. In each case feasibility studies were contracted individually.

In 1976, AID approved a \$96 million loan for MISR Spinning and Weaving. The principal purpose was to rehabilitate and modernize a textile plant; a subsidiary effect noted in the project paper was a major impact on the U.S. textile machinery industry, projecting an increase in sales of more than 10%. The government was to reloan to MISR at an interest rate of 10% for 15 years with a five year grace period. Although policy changes were not expressly included as a project purpose, the loan covenant included a provision that a study of textile pricing policy would be conducted within a year. As of March 1982, 86% of the funds had been disbursed, and the project is scheduled for completion by 1983.

Also in 1976, AID approved a loan of \$90 million to the Suez Cement Company (SCC) to construct a cement plant and auxiliary facilities in order to reduce cement imports. In 1980 an additional \$10 million grant was funded. Of the government-to-government total, \$64.9 million was reloaned to SCC for 22 years at 10%; \$29.2 million was regranted to the SCC; and \$5.9 million was regranted to the Egyptian Electric Authority. Again, no policy changes were envisioned as an explicit project goal, but

the covenant required that cement prices be set at a level to allow the company to generate a reasonable profit. As of March 1982, 93% of the funds had been disbursed and the project was scheduled for completion in 1983.

In 1977, AID provided a \$13 million government-to-government grant for the purpose of reconstructing and modernizing a solar salt plant, partially destroyed in the 1967 and 1973 wars. The project had the auxiliary purpose of continuing AID assistance to reconstruction of the Suez Canal area. GOE was to reloan the funds to the company, El Nasr Salines, for 15 years at 10% with a five year grace period. In 1979 the agreement was amended so that \$9.5 million was reloaned and \$3.5 million regranted for engineering services and ocean freight. As in the preceding two projects, the loan covenant sought changes in salt pricing policies. As of March 1982, only 12% of the funds had been disbursed, with final disbursement not expected until 1984.

In 1978, AID provided a \$95 million government-to-government loan to construct the Quattamia cement plant and auxiliary facilities in order to reduce cement imports, save foreign exchange, and facilitate the GOE's construction program. \$58.5 million was to be reloaned for 15 years at 10%, with a five year grace period, while \$36.5 million was regranted as an equity contribution. Like Suez Cement, the covenant required the borrower to set cement prices at a level which would permit the company to generate a profit, and went further to state that the price

of domestic cement should be raised to that of imported cement "as quickly as practicable." As of March 1982, 38% of the funds had been disbursed, with completion scheduled for 1984.

During the same period, AID considered but did not fund five other major industrial projects: for production of flat glass; polyester fiber; pulp and paper; ferromanganese mining; and salt extraction.

## B. Assessment

Commodity Import Program. The CIP is generally viewed by the GOE and companies as a highly successful program, meeting its goal of helping to ease Egypt's balance of payments problems while fostering U.S. exports. While GOE and company officials may complain about procurement and shipping rules, they uniformly praise the CIP's ease of application, timely process and generous reloan terms, particularly in comparison to the IPP. As one official noted, "Why can't AID fund all assistance through the CIP?"

The latter is somewhat ironic, given that perceived flaws in the CIP, from USAID's point of view, led at least in part to the creation of the IPP. By 1978 concern had begun to be expressed about the number of "project-type" loans within CIP involving both larger sums of money and more complex alterations or rehabilitation, which were not subject to an appropriate level of analytic scrutiny. Hence, capital equipment purchases for the industrial sector were intended to be increasingly shifted from the CIP to the IPP, leaving the CIP for simple equipment purchases.

Yet by FY82 a decision was made to add several features to the CIP that bring it closer to the IPP. First, AID will work with the Ministry of Economy to develop "procedures" under which the potential user agency will provide a structured review of the "feasibility and appropriateness" of procurement before CIP

funds are allocated. Unlike the IPP an appropriate rate of return is still not specified; a review of technical rather than economic feasibility is envisioned. Second, the program proposes to finance through the CIP "such planning, training and technical consultant services as may be required to facilitate effective implementation." Unlike the IPP, such services are expressly not intended to be institution-building. It is possible that these needs could also be met through supplier-provided training or channeled through the training and technical assistance components of the IPP, MDP, ITAP or vocational training program. For example, if the technical aspects of a proposed CIP loan need further attention, the company could be referred to the ITAP for a quick diagnostic or to the vocational training program for an estimate of its skilled labor needs for the new equipment.

However, the sectoral foci of the MDP and vocational training programs may limit their access to CIP recipients outside the designated sectors. Less than 30% of CIP funds are channeled through the Ministry of Industry; for those outside, the new aspects of the CIP may be valuable.

Development Industrial Bank. The DIB loan is generally felt to have met its objectives, although at a slower pace than originally planned. Originally, the funds were to have been fully disbursed by December 1979; as of April 1982, only 55% had been disbursed. The delays are attributed, in the early years, to lack of knowledge of AID rules and procedures on the part of DIB

management and Egyptian investors; to U.S. source/origin, cargo preference, and competitive procurement rules; to lack of knowledge and experience with U.S. goods and equipment; and to competition from other donor funds within the DIB, principally from the World Bank, which were felt to be easier to use and free from U.S. tie restrictions. In addition, because of changes in exchange rates, a number of investors cancelled loans after they were approved by the DIB. Those projects that were approved, however, exceeded the 15% financial rate of return, and the total pool of AID-financed loans exceeds the 65% private sector requirement.

There has been some progress in institution building, within the constraints of the DIB as a public sector bank, principally in staffing and salaries. The management consulting team arrived in October 1981; their recommendations are only now moving into an implementation phase.

AID's DIE program thus differs from the IPP in a number of ways:

- its emphasis on the private rather than public sector;
- its requirement for a 15% financial rate of return, with no reference to an economic rate of return (vs. the PIE Fund's specification of 15% economic IRR);
- the size of the projects (maximum \$5 million);
- its lack of feasibility study specifications;
- its emphasis on project financing rather than policy goals;
- its use of a banking institution as implementing agency.

PIE Fund. Implementation of the PIE project has lagged and AID is currently reassessing the future of the Fund. The director was not appointed until March 1981; the GOE established the Fund as an autonomous institution with a board of directors rather than under the Minister of Economy. Three courses in financial analysis, paid by the banks, were given to 60 bank staff by the contractor, Robert Nathan. Language difficulties were experienced and the courses were apparently heavily criticized; the goal of building institutional capacity is not felt to have been realized.

The first subproject was not approved by AID until November 1981, nearly two years behind the original schedule. However, AID review time after the formal request for funding from the PIEF took only two to four months.

Of the \$30 million credit available, only four subprojects totalling \$6.8 million have been approved by AID and the Fund. One U.S. joint investor recently withdrew, leaving actual loan commitments of only \$4.8 million. The three remaining projects include \$350,000 for expansion of a bandage company, \$1,417 million for egg production machinery and equipment, and \$3 million for hospital equipment for a new hospital. In each case the investors provided a feasibility study at their own expense, assisted by AID staff in some aspects such as calculation of the IRR.

The participating companies are said to be pleased with

the arrangements, given the favorable interest rate (12% in each case) and the relative flexibility of the fund (i.e., funds available through any participating bank rather than tied to the DIB and no standard format for feasibility studies).

However, the slow rate of loan disbursement and the failure of the Fund to meet certain conditions (trained staff, independent auditor and legal counsel, an adequate accounting system, etc.) are of concern to AID, and approval of future loans has been suspended pending the resolution of these problems. The planned Production Credit Project has a long term credit portion which may absorb the PIE Fund's function, with a different organization managing the fund.

The program differs from the IPP in a number of key ways:

- focus on the private rather than public sector, and a concomitant range of projects beyond the industrial sector;
- institution building and financial analysis capability in the banking community rather than the companies (although sharing the goal of developing capability within a government institution);
- channeling funds through the banking community and encouraging joint funding;
- permitting loans for new as well as rehabilitated facilities;
- a lower ceiling for loans (\$5 million vs. the IPP's

cap of \$10 million);

- less rigid feasibility study requirements;
- the explicit requirement that the economic rate of return exceed 15% while the financial rate of return exceed the effective cost of funds.

The program differs from the DIB in that the DIB funds both public and private sector companies, in the focus on larger companies as opposed to the DIB's planned emphasis on small scale industry, and, of course, in the use of various banks. The type and amount of goods approved thus far could seemingly have been loaned through CIP private sector financing, the key differences being the explicit rate of return provisions and the interest rate.

Industrial Productivity Improvement. Implementation of the MDP component has fallen behind the project paper schedule by over a year; whereas project start-up was initially envisioned in January 1981, in fact the contract was signed in May 1982. Contracts have not yet been signed for either the ITAP or vocational training components. Thus, the accomplishments of the programs cannot be assessed at this time.

The training, consultancy, and institution building aspects of all three components relate, at first glance, closely to these aspects of the IPP; indeed, the programs could easily be administered within the same framework. However, some key differences exist between those aspects of the IPI and the IPP:

- companies are expected to pay for the MDP and ITAP services;
- the IPP is aimed at the public sector whereas the IPI aims at both public and private;
- the IPI is intended to focus on certain industrial sectors such as food processing;
- the IPI is aimed more directly at companies (even though two components are implemented through GOE agencies);
- all three components of the IPI feature explicit marketing and promotion; the IPP did not.

More specifically, both the IPP and MDP management consultancy components are designed with the primary purpose of building institutional capabilities. However, as noted earlier, in practice the IPP assistance was geared toward solving a specific problem rather than increasing capability within the organization to diagnose and solve its own problems. The IPP training component was not oriented around problem solving but geared more to classroom training in the abstract (as well as focusing on financial rather than management analysis). In contrast, the MDP training is designed around identified problems, with consultancy follow-up as the student puts new skills into practice. The MDP training also differs in the participation of a critical mass of managers in each company.

Once the ITAP and vocational training programs are active,

there could be valuable interaction between these programs and other AID programs. For example, a company might use an ITAP diagnostic to identify equipment for purchase under the CIP, DIB or PIE successor. The vocational training program could help to identify the training needs created by new equipment financed by one of the other programs. The MDP might identify and solve management problems posed by a complex new process financed by an IPP-type program. AID should be alert to the vast potential for such interaction, within the limits of the sectoral emphasis of IPI.

Direct Project Assistance. Like the CIP, AID's program of direct capital assistance for new and modernized industrial facilities was a significant precursor to the IPP. The loans differed from the IPP, of course, in a number of ways: the incremental rather than programmatic approach; the magnitude of the projects; the inclusion of new as well as rehabilitated facilities; the separately-bid feasibility studies; the direct relations with the companies rather than reliance of GOFI as an intermediary; the absence of institution-building goals; the decision-making criteria; and the absence of emphasis on policy changes. The following discussion focuses on the latter two differences, because of their important evolutionary link to the IPP.

In the early years of AID project assistance, the emphasis was on moving funds into the industrial sector quickly rather than comparative selection of projects. Unlike the later decision rules of IPP, DIB and PIE, an appropriate rate of return

was apparently not a factor in the decision. For example, neither a financial nor economic rate of return was included in the project paper for the Mehalla textiles investment in 1976; the following comment from the paper is revealing:

Such an IRR undertaking would take many months to prepare and the assumptions used would at best be rough estimates in many instances and thus subject to challenge. While it would be an interesting exercise to go through such calculations, its principal benefits would be a demonstration of the adjustments in Egyptian economic policies necessary to bring about a rational pricing structure. We doubt that in these circumstances an internal return analysis would be useful in assessing the merits of this particular project.

Yet for Suez Cement, approved at the same time, an economic rate of return was calculated: 14.6%, raised to 16% in the 1980 amendment, reflecting the increase in world cement prices. No financial IRR was calculated.

A year later, Port Said Salines showed a 17.2% economic rate, with no financial rate. By 1978, both economic and financial IRR's were calculated for Quattamia, although it would have been rejected under IPP criteria with its economic IRR of 13.58% and financial IRR of 10.7%. Even the range indicated by the sensitivity analysis did not include a financial IRR over 15%. Yet, a \$95 million loan for a new project was approved.

By 1979 a dialogue had begun in the Mission over appropriate decision criteria, stimulated by the proposed \$31.6 million loan for the Edfu Pulp and Paper project which showed an expected financial IRR of 25% and economic IRR of 7.5-11.4%. A memo

analyzing previous AID infrastructure and industrial projects in Egypt argued that "in general IRR's less than 15% are economically unacceptable in Egypt," given the opportunity cost of projects with higher IRR's. A memo in response argued that "the IRR is such an unreliable indication of real project value that it is relatively useless in comparing anything except closely related options in which all the elements are known with fairly equal reliability." The memo went on to argue that Edfu's 11.4% economic IRR should not in itself rule out the project, given that

it produces a badly needed product which must be imported, from an indigenous raw material that otherwise will be wasted; it employs 800 people in a remote, economically depressed area...; it assists one of the better public sector firms.

The project was formally rejected eight months later in a letter from AID to GOFI, stating that because of the low economic rate of return, compared to the benefit of other projects for which AID funding may be used, AID would not fund the project.

Hence, the decision rule of 15% ERR started to be exercised. Sinai Manganese's feasibility study showed a financial IRR of 5.39-9.59% and an economic IRR of 6.13-8.4%; the latter was recalculated by AID at a range "between negative and 3%." The project was rejected on these grounds.

Yet favorable IRR's were no guarantee of project acceptance. Lake Quarun showed an economic IRR of 31% and a financial IRR of 22% (the latter as low as 9-13% under a sensitivity analysis) but was turned down because of the failure to locate a U.S. joint

venture partner and the lack of Egyptian private sector investors. Thus, for these non-IPP projects, the 15% criterion was neither a necessary nor a sufficient condition for funding.

Other issues — technical and joint venture — determined the fate of the flat glass project. Because of the subsidized price of cotton, the polyester plant could not be financially competitive. The U.S. suspended further financing discussions until the GOE would be forthcoming with changes in cotton pricing policy, demonstrating the evolution of projects as attempted instruments of policy leverage.

The IPP sought to achieve policy leverage as an implied program goal. The early projects did not, although as noted earlier, the covenants expressed desired policy outcomes which were largely unrealized. In the case of Mehallah, the pricing study was never done. The May 1982 covenant report recognized that "the company's freedom to set prices is limited" and that the "dialogue with the GOE on textile pricing policies and subsidies must take place on a much broader scale outside the scope of this particular project." With the cement companies, no progress is reported but "AID will continue to urge the borrower to develop a plan for implementation of a national pricing system." Finally, with Port Said, the latest covenant report recognizes that industrial salt prices are not set by the company. In several cases AID has written letters to GOE ministries expressing concern about pricing and extending support for a company's need to raise prices, a recognition of the limited leverage possible through individual company chairmen.

### C. Conclusions

The following broad observations can be made regarding the IPP and AID's other programs in the industrial sector:

- Although current AID programs share some of the same goals and approaches of the IPP, there is limited coordination and interaction among the programs.
- Investment decisionmaking criteria have been unevenly applied across the programs and over time.
  - The programs vary in their specifications for and depth of the feasibility studies used for investment decisions.
  - Only the IPP and, to a degree, direct project assistance, have shared implied goals of policy leverage.
  - Only recently (in the IPI) has AID attempted a sectorally-focused approach.

VI. Structural Reform — The Role of USAID

Coopers & Lybrand's evaluation of the Industrial Production Project and a review of other USAID interventions in the industrial sector act as a base from which to judge the appropriateness of future program options. It appears from our discussions with USAID officials that a predominant emphasis should be placed on those options which have the following characteristics:

- promotion of structural reform;
- promotion of private sector development;
- use of effective institutional arrangements to efficiently channel forms of assistance;
- minimal burden on USAID management resources;
- rapid disbursement and/or commitment of obligated funds.

These program characteristics are contained in USAID's Industrial Sector Strategy and reflect USAID's apparent desire to shift from a project oriented role to a more programmatic mode over a phased period of time. The strategy appears to have a micro level orientation in the first phase and a macro level orientation in the second phase. The emphasis, however, appears to be on the issue of using USAID leverage to support structural reform in pricing, employment, investment, production, economic analyses and associated policies. Though there is an emphasis on structural reform in the public sector, there is the complementary issue of private sector development.

The issue of structural reform and the various means USAID can offer support to Egypt in the future, should be judged in light of USAID performance to date in the sector. Our evaluation of the project oriented phase and the lessons derived from it permit us to raise some issues which must be addressed in phase two. These issues have been discussed to some extent with AID management and Egyptian individuals and therefore represent a synthesis of thoughts and ideas from various people. The format in which we present them serves the purpose of focusing future discussion on specific areas.

#### The Role of USAID

It appears that USAID may be moving toward a programmatic mode of activity without fully exploring and debating its previous performance as a project oriented organization, and without considering whether the organization as a whole has developed patterns of behavior which may inhibit its new role as a "wholesaler" who can use leverage to influence policy or structural reform. In addition there may be consensus evolving within USAID that places excessive emphasis on funding as the leverage for structural reform to the exclusion of other options.

There is no doubt that structural reform is a complex process and the benefits derived in terms of economic growth may well be worth USAID focusing on this issue. However, the process

other donor agencies (such as the World Bank and Asian Development Bank) have used to influence structural reform in host countries seems to incorporate a variety of leverage mechanisms which includes financial leverage but of necessity does not solely rely on it. A review of them in the context of AID's role to date may be helpful. These mechanisms generally include:

1. A systematic and continuing dialogue on economic issues of concern to the donor and the host country.
2. The provision of economic and other information as a means of influencing reform measures.
3. Project selection and approval procedures tied to reform.
4. The size and sectoral composition of funding.
5. The relationship with other donor agencies.

Our review of USAID's approach to the industrial sector to date, particularly in relation to the IPP project, provided us with impressions that may be useful as we begin the second phase. These impressions are intended to stimulate thought and discussion within the mission and not to be construed as definitive policy choices.

Our first impression is that of the five identified leverage mechanisms, USAID has primarily focused on project selection as its prime leverage. However, as we found in the execution

procedures of IPP and other projects, the selection and approval process was not used effectively to address broader structural issues. For example, it does not appear that the results of the USAID's project review process and criteria were ever brought together as a composite analytic study to demonstrate to GOE the effects certain policies were having on the efficiency of a selected group of firms. Firm specific examples could be an effective way of systematically providing economic information to various Egyptian policy influencers.

This emphasis on project by project assessment seemed to distract USAID management away from using other leverage mechanisms as well. For example, it may be useful for USAID management to review the approach and quality of its dialogue with GOE concerning macro issues influencing the industrial sector. If its interaction to date has been on a project level basis with the dialogue centered on relatively minor issues, USAID may well consider other ways to establish a broader substantive dialogue, and determine what Egyptian individuals and institutions should be the target group. Phase two of this evaluation may be the beginning of that process.

In terms of economic and other information as a form of leverage we were not able to discern how information collected through project level experience was systematically shared between various sections internal to AID, to develop within the mission a consensus as to the role of USAID. We noted this

problem of control and coordination in our evaluation of the IPP and USAID may wish to determine if the problem exists in other ways. The AID staff are all very knowledgeable about Egypt and articulate problems and ideas well concerning structural reform. However, it is not clear if that information is systematically shared with appropriate Egyptians in ways which could influence structural reform. Often, part of the reluctance to change policy is that there is no clear indication of the effects of that policy change. USAID may help GOE overcome some of this apprehension by disseminating more focused economic studies either through USAID sponsored forums on major structural issues or by providing access to reports and studies sponsored by AID.

Another leverage mechanism is the size and sectoral composition of USAID's funding. To date most of the projects in the industrial sector appear to have been aimed at targets of opportunity rather than reflecting a consistent strategy. Obviously USAID is aware of this and steps have been taken in the new USAID Industrial Sector Strategy to rectify this situation. However, USAID should consider the possibility of working in selected sub-sectors of Egyptian industries and with targeted companies, both public and private.\* This would provide greater leverage to USAID's investment and may lead to structural reforms within

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\* The issue of "spread effect" in investment decisions must be more fully explored. This would involve redefining "bottleneck" in terms of critical industries or companies. Furthermore, focusing on public sector companies which "feed" into private sector companies may resolve the public/private sector dilemma.

or  
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Lithuania

subsectors. In turn these could act as interim steps to broader policy reform.

Finally, our impression is that USAID should review its strategy in the industrial sector vis a vis other donor agencies, and determine in what areas collaborative efforts could be pursued. There are examples of this collaboration already underway, such as the funding of the Development Industrial Bank. However, USAID may explore other areas of mutual interest and share with the other donors (to the extent politically feasible) AID's long term strategy regarding project interventions and structural reforms. The relationship with other donor agencies is a critical one as a leverage mechanism. If GOE has accessibility to other sources of funds for projects and programs, USAID's ability to influence policy could be significantly diminished. The role of the other donors as part of USAID's strategy must be fully addressed.

As USAID and the evaluation team move into phase two of this project, it should view the past role of AID in the industrial sector in relation to the five suggested mechanisms that can be used to support Egypt in its efforts to achieve structural reform. In the Industrial Strategy, USAID states:

At the same time there is the realization that our funding levels by themselves will not have a great direct effect on growth and employment. We need, therefore, to use our investment in a way to maximize our influence on the rest of investment in the sector, both public and private, domestic and foreign.

As USAID moves toward the "wholesaler" role, toward programs rather than projects in support of structural reform, it probably should consider in what ways, other than funding, AID could exert leverage. From our evaluation of the Industrial Production Project and other project modes, it appears that other opportunities for leverage have not been fully explored.

## Appendix I

### Background Paper for Evaluation of Program Modes in the Industrial Sector: The Macro Economic and Strategic Basis for the Evaluation

Over the last five years, Egyptian economic performance has been highly buoyant. GDP growth in real terms has averaged in excess of 9% per annum. Gross investment has averaged in excess of 25% of GDP. Partly as a result of buoyant domestic performance and partly as a result of the demand for Egyptian workers in neighboring Arab countries, trends in open unemployment rates have been favorable and pressures to provide essentially redundant jobs in the government sector have been reduced. Inflation has been contained within reasonable bounds. In a small measure, however, these favorable trends in inflation have been achieved through price controls on a substantial share of the commodities in household/firm expenditure baskets. The effectiveness of these price controls has been supported by the ability of the government to meet the demand for price controlled items at the controlled prices through a rapidly rising government import bill and through a reduction in the exportable surplus of commodities sold on the domestic market at prices substantially below their international market price equivalents.

Without discounting the very positive role played by GOE economic policies in generating favorable domestic performance, it is nevertheless true that a major — if not the dominating —

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pillar of support for meeting the rapidly rising import requirements of sustaining this favorable performance has been sources and amounts of foreign exchange that have been exogenous to economic developments within Egypt's commodity, producing, industrial and agricultural sectors. In particular, worker's remittance, petroleum export earnings, Suez Canal foreign exchange revenues, tourism, and foreign assistance all dramatically increased between 1975 and today. It now appears likely that future growth in foreign exchange revenues from these sources will fall short of the import growth rates required to sustain favorable economic performance.

In essence, Egypt will have to supplement these existing sources of foreign exchange through the development of efficient tradeable goods industries in the commodity, producing industrial and agricultural sectors in order to sustain favorable economic performance trends. The key role which will have to be played by these sectors — and in particular the industrial sector — is a conclusion widely shared among Egyptian policymakers, USAID and other bilateral and multilateral donors. This conclusion and the analytical basis for it is set forth in USAID's current Industrial Strategy Statement. This Industrial Strategy Statement, in turn, draws heavily on a detailed, USAID funded study of the structure, constraints and problems facing the economically efficient development of Egypt's public and private industrial sectors.

In brief, Egypt's industrial sector is dominated by the public sector in terms of contribution to GDP, employment, size of enterprises and coverage of the vast majority of industrial subsectors. Competitive market factors play a limited role in terms of the public industrial sector's pricing, employment, investment and financing policies. Many decisions are taken in the absence of a careful review of the conformity of these decisions with the industrial areas in which Egypt has comparative advantages. The private sector, in many respects, is disadvantaged relative to the public sector. Formal and informal approval is required for private investments which might compete with the commodity producing public sector. Access to foreign exchange imports and credit is subject to constraints that oftentimes place the private sector in a disadvantaged position relative to the public sector. All of these factors hinder the development of efficient tradeable goods production in the public and private industrial sectors.

The contextual framework provided by these background observations and studies is designed to place the assessment/evaluation in the prospective context of assisting the development by USAID of possible new programmatic initiatives in the public industrial sector that are consistent with current USAID industrial strategy.

#### A. The Industrial Setting

Egypt's industrial sector produces about 12% of GDP and

employs some 13% of the total labor force. The public sector accounts for approximately 75% of the gross value of industrial output while the private sector's share has risen in recent years to around 25%. On the other hand, 1979 data indicate 60% of the employment was in the public sector and 40% was accounted for the private sector. Thus the private sector appears to be more labor intensive than the public sector. Public sector enterprises dominate the output of basic industries such as spinning and weaving, food, chemicals and heavy engineering products, where the capital intensity is high and the establishment tends to employ more than 50 workers. Private sector industries tend to be smaller in size, both in terms of number of employees and invested capital per employee. There has been, however, a recent trend toward larger private sector establishments including some in the manufacture of consumer durables and certain light engineering products.

The gross value of industrial output at current prices increased by 21% in 1979. Public sector output rose 17% in 1979 to £2.8 billion, while that of the private sector expanded 31% to nearly £1.4 billion. On the basis of national income accounts data, real value added in industry has risen at an average annual rate of 7% over the last four years.

Beginning in 1974, industrial policy in Egypt started a gradual shift toward liberalization of export and import restrictions and toward decentralization of authority over investment

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and pricing decisions. This was the start of the transition to a more market oriented economy. The public industrial organizations, which had operated as holding companies for enterprises in each of the main industrial subsectors, were dissolved in 1975 and greater authority was suppose to devolve to the enterprises themselves. However, indications are that despite such decontrol measures, individual managers either have no increased authority or are reluctant to adjust prices to meet rising costs or to exploit market opportunities. Partly as a result of these changes, but also because foreign exchange became more available during this time, companies had access to imported raw materials and their capacity utilization went up, increasing productivity.

Also, in 1974, the GOE passed Investment Law 43 which opened up the economy to foreign joint ventures with public or private Egyptian firms to be formed in the private sector; and, the Free Zone and Investment Authority was established to foster and to approve these investments. This law and its subsequent 1978 revision, along with the recently enacted law extending some of the Law 43 benefits to domestically formed companies, have led to an ever increasing level of and interest in investments in Egypt. While the actual number of projects under implementation is far fewer in value also than those approved, still Egypt's industrial sector has expanded greatly.

#### B. AID's Involvement

AID's initial involvement in Egypt's industrial sector during

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the mid-1970's was of necessity somewhat unstructured. AID was looking to assist large, economic investments in mostly new industrial plants that could absorb the level of funds being provided to Egypt. The Commodity Import Program was initially structured to meet the more immediate needs of industry for raw materials and small capital equipment procurements. AID initially made little distinction between public and private sectors; however, with the passage of the Humphrey Amendment in 1977, AID began to more carefully approach assistance in developing and expanding the private sector.

The first large industrial project AID assisted was with the public sector company, MISR Spinning and Weaving, for \$96 million. Next, AID supported two large cement plants in the private sector, but essentially owned by the public sector. This support was for \$195 million. During 1976 through 1979, AID financed many feasibility studies: Edfu Pulp and Paper, Flat Glass, Polyester, Manganese, and Lake Quarun. However, as AID has become increasingly concerned about development of the private sector, it has been looking more toward U.S. joint venture arrangements to implement large industrial projects. Some of these studies have evolved into possible joint venture projects. Others were determined to be unattractive to AID for economic, financial and technical reasons.

AID recognized in 1978 that many CIP type industrial equipment procurements were really more like mini-projects which

extended beyond the scope of CIP. Therefore, in 1978 the Industrial Production Project was designed to move these types of public sector industrial procurements out of CIP and into a more structured format. These investments were to be of a remodeling, rehabilitation, de-bottlenecking nature, and not significantly affect the public/private sector balance or direction of investment. In part, this approach was taken to design a quick disbursing mechanism that strengthened the GOE's capabilities of doing this on its own in the long term. With this project in place, CIP funding was shifted to other areas. AID's current position on investments in public sector industry is to support those that rehabilitate current facilities but do not add significantly to new productive capacity.

C. The Industrial Production Project (IPP)

In brief, the IPP is designed to assist the development of Egypt's public industrial sector through a package of financial and technical assistance. This assistance is provided both directly to Egypt's General Organization for Industrialization (GOFI) and, through GOFI, to public sector industrial enterprises operating under GOFI. GOFI itself is a form of public sector industrial holding company operating under the Ministry of Industry. Over 100 companies operate under GOFI. The companies under GOFI produce the vast majority of public sector industrial output.

Of particular relevance to the evaluation are the three

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main components of the IPP:

- loans are provided through GOFI to public sector companies for purchases of capital equipment designed to replace, upgrade and/or rehabilitate existing plant and equipment; such loans\* are also provided to reduce adverse environmental effects of existing plant operations.
- technical assistance is provided to GOFI and the companies in the identification, appraisal and preparation of sub-projects involving capital and environmental equipment purchases. This technical assistance encompasses the financial, economic and engineering aspects of subproject preparation and implementation. Technical assistance is also provided in areas which do not involve capital equipment purchases.
- finally, the IPP includes a training component aimed at upgrading the technical and managerial competence of GOFI and companies' staff.

The technical assistance components of the IPP are provided through U.S. A&E firms and joint ventures. The two firms currently providing assistance are McKee-Kearney Joint Venture and Western International, respectively, for capital and environmental equipment purchases.

\* N.B., grants, not loans, are provided for environmental subprojects.

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## APPENDIX II

### BRIEF OVERVIEW OF MINISTRY OF INDUSTRY (MOI) INVESTMENT ALLOCATION PROCESS

- Six months prior to fiscal year planning exercise begins;
- GOFI requests 116 companies to submit investment projects in foreign and local currency;
- GOFI receives requests and discusses with company; GOFI advises if discrepancy exists, for example, as to investment requirements versus down payment for equipment;
- GOFI agrees/modifies; resolves issues involving projects not in five year plan; reviews each project for each company;
- GOFI/MOI develop investment program by subsector;
- Program forwarded to Ministry of Planning (MOP) with description of each project for each company;
- MOP collects inputs from MOI and other sectors;
- MOP allocation review exercise based on consumption/investment analysis;
- Projects are reviewed individually by MOP and decides on sector allocation and subsector allocation;
- MOP gives target figure to GOFI/MOI and reallocation of target amount is carried out
- GOFI/MOI provide final list to MOP
- MOP approves
- GOFI allocates funding to each company on a project by project basis; if a company has more than one project, the company does not have the authority to switch funding from one to another.