Project Performance and Development Impact Indicators for Projects in Private Sector Development:

A First Edition Note

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EXECUTIVE SUMMARY

Introduction

i. The Wapenhans Task Force Report "Effective Implementation: Key to Development Impact" identified a number of factors as contributing to poor project performance. These include poor project monitoring and supervision, and lack of focus on project outputs and development impact. The Report stressed the importance of setting clear goals, related to development impact, for Bank operations. To achieve this, it recommended that performance indicators related to both project implementation performance and development impact be identified at appraisal. The implementation indicators are to be monitored during project implementation to check if the project is on track and the impact indicators are to be monitored after project completion to assess the development impact of the project. The Report also emphasized that this should be a collaborative exercise with the Bank's clients being involved in all stages, i.e. identification and development of indicators, and monitoring of indicators. This Note seeks to provide some preliminary guidance in carrying out this task for Bank operations with private sector development components.

Methodology

ii. The most meaningful and unambiguous indicators are derived from the economic analysis of the project which measures the gain to society from the project and determines that the project is worth doing from the perspective both of the borrowing member and the shareholders. However, sometimes it is not convenient to replicate the overall economic analysis of the projects as a supervision and evaluation strategy. In such cases, it may be possible to use byproducts of the economic analysis -- "indicators" of the project's mid-term performance and of its ultimate development impact.

iii. A good project raises social return. The best projects raise social return by the most relative to the investment required to get the change. A government project must raise social return more, relative to investment, than would the same project if undertaken by private parties. The economic analysis of a PSD project needs to be ultimately related to this objective of raising social return. Various PSD measures, such as privatization or reforming laws, are not ends in themselves but rather instruments to increase social return.

iv. This principle -- that the most useful indicators follow from economic analysis --is true whether the PSD components are part of an investment or adjustment operation, only the tools of economic analysis may differ. Unfortunately, the basic economic analysis is frequently not well documented in the design and supervision of PSD projects. In a review of over 100 PSD operations, we found few that attempted to quantify any part of the overall social gain from the recommended reforms. The Form 590s rarely compared the objectives of the project to the development impact indicators and rarely quantified the objectives of the project in a way that would permit precise discussion of whether the objectives were met.

v. In addition to emerging from the economic analysis, a desirable indicator for PSD projects has other properties. First, it lies closest to the underlying measures that the project is supporting. The closer the indicator to the initial problem being addressed by the project, the less distorted is the information. Second, it has a benefit commensurate with its cost. Third, it should help indicate the

need for a mid-course correction. The more an indicator is linked to changes that the task manager can influence, the more useful is it.

vi. It is also important to link the project design to the indicators. There should be provision to estimate the impact on the indicator of changes in important variables that are external to the project and there should be a check for general equilibrium effects in partial equilibrium analysis. When a project envisages large-scale changes in the economic environment, the underlying economic analysis must be modified and may become more complex. The indicators chosen may also change but not necessarily become more complex. Where complex economic analysis, although desirable, is not possible, simpler partial equilibrium analysis is better than no analysis and should point to the right direction. The proper response to greater complexity is better indicators rather than no indicators. The need for logical thought leading to useful signals of project performance and predicted outcomes is all the more in the case of complex projects.

vii. When, as is common, Bank projects involve investments and policy changes that take a long time to work out, one can use different approaches to monitor the likely long-term impact in the short term. These include tracking key economic variables which may reflect long-term expectations immediately, such as stock prices and exchange rates, and taking polls of economic agents likely to be affected by the project.

viii. This Note does not set out a general discussion of proper economic analysis of projects. Rather, it attempts to set out, using some examples of elements of PSD projects, how the task manager might derive performance and development impact indicators when an economic analysis of the project has already been undertaken. Task managers need not themselves perform the economic analysis or devise the indicators for the projects, but should collaborate with an economist who can perform the task.

Types and uses of indicators

ix. Four categories of indicators are considered here: input, process, output and impact indicators. Together, these indicators are expected to help evaluate implementation status and development impact of projects. The input indicators show what resources the project will provide in order to achieve specified output. The process indicators relate to different stages of project implementation and are used to monitor progress towards specific project targets. Task managers may use them to check if the project components are being implemented smoothly or whether any bottlenecks are emerging. The proper use of such indicators should help detect early warning signals and take remedial measures. The output indicators measure the output for each project component. They are linked to the direct project objectives and are used, on completion of the project, to evaluate whether the objectives have been met. Finally, the impact indicators are meant to capture the long-term development impact of the project and are usually evaluated after some time has elapsed following project completion.

x. Used properly, these indicators will make it easier to supervise the portfolio--directly, as they permit the task managers to supervise their project, and indirectly as they permit senior managers to supervise the performance of their task managers. It must be stressed that the application of useful indicators does not make an essentially bad project good nor does it mitigate external influences on the project. However, it does lead to more focused consideration of project design, implementation

issues and overall development goals. The development and widespread use of indicators in Bank projects may require a change in the incentive structure that encourages task managers to pay attention to these issues.

Data requirements

xi. Where data are lacking for the best indicators, task managers may wish to consider including such data components in their projects to ensure that adequate data are generated to supervise and evaluate the project. Adjustment operations commonly require improvements in the national accounts or in trade data. In a similar spirit, PSD operations, both investment and policy-based, can require collection of data on profits or on unit costs for privatized or restructured enterprises and of data on loan recovery rates and profits of institutions on-lending credit lines.

Menus of performance indicators

xii. The following are examples of input, process, output and impact indicators related to four proto-type PSD projects supported by the Bank.

Project	***Indicators***			
	Input	***Process***	***Output***	***Impact***
1. Regulatory reform	Consultants to study regulatory options and recommend changes	Consultants complete report	Changes in regulation	Cost of regulatory compliance
2. Privatization	Consultancy services to privatize enterprises	Number of enterprises for which announcement of share-offering made	Total value of assets privatized	Annual flows from govt. to public enterprises
3. Development of SMEs	Finance for line of credit	Number of credit applications received and reviewed	Amount of credit disbursed	Growth rate of SME value-added relative to GDP growth rate
4. Enterprise restructuring	Consultancy services for enterprise diagnosis and development of restructuring plans	Initiate restructuring or liquidation of enterprises	Number of enterprises restructured	Aggregate profitability of enterprises selected for restructuring

I. INTRODUCTION

1. The Wapenhans indicator study shares the same original impetus that propels all the Wapenhans efforts: a broadly-perceived need to improve the quality of the Bank's portfolio. New findings continue to support this effort: for example, a recent OED/OPR report estimated that 48% of the economic analyses done for projects were poor or inadequate.[1]

2. The most useful indicators emerge from the economic analysis of the project -- the fundamental analysis that measured the gain to society from the project and determined that the project was worth doing from the perspective both of the borrowing member and the shareholders. However, sometimes it is not convenient to replicate the overall economic analysis of the projects as a supervision and evaluation strategy. In such cases, it may be possible to use byproducts of the economic analysis, i.e., "indicators" of the project's mid-term performance and of its ultimate development impact. Used properly, these indicators will make it easier to supervise the portfolio -- directly, as they permit the task managers to supervise their projects, and indirectly as they permit senior managers to supervise the performance of their task managers.

3. Section II demonstrates how indicators can be derived from the economic analysis of PSD projects. Section III presents some generally desirable features of indicators. Section IV presents some examples of project implementation and development impact indicators for different, important types of PSD projects. The last section discusses some more general issues about the derivation and use of indicators.

4. These indicators have been prepared as a follow-up to the report, **Portfolio Management/Next Steps--A Program of Actions,** Report No. R-93-125, which was approved by the Board on July 8, 1993. It also follows up on OP/BP 10.00 (issued June 1994), which refers to investment lending and specifically identifies performance monitoring and development impact indicators as key elements of the implementation plan.

[1] Wijnand/Distribution, "Post Appraisal Review of the Quality of Economic Analysis in Bank Projects," September, 1994

II. DEVISING PSD INDICATORS FROM THE ECONOMIC ANALYSIS OF PSD PROJECTS: EXAMPLES

5. This section first sets out some examples of private sector indicators and how they are derived from the economic analysis of the underlying project. It then groups the derived indicators in Tables I and II. The tables illustrate the usefulness of the indicators and the dangerous ambiguity that emerges when indicators are used without a careful, initial economic analysis.

Improve firm efficiency: private; reform laws and regulations

6. A well-designed privatization or legal/regulatory reform project will cut the costs of doing business and raise firm profit (Figure 1). Schematically, for the affected firms, the project will shift cost curves down, permitting output and profits to rise; if the good is not produced in a competitive market, the price will fall too. A well-designed project would scale the investment or the loan in proportion to the likely benefits: society is likely to benefit more from reforming the regulations for building houses than from reforming the regulations for checking scales. On the other hand, a sufficiently cheap project for checking scales may have the social edge over a sufficiently expensive and badly focused program for reforming building codes. Nothing substitutes for the numbers and the technical specialist should work closely with the economist on the project to work this out.

7. The indicators emerge from the economic analysis: the performance indicator is, of course, the passage of the law or regulation presumed to have the benefit. The secondary indicators -- lower costs, lower prices, higher profits, higher output -- can be used to confirm the performance indicator.

8. Evaluating these indicators can be complicated by "exogenous" changes and larger systemic changes. Obviously, for example, if a macroeconomic crisis overtakes the country, and interest rates and taxes rise sharply, the building industry might collapse and the number of housing starts fall. Nonetheless, the underlying legal and regulatory reform may have been quite sound. The secondary indicators, then, might better include measures that permitted direct observation of the issues in question -- for example, data on the cost of housing units, profit of builders adjusted for exogenous changes, or a survey of builders on the actual costs of complying with regulations.

(a) **Project performance indicator:** enact legal or regulatory change

(b) **Development impact indicators:** data showing lower costs, lower prices, higher profits, higher output; surveys of firms to determine before and after experience

(c) **ARPP experience:** Based on a review of over 100 operations whose primary emphasis was private sector development, use of project performance indicators was not widespread. About ten percent of the Form 590s specified, for each stated objective, whether that objective was met; on average, the Form 590s report on meeting only one-half of the objectives stated in the same Form 590. Even here, the stated objective and judgment of achievement were so qualitative that there would be no way to disprove the assertion of the opposite. No credit line operation reviewed reported on the profit of the on-lending institution; only two Form 590s dealing with any industrial reform reported on the profit of private firms, the prices of their shares, their output, their prices, or their unit costs.

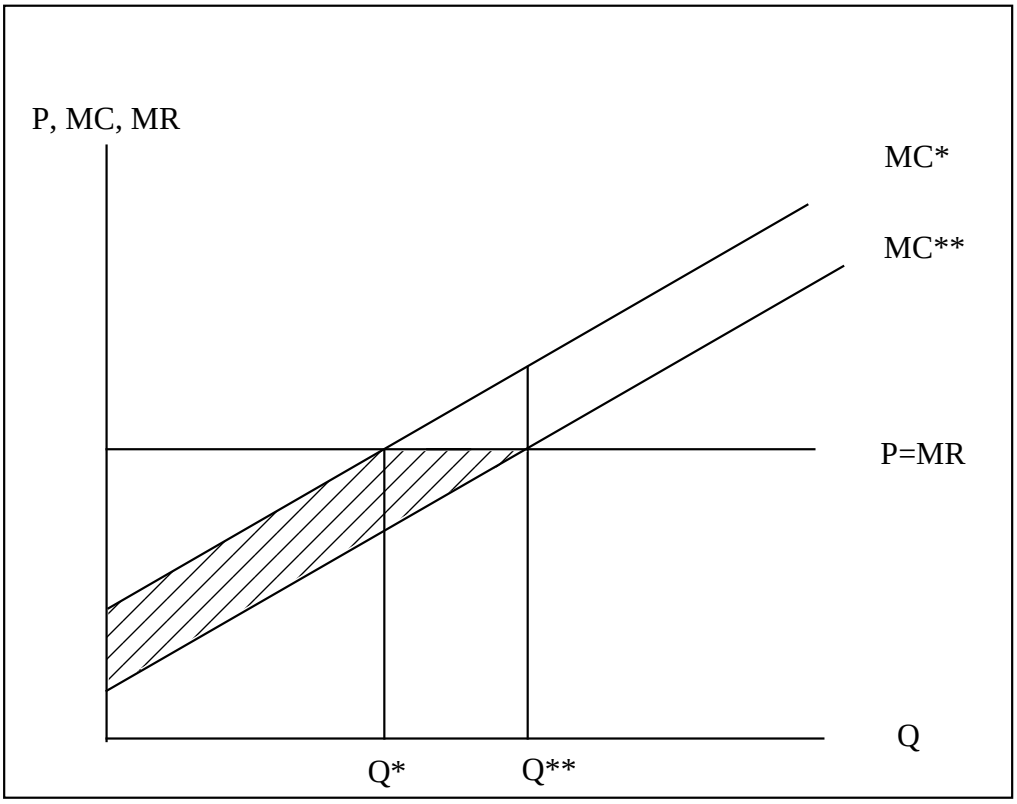

Figure 1: Indicators for improving the efficiency of the firm

Project performance indicator: removal of the regulation; privatization of the firm; completion of the restructuring.

Reducing unnecessary regulations on firms, restructuring them, or privatizing firms that compete should lower costs. The drop in costs will increase output and profit, even though prices will remain unchanged if the firm is competing in world markets. The gain to the country is shown by the shaded areas.

In all the charts, the notations P, MC, MR, AR & Q stand for price, marginal cost, marginal revenue, average revenue and output respectively.

Eliminate price controls

9. Eliminating price controls makes a country economically better-off: firms produce more of the output that citizens want and citizens value it more than it costs to produce (Figure 2). As before, the loan should be scaled to the social gain from the removal of the price control. The performance indicator is obviously the elimination of the price controls. Development impact indicators include a rise in the domestic price, a rise in production and an increase in firm profit.

(a) **Project performance indicator:** remove price control

(b) **Development impact indicators:** domestic prices rise; as do output and profit of firms in the decontrolled industry

(c) **ARPP experience:** no PSD Form 590 described the need to remove a price control or monitored a price control removal. It was hard to know what to make of this. It is possible that none of these operations involved removing any price controls and that the Form 590s were correct to ignore this. Only a comparison of the Form 590s with the SARs and supervision reports will clarify this. It was a mildly surprising finding in view of the extensive use of price controls and trade barriers in protecting state-owned enterprises from competition.

Reduce tariffs

10. Reducing tariffs and quantitative restrictions raises economic well-being by reducing the costs of consumption and by aligning the private and social costs so that producers shift investment and workers into the production of the goods and services that are most valued in the country and the world (Figure 3).

(a) **Project performance indicator:** remove tariff or QR

(b) **Development impact indicators:** domestic prices fall; as do output and profit of firms in the protected industry; share of imports rises

(c) **ARPP experience:** no PSD Form 590 monitored the removal of a tariff or a QR. The same qualifications apply to this observation as to the discussion of the removal of price controls.

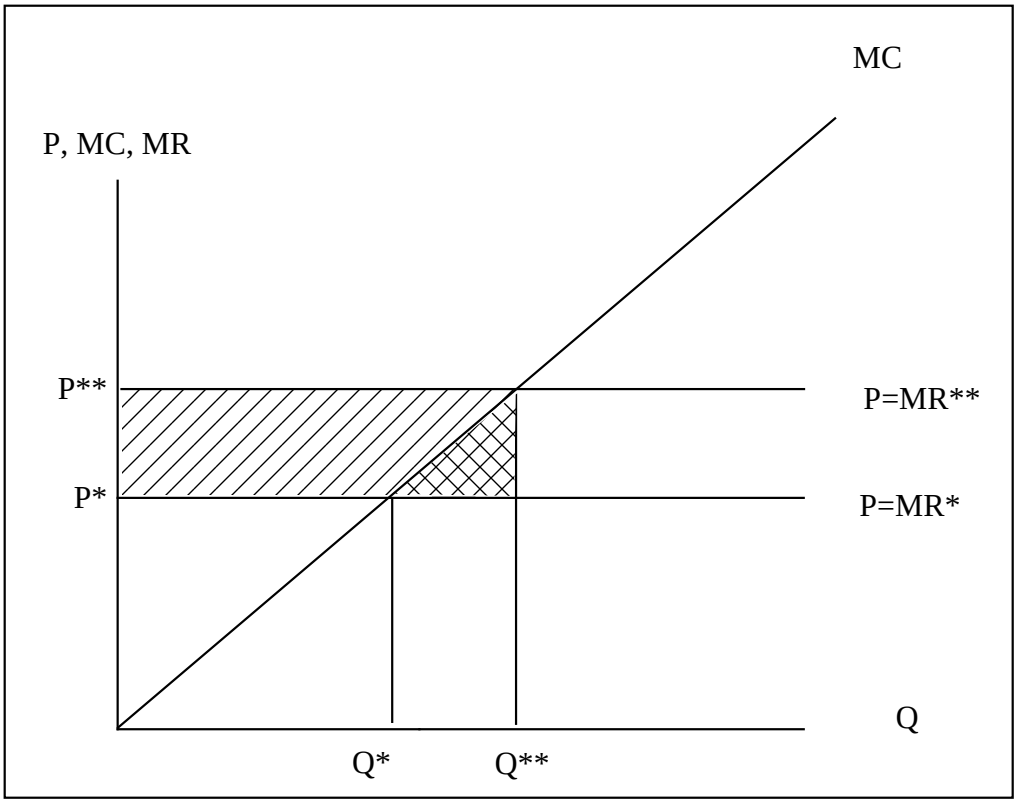

Figure 2: Indicators for a price decontrol

Project performance indicator: removal of the price control

Decontrolling the price leads to an increase in profit and an increase in the amount produced. The country gains in the short run from the increase in the value of production (diagonal) less the cost of production (cross-hatch); in the long run from the better allocation of capital as investment is attracted to this profitable use. Points to watch: important redistribution effects of the price increase. For example, is this the price of vaccine? What group gains? What group loses? Will these gains and losses affect the political viability of the project?

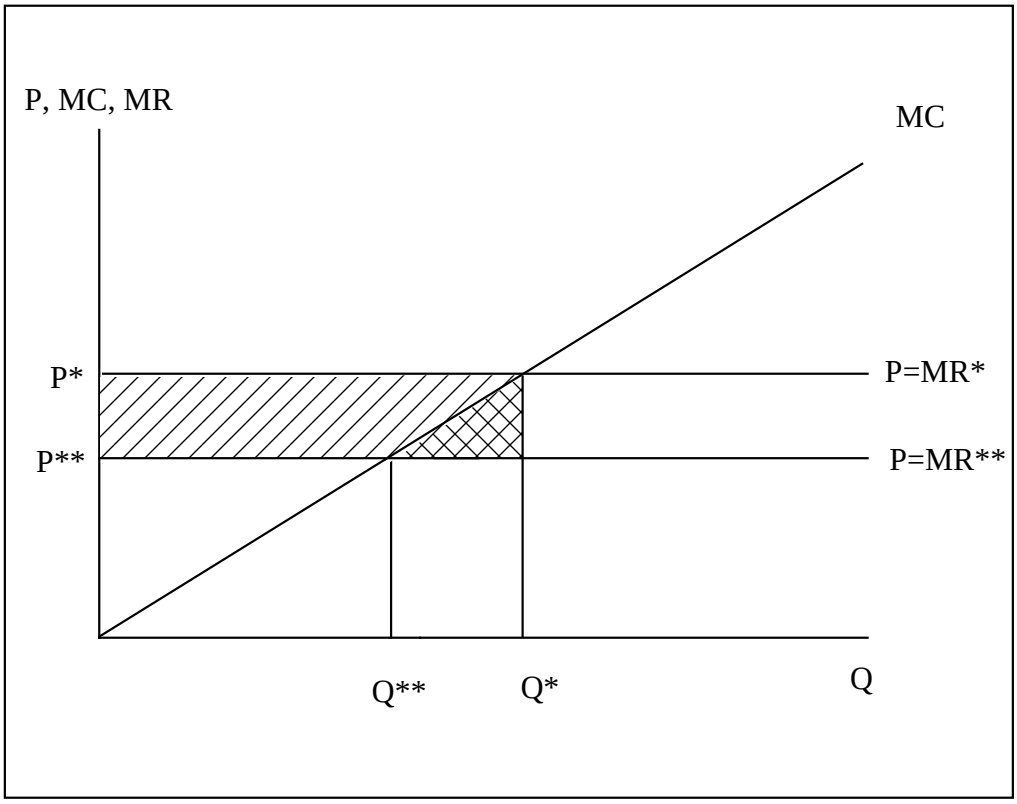

Figure: 3: Indicators for tariff reduction

Project performance indicator: reducing the tariff.

Eliminating the tariff leads to a drop in profit and a decline in the amount produced. The country gains in the short term from eliminating the waste of producing something that can be imported more cheaply (cross-hatch); consumers gain from not having to pay local producers more than the world market price (diagonal). In the long run, the country gains from better allocation of capital as investment in this industry falls on account of lower expected profit. Points to watch: important redistribution effects of the price decline. Will these be socially important -- for example, grain produced by poor peasants? If so, what alternative mechanism is in place to support their income? Are tariff revenues important for the government budget and what will replace them when tariffs are lowered? What political groups are affected and how will this affect the viability of the project?

Eliminate subsidies

11. Eliminating subsidies improves economic well-being. Given that subsidized firms produce and sell goods at costs higher than consumers are willing to pay, each subsidy produces a loss for the country (Figure 4). This may seem small for each individual, but added up over a large number of programs and citizens can represent a large cost. Over time, the subsidies produce even greater losses as they attract labor and capital into the money-losing industries.

(a) **Project performance indicator:** remove subsidy

(b) **Development impact indicators:** domestic prices rise (only for monopolies); output falls

(c) **ARPP experience:** no PSD form 590 monitored the removal of a subsidy.

Privatize a state-owned monopoly

12. Privatizing a state-owned monopoly has a positive effect on economic well-being in the country -- the reduction in the cost of operating the firm -- but it may also have a negative effect. The now-private monopoly may take advantage of its position to raise prices closer to the profit maximizing monopoly price than did the previous state-owned monopoly. Depending on the relative sizes of the two effects -- efficiency and exploitation -- price, quantity, and social return may rise or fall (Figures 5,6).

(a) **Project performance indicator:** privatize monopoly

(b) **Development impact indicators:** social return rises; need to measure increase in efficiency and loss in consumer welfare from the price rise

(c) **ARPP experience:** of about 30 restructuring and privatization projects, no Form 590 reported on the social gain from privatizing a state monopoly. None reported on whether regulation was necessary to control the monopoly or that domestic or international competition would suffice. None reported on whether the regulatory regime or trade liberalization, if needed for control, was in place.

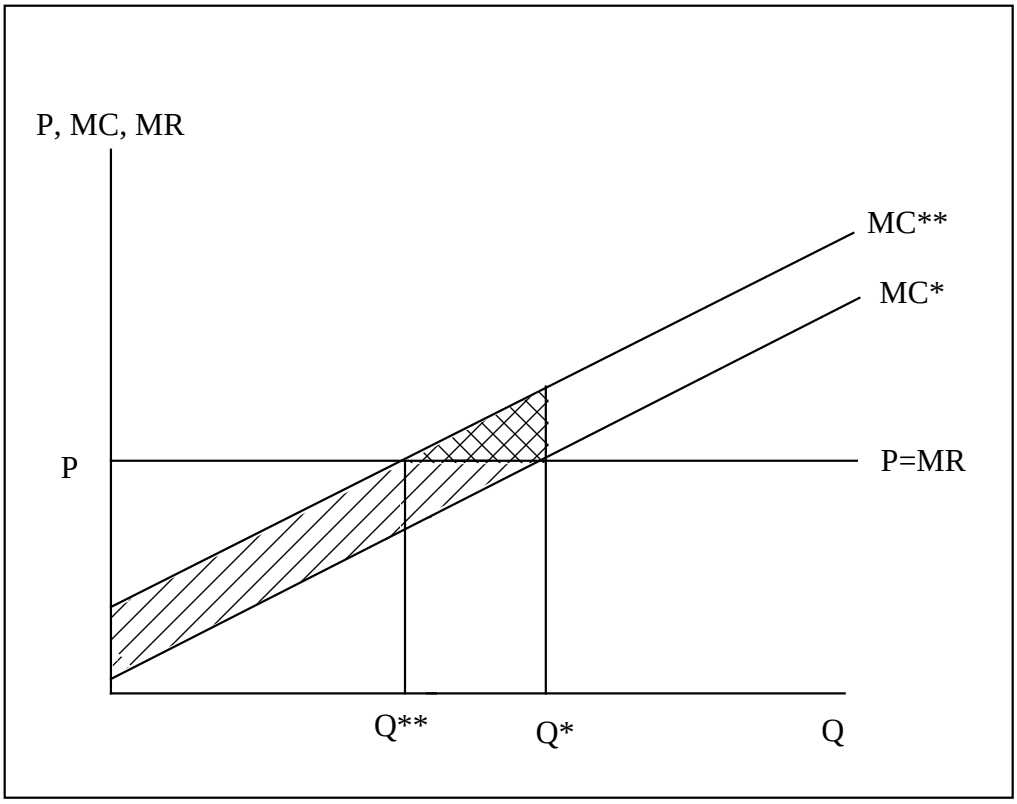

Figure 4: Indicators for removing a subsidy

Project performance indicator: removal of the subsidy

Secondary indicators and elements of the economic analysis of the project: removing a subsidy shifts up the cost curve that the firm faces in making its production decisions. Since the good, in this example, is traded in the world market, its price will remain unchanged. The increase in the firm's costs, with the lower subsidy, will cut the firm's profits and lead it to reduce production. The gain to the country arises in the short term, from not producing goods that cost more than their social value (cross-hatch) and in the longer term by reducing firm profit that leads investors to invest more than is socially useful in this enterprise (diagonal).

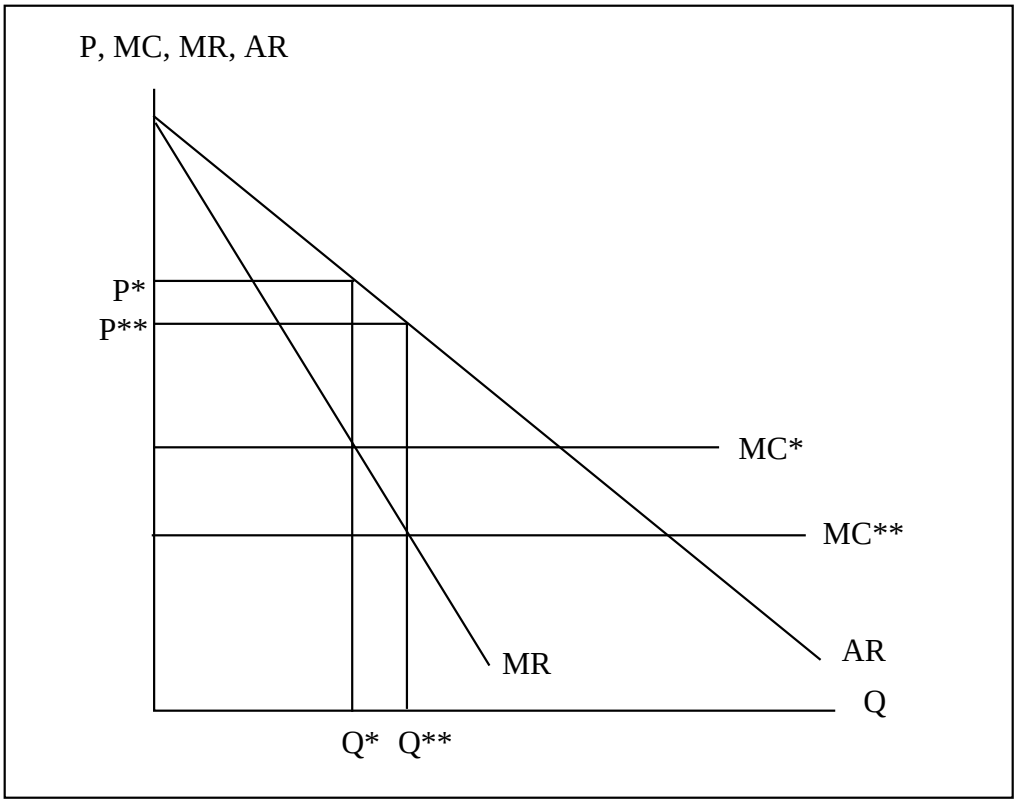

Figure 5: Cut costs for a monopoly with reform or privatization

Project performance indicators: enact the reform; privatize

Secondary indicators and elements of the economic analysis of the project: The rise in the profit of the monopoly is the measure of the gain to the country. With privatization or regulatory reform, costs fall from MC* to MC**, leading to an increase in output and a fall in the price.

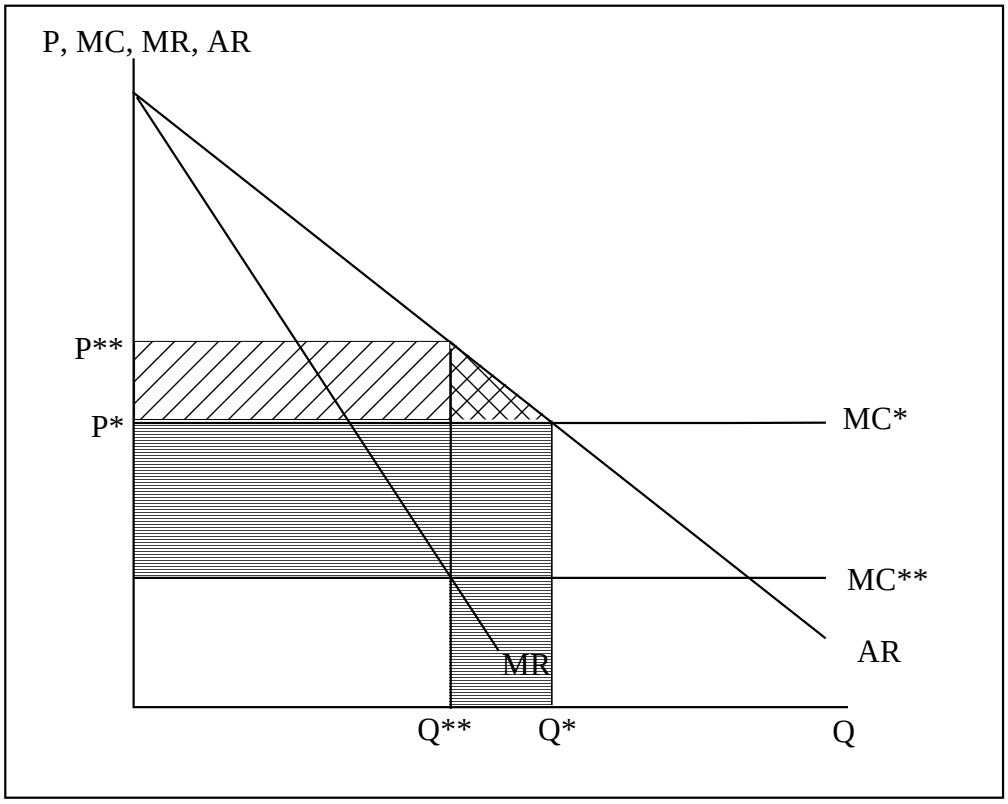

Figure 6: Privatizing a SOE Monopoly without regulation.

Project performance indicator: privatize

Secondary indicators and elements of the economic analysis of the project: drop in output, rise in profits, rise in price. Privatizing the SOE lowers cost. Society gains from those lower cost (horizontal shades). But suppose the SOE charged the competitive price (P*) while the privatized monopoly charges the monopoly price (P**). Then output drops from Q* to Q** after the privatization/price deregulation. Consumers lose due to the reduction in the consumer surplus (diagonal plus cross-hatch). Part of the loss of consumers (diagonal) is just transferred to producers and must be evaluated like any other redistribution. Part of the loss (cross-hatch), though, affects all of society as citizens falsely economize on the goods because the monopolist has the power to charge more than the cost of producing the good. This loss (cross-hatch) should be compared to the gain to society through lower costs (horizontal shades). In this example, the gain to society clearly exceeds its loss. However, for a different configuration of demand and cost structures, the opposite may be true.

13. **Indicator Tables.** As the above discussion demonstrates, good indicators follow logically from the underlying economic analysis of the project. Tables I and II summarize the above analysis; some reforms common in private sector development projects are considered and some examples of relevant indicators are set out. Each one increases social return and each one is potentially desirable if the social gain can be achieved with a sufficiently small investment. The tables show the indicators of price, quantity, employment, and industry profit.

14. Note, crucially, however, that of these four "indicators" that would be good candidates in any indicator exercise, the direction of change consistent with good development impact changes completely with different underlying economic analyses.

15. ***Basic Economic Data Relevant to Private Sector Development***. Many economic data can be relevant as background in the development of a sound economic analysis of a successful private sector development project. Extensive lists of such data series are readily available from Bank publications, from the BESD and ANDREX packages, and from other international agencies and governments. It is common to see projects that contain such data, but all too often the data are not linked with any analysis of the projects; rather, the data are presented as "background." However, if the task manager cannot explain clearly to the reader how the data presented are to be linked to the analysis of the project, the reader can not be expected to be able to imagine the connection. Unfortunately, too often, these statistical presentations serve to create the illusion of an analysis when, in fact, none is present.

16. Thus, it is not typically useful exercise to decorate the project analysis with such data. The economic analysis should identify which data are useful. For example, it may make a great deal of sense to present detailed data on GNP if GNP behavior is going to be crucial in determining the outlook for investors buying newly privatized firms but it is not obvious how the GNP data would tell us much about project performance or development impact in a project aimed at, say, revising the building codes.

17. ***Private Sector Data***. As the private sector encompasses almost all known economic activity, except for a few highly specialized areas reserved to the government, nearly any data will have some bearing on the private sector. As with basic economic data, the best data will be those whose collection is justified in terms of the underlying economic analysis of the project. However, the indicators project cannot be used to rank countries in order of their need or aptitude for private sector development or to rank projects in order of their social desirability. Take, for example, an obvious candidate -- the fraction of total output emerging from the private sector. Suppose the private sector in one country is larger than in another, or the private sector increases over time. What should be made of this fact? We would still need to know whether the public sector was, more appropriately, in the sectors with market failures or, less appropriately, in the sectors producing tradeables. We would need to know whether the private sector was large or growing because it was competitive or large and growing because it was subsidized or protected.

Table 1: Examples of Project Performance and Development Impact Indicators for Private Sector Development Projects where Markets are Competitive

1. Competitive Industry	Impact of Policy Change on Easily Measured Economic Variables				Impact of Policy Change on Social Profit
	Price	Quantity	Firm or industry employment	Firm or industry profit	
Policy Change:					
1a. Cut overall costs with legal and regulatory reform	no change	up	?	up	up: cuts costs and makes it profitable for firms to expand output. What happens to employment is less clear because workers are now more efficient. With the same resources of production, the country gets more output and is better off. (figure 1)
1b. Eliminate price controls	up	up	up	up	up: imposing price controls leads firms to produce less of the output that citizens want; removing them leads firms to produce more of the output that citizens want; as the cost of producing that output falls short of the value placed on it by the citizens, value added rises. (figure 2)
1c. Remove tariffs	down	down	down	down	up: imposing tariffs raises domestic prices and production, but the cost of producing that output exceeds its value; citizens gain when these policies are reversed (figure 3)
1d. Eliminate subsidies	no change	down	down	down	up: subsidizing production can raise output, but that increased output costs the country more than citizens think it is worth; otherwise they would have purchased that amount before the subsidy. (figure 4)
1e. Privatize	no change	?	?	?	up: since prices are set in world markets, privatizing will not lead to a change in the price. What happens to output depends on associated variables that, presumably, will be closely monitored. If subsidies to the firms fall or the firms lose access to state-subsidized credit, then output and employment might fall. Firm profit will always rise, relative to what it would have been if corrected for the loss of subsidies or other anti-competitive protective policy; unit cost will always fall; social profit will never fall and typically will rise.

Table 2. Examples of Project Performance and Development Impact Indicators for Private Sector Development Projects where Markets are Not Competitive

2. Monopolistic Industry	Impact of Policy Change on Easily Measured Economic Variables				Impact of Policy Change on Social Profit
	Price	Quantity	Firm or industry employment	Firm or industry profit	
Policy Change:					
2a. Cut overall costs with legal and regulatory reform	down	up	up	up	up: cuts costs and makes it profitable for firms to expand output and employment. With the same resources of production, the country gets more output and is better off. (figure 1)
2b. Eliminate price controls	up or no change	up	up	up	up: imposing price controls leads firms to produce less of the output that citizens want; removing them leads firms to produce more of the output that citizens want; as the cost of producing that output falls short of the value placed on it by the citizens, value added rises. (figure 2)
2c. Remove tariffs	down	down	down	down	up: imposing tariffs raises domestic prices and production, but the cost of producing that output exceeds its value; citizens gain when these policies are reversed. (figure 3)
2d. Eliminate subsidies	up	down	down	down	up: subsidizing production can raise output, but that increased output costs the country more than citizens think it is worth; otherwise they would have purchased that amount before the subsidy. (figure 4)
2e. Privatize	?	?	?	?	?: The effect on price cannot be predicted from first principles: the old state monopoly probably had higher costs but was less concerned about maximizing profit; the privatized monopolist may charge more or less than the state monopolist; whether output and employment rise or fall depends on the net effect of measures to improve efficiency (lower employment) and reductions in price (more output and more employment); the effect on social profit depends on the balance between the gain from lower costs and the possible loss to consumers from high, monopolist prices (figures 5,6)

III. PROPERTIES OF DESIRABLE PSD INDICATORS

18. ***Prefer an indicator close to the problem at which the project is directed.*** Typically, the best indicators are closest to the underlying policy measures that the project is supporting. For example, if burdensome regulations are the issue, then the change or removal of those regulations may be the best performance indicator. The more distant the indicator from the initial problem that is the object of the project, the more distortion arises in the information. It is easy to determine that the building regulations have changed, harder to determine how much of the response of the building industry is attributable to the change in the building regulations, and still harder to identify the overall impact on national output of a growth in housing stock induced by a change in the building regulations.

19. ***Consider the costs and benefits of indicators***. The underlying economic analysis may suggest other approaches. For example, suppose that it is easy and cheap to get data on housing starts, the interest rate, population growth and GDP, but hard to get observed data on the impact of building regulation. Then a rise in housing starts that can't be explained by a drop in interest rates or a rise in population or output could confirm the effectiveness of a program to simplify building regulations.

20. ***Link indicators to mid-course correction***. The more an indicator is linked to changes that the task manager can influence, the more useful is the indicator. Monitoring whether the government has passed agreed-upon changes in building regulations permits directly observing whether the government has undertaken the change on which the loan is predicated. This helps lay the groundwork for discussions during a mid-course correction. If the indicator monitored the profits of the building firms, then observing that profits didn't rise would still require further investigation of its causes before knowing what to negotiate with the government.

Link Project Design to the Indicators

21. ***Adjust for changes in important variables***. We might expect profit of privatized firms to rise, other things being equal. However, an unexpected shift in interest rates and exchange rates might reduce those profits. Similarly, a privatization accompanied by a reduction in subsidies might cut the profits and output of a privatized firm. An economist should be able to work out a back-of-an-envelope estimate of the impact of changes in important variables that are external to the project, like commodity prices, interest rates, or exchange rates. That can be useful in constructing the right "counterfactual" case. Suppose the task manager was using profit of the firm as the index of the success of a restructuring, but that world prices of the product produced by the firm fell. Making a rough correction for this change would permit the task manager to still use the indicator of, say, the profit of a restructured firm and to determine that the project was on track because "profits had fallen less than they should have."

22. ***Design data components into the project***. Many of the indicators listed in this paper may not be feasible given the state of data in many countries. One solution to that problem is to include a data component in the project. Adjustment operations commonly require improvements in the national accounts or in trade data. In a similar spirit, PSD operations, both investment and policy-based, can require collection of data on profits or on unit costs for privatized or restructured firms and of data on loan recovery rates and profits of institutions on-lending credit lines. In that case, the supervision budget must be sufficient to extract the information from such sources, such as auditor's reports, or

the project component must be designed to finance the compilation of this material in a form suitable for supervision.

23. ***Check for general equilibrium effects in partial equilibrium analysis***. The indicators shown in the examples follow from partial equilibrium analysis where, essentially, the world outside the firm is expected to remain unchanged. However, some Bank projects envision large-scale changes in the economic environment. Accordingly, the underlying economic analysis must be modified and the indicators chosen may change. Typically, the indicators will become more aggregative -- for example, average tariff levels and imports as a share of GDP might become the monitored variables. Usually the scope of the indicator should expand beyond the direct impact on the industry; for example, a transport sector reform might consider the positive impact outside the transport sector of the drop in the cost of transport as well as the profit of the transport sector. Large projects will require more complicated economic analysis. In the end, though, the indicators may be quite simple. Much will depend on the economic model used to provide the economic analysis.

24. ***Indicators of long-term impact***. Bank development projects typically involve investments and policy changes that take a long time to work out. However, there are ways to monitor the likely long-term impact of a project in the short term. First, key participants could be polled; survey techniques have been used successfully to monitor a number of characteristics of operations. For example, having initially polled businessmen to determine the most costly government regulations, they could be polled again after the operation begins to see if any progress is being made and whether they believe the progress is permanent.

25. Second, some key economic variables do reflect long-term expectations immediately: stock prices, bond prices, and exchange rates. For example, policies that are good for business should make stock prices rise; if the reforms don't have that effect, the task manager might address that problem.

26. ***Indicators in adjustment versus investment operations***. The principle of deriving an indicator for a PSD investment operation is the same as the principle of deriving one for a PSD adjustment operation: the indicator must emerge from the underlying economic analysis of the operation. There is no obvious qualitative difference in the economic analysis of a change in policy from the economic analysis of an investment project, although the underlying economic tools to develop the economic analysis might differ.

27. One may argue that even when some of the changes prescribed are unambiguously good for the country and are welfare-enhancing, the loan must have some logic justifying its size: why lend $100 million and not $10 million to support the removal of price controls? If there are a dozen conditions on a policy-based PSD loan, one should ask which are essential for a high-return operation and which can be waived without serious problems.

28. It is also true that different "events" may have different degrees of precision: it may be easy to tell that price controls have been removed, but more difficult to determine that the courts have been reformed. But this is perhaps less a problem in devising indicators, and more a problem in project design: if it is difficult to tell when an event has taken place, on what basis was the loan originally justified and what evidence will be used to show that this was a well-chosen project?

IV. EXAMPLES OF PSD PROJECT IMPLEMENTATION AND DEVELOPMENT IMPACT INDICATORS

29. This section, which builds upon Section II, provides further examples of project implementation and development impact indicators for Bank-financed PSD projects. The list of PSD projects considered here is not exhaustive but the examples chosen represent some of the typical areas of PSD-related work in the Bank. Similarly, for each type of project, the indicators presented are only examples, not comprehensive lists.

30. Four categories of indicators are considered here: **input, process, output and impact** indicators. Together the indicators are expected to help evaluate implementation status and development impact of projects. The *input* indicators show what resources the project will provide in order to achieve a particular output. The *process* indicators relate to different stages of project implementation and are used to monitor progress towards specific project targets. Task managers and implementing agencies in the client countries may use them to check if the project components are being implemented smoothly or whether any bottlenecks are emerging. The proper use of such indicators should allow one to detect early warning signals and take remedial measures. The *output* indicators measure the output for each project or project component. They are linked to the direct project objectives and are used, on completion of the project, to evaluate whether the objectives have been met. Finally, the *impact* indicators are meant to capture the long-term development impact of the project and are usually evaluated after some time has elapsed following project completion. Some of them are at the micro (i.e. enterprise) level while others are at the sectoral or national level.

31. The indicators which are to be monitored for a particular project and the modalities for collecting data for tracking the indicators, should be agreed upon by the Bank and the Clients by the time of project appraisal. Where sub-project components will be required to generate such data there should be agreement on the arrangements for doing so.

32. Some of the impact indicators listed in the examples are the same as those discussed in Section II. These indicators, which are all at the enterprise level, follow clearly from the economic analysis of PSD projects. In addition, we present several impact indicators, some at the enterprise level but most at the economy/sectoral level, the economic rationale of which is not explicitly established in this paper. The relevance of these indicators for any particular project, and the meaning of the changes in their values, will have to be derived from proper economic analysis of the project. For example, one of the economy-wide impact indicators for privatization projects presented below is the rate of growth in industrial investment (see Example 2). As was discussed above, which direction this indicator should point depends on the economic analysis. Increased efficiency of enterprises may lead to greater investment in industry, at least in the medium to long run. However, where there is over capacity in the industry, a reduction in investment, or disinvestment, may be socially desirable and one would like to examine if privatization has led to a reduction in the investment rate in this industry. Here the indicator remains relevant but the desirable direction of change in its value is different from what one might have expected.

33. The following examples show how project goals are related to national goals and how the indicators are linked to the project goals. Thus, in the case of the line of credit operation for small and medium enterprises (SMEs), the national goal is to expand the role of SMEs in the economy, and this is captured in the impact indicators (Example 3). The goal of the project is to contribute to

the national goal by providing a line of credit to some SMEs and by increasing efficiency of some of the financial intermediaries involved in SME-financing. There may be alternative ways of expanding the role of SMEs but this particular project has an economic analysis that justifies these two particular approaches. Hence the output indicator focuses on the amount of credit disbursed to SMEs and the collection performance and transaction costs related to SME lending by the participating financial intermediaries. It would not be proper to have the rate of growth of the SME sector as the output indicator because that reflects the national, not the project goal, and it does not lie close to the problems being addressed by the project. Rather, it could be an appropriate impact indicator. The input and process indicators are also related to the project, not the national, goal.

Examples of input, process, output and impact indicators

34. ***Regulatory reform****:* The first set of indicators (Example 1) relates to a project involving a regulatory reform. In this example, the enactment of a regulatory change is taken as the output of the project. However, one may argue that the mere enactment of a regulatory change is not enough to ensure that the change has been implemented in practice. In that case, one may view the enactment of a regulatory change as the process indicator while the establishment of a regulatory body or some other indicator which captures actual implementation of the change may serve as the output indicator. The latter type of indicator may be quite difficult to define and track. In such a situation, the impact indicator suggested below, i.e., a reduced cost of compliance with regulation, may satisfactorily indicate whether the change has effectively taken place as long as there is no "noise" in the information, i.e., there are no exogenous factors contributing to a reduction in the cost of regulatory compliance.

35. The impact indicators listed below are related to each other. As shown in Section II, a reduction in the cost of regulatory compliance, by reducing the cost of production in an enterprise, may have an impact on its output, output price, employment and profit levels. The nature of the impact depends on market structure, i.e. whether the market is competitive or monopolistic, but in either case social profit will go up.

Example 1

Project **Objective:**	**Regulatory reform** **Reduce cost of compliance with regulation**		
Input indicator	***Process indicators***	***Output indicator***	***Impact indicators***
i) Consultants to study regulatory options and recommend changes	i) TORs for consultants issued ii) Consultants hired iii) Consultants complete report iv) Government drafts regulatory changes v) Government enacts regulatory changes	i) Changes in regulation	(The following relate to enterprises affected by the regulation) i) Cost of compliance with regulations ii) Cost of production iii) Output iv) Output prices v) Profits vi) Employment

36. ***Privatization:*** The second set of indicators relate to privatization projects (Example 2). There are several modes of privatization of which two are considered here: privatization through direct sales and privatization through share-offering.

37. The process indicators refer to various stages in the privatization process. These stages are listed in the order in which they typically occur. This is not a comprehensive list of all possible stages in privatization of an enterprise; nor are all these stages relevant for every enterprise. This information can be also be presented on an enterprise-by-enterprise basis, giving the dates at which each stage was reached, or just specifying whether the stage was reached or not.

38. It is important that the output indicators include the number of enterprises privatized, as well as some indication of the size of enterprises, as indicated by employment or value of assets. While it is obviously easier to collect data on the number of enterprises privatized, this indicator by itself would not provide an appropriate picture of the extent of privatization.

39. The rationale for the enterprise-level impact indicators has been discussed in Section II where these indicators are derived from an economic analysis of a privatization project. The likely nature of movement in these indicators under alternative assumptions about market structure is also predicted there. The rationale for the economy/sector wide impact indicators is not explicitly derived here. The indicators related to industrial value-added and investment are intended to capture expansion or contraction of the industrial sector. One cannot predict as a general rule which of these two changes will increase social returns in a particular project; the answer to that question will follow from economic analysis.

40. The impact indicator related to government flows to the public enterprise sector is derived on the assumptions that a reduction in these flows is unambiguously good for the economy and that, other things remaining the same, privatization will lead to a reduction in such flows. The second assumption is not unrealistic, but one should not discount the possibility of "noise" in the data. Thus, while privatization of some enterprises may lead to elimination of flows to these enterprises, flows to enterprises remaining in the public sector may go up for exogenous reasons and offset the reduction to privatized enterprises.

41. Of the impact indicators, the enterprise-level indicators will be the most difficult to monitor. It is unlikely that, in the absence of a well-developed statistical system, enterprise-level data on these variables will be readily available. Special surveys of privatized enterprises may thus be required. If it is found too difficult or costly to collect information on all the variables mentioned above, a second-best option would be to monitor one or two variables, such as employment and output levels, on which data may be more easily available.

Example 2

Project:	**Privatization of enterprises**		
Objectives:	**a) Increase efficiency of enterprises** **b) Reduce fiscal burden of government**		
Input indicators	***Process indicators***	***Output indicators***	***Impact indicators***
i) Consultancy services to prepare enterprises for privatization ii) Consultancy services to privatize enterprises iii) Consultancy services to increase capacity of institutions responsible for privatization	i) Bids for provision of consultancy services invited ii) Bids received and being evaluated iii) Contracts for consultancy services awarded or advisors appointed iv) No. of enterprises to be privatized under the project v) No. of enterprises for which the following stages have been reached: <u>for enterprises to be privatized through share-offering</u> - decision taken to privatize - privatization plan prepared - enterprise corporatized - enterprise prospectus prepared - announcement of share-offering made - sale of shares started - sale of shares completed <u>for enterprises to be privatized through direct sales</u> - privatization plan prepared - enterprise transferred to appropriate agency which will exercise ownership rights during transition - preparation for bidding/negotiation completed (includes valuation, determination of reserve price, preparation of prospectus and rules and procedures for bidding) - bidding process initiated - negotiations with potential buyers started - deal concluded - enterprise transferred to private owners	i) No. of enterprises privatized, in absolute terms and as % of total number of enterprises in the public sector at beginning of program ii) Total employment in enterprises privatized, in absolute terms and as % of total employment in the public enterprise sector at beginning of program iii) Total value of assets privatized, in absolute terms and as % of total assets in public enterprise sector at beginning of program iv) Amount of proceeds from privatization v) Amount of proceeds from privatization as % of annual government budgetary deficits	<u>impact on enterprise efficiency</u> (the following indicators will be for enterprises privatized) i) Unit cost of production ii) Output iii) Employment iv) Price of output v) Profits <u>economy/sector wide impact (on industry)</u> vi) Rate of growth of industrial value-added vii) Rate of growth of industrial investment <u>economy-wide impact (fiscal and monetary</u> viii) Change in net annual flow from government to the public enterprise sector ix) Change in public enterprise share of banking sector credit

42. ***SME development:*** Many Bank projects aimed at the development of SMEs include a line of credit for SMEs through financial intermediaries and technical assistance to improve SME lending capabilities of the intermediaries. Example 3 presents some indicators which may be relevant for such type of projects. In this example, some of the process indicators assume the setting up of a special agency or window for SME lending. However, this need not be the case in every project. What is important is that the banks set up "units" (whatever they may be called) for SME lending which are cost-independent or even profit-independent from other banking activities.

43. Unlike in the case of a project involving regulatory reform, where we show that the impact indicators are directly derived from an economic analysis of the project, here we assume that an economic analysis of the project has shown that an expansion of the SME sector and an increase in the efficiency of the financial intermediaries serving SMEs both raise social profits. Based on this assumption, we have then derived indicators to capture an expansion of the SME sector (through impact indicators 'i') and the efficiency of financial intermediation (through impact indicator 'ii').

44. It is important to monitor growth rates of SME investment, value-added and employment not only in absolute terms but also in comparison to the growth rates of the variables for the economy. A particular rate of growth for any of the variables for the SME sector will have different meanings depending on what is happening to the overall economy. Interest rates on SME loans can be used as an indicator of efficiency of financial intermediation serving SMEs on the grounds that reduced transaction costs of lending to SMEs (which include the cost of appraising credit applications, the cost of monitoring credit use as well as costs arising from poor collection performance) may lead to a decrease in interest rates charged to SMEs, assuming that the cost of borrowing by the intermediary remains unchanged.

45. ***Enterprise restructuring:*** The last set of indicators (Example 4) relate to an enterprise restructuring project where a special agency is created to oversee the restructuring and liquidation of a select group of distressed enterprises. While this is becoming an increasingly common feature in Bank projects related to enterprise restructuring in Eastern Europe, the establishment of a special agency to oversee restructuring is neither necessary for, nor is it the most optimal way of, implementing restructuring. The establishment or strengthening of work-out units in banks is an alternative and can be part of Bank projects. The set of indicators, especially process indicators, for such projects will be somewhat different.

46. Note that the impact indicator (ii) refers to the profitability of the enterprises in aggregate, not individually. This approach enables one to capture better the impact of the liquidation of loss-making enterprises under the project because, other things remaining the same, such liquidation should lead to an increase in the aggregate profitability (or decrease in aggregate losses) of the set of enterprises being addressed by the project. If the reduction in losses due to liquidation is more than offset by an increase in losses (or reduction in profits) of enterprises which remain in operation, the aggregate profitability of the set of enterprises will go down. This indicates that, while some components of the project, i.e. those relating to liquidation, may have been successfully carried out, the overall impact of the project has not been positive.

Example 3

Project:	**Line of credit for SMEs and improvement of capabilities of on-lending agencies**		
Objectives:	**a) Increase investment by SMEs** **b) Improve efficiency of lending agencies in administering lines of credit for SMEs (i.e., decreased transaction costs of making small loans)**		
Input indicators	***Process indicators***	***Output indicators***	***Impact indicators***
i) Finance for line of credit ii) Technical assistance and training for staff of lending agencies iii) Technical assistance to design and implement loan screening system, loan portfolio management system and client tracking system. iv) Technical assistance and training to potential borrowers (e.g. on how to prepare a bankable project)	general i) Agency/window established to disburse line of credit ii) Staffing of the agency/window completed credit i) No. of credit applications received and number reviewed ii) No. of credits, and total volume of credit, approved systems i) Loan screening system designed ii) Loan screening system implemented (or implementation begun, if completion will occur beyond project life) (similar indicators can be developed for introduction of other systems) training i) Training of staff completed ii) Number of staff trained	i) Amount of credit disbursed ii) Collection performance of lending agencies (loan repayment as % of repayments due) iii) Transaction costs of making small loans.	i) Rate of growth in SME investment, value-added and employment (absolute and in comparison with that of the economy as a whole) ii) Interest rates on loans to SMEs

Example 4

Project:	**Restructure and liquidate enterprises; resolve enterprise debts (through special agencies set up for that purpose)**		
Objectives:	**a) Increase enterprise efficiency** **b) Reduce enterprise debts to banking sector** **c) Increase indigenous capabilities in enterprise turn-around and liquidation**		
Input indicators	***Process indicators***	***Output indicators***	***Impact indicators***
i) Consultancy services for enterprise diagnosis and development of restructuring/liquidation plan ii) Consultancy services to develop institutions responsible for restructuring and liquidation iii) Consultancy services to draw up debt-resolution plans iv) Training programs in enterprise restructuring and liquidation v) Study-tours for enterprise managers	i) Approve charter to establish special agency to oversee enterprise restructuring and liquidation and resolve enterprise debt ii) Set up such agency iii) Invite bids for consultancy services to the agency iv) Award consultancies/appoint advisors v) Select and transfer, to agency, enterprises which are to restructured/liquidated vi) Transfer enterprise debts to agency vii) Complete viability assessment of enterprises viii) Initiate restructuring or liquidation of enterprises ix) Complete restructuring or liquidation of enterprises x) Resolve enterprise debt	i) No. of enterprises restructured (with some indication of their size) ii) No. of enterprises liquidated (with some indication of their size) iii) Amount of enterprise debt restructured (e.g. through equity swaps, debt write-off, debt rescheduling) iv) No. of local individuals trained in enterprise turnaround and liquidation	i) Improvement in bank portfolio (reduction in % of doubtful and bad loans) ii) Increase in aggregate profitability of enterprises selected for restructuring

V. GENERAL ISSUES IN DEFINING INDICATORS FOR PRIVATE SECTOR DEVELOPMENT OPERATIONS

Useful Indicators Follow from the Underlying Economic Analysis of the Project

47. Proper economic analysis of a PSD project is crucial to success. This paper does not attempt to defend that proposition or set out a general discussion of a proper economic analysis of a PSD project. As private sector development covers nearly every aspect of economics, the task would require shelves of books and years of presentation. Rather, the paper attempts to set out, using some examples of elements of PSD projects, how the task manager might derive performance and development impact indicators when an economic analysis of the project has already been undertaken.

48. A number of commentators on earlier versions of the paper noted that this exercise seemed extremely difficult. However, it is not necessary that each task manager be able to perform the economic analysis or devise the indicators for a project, but rather only that they collaborate with an economist who can. The Bank is purposefully organized to facilitate this collaboration: every departmental unit has economists in the COD and, often, in sector divisions; task managers, moreover, can CAM economist time from many different departments in the center. The idea that a paper of a few pages will give each task manager a useful and complete guide to the economic analysis of a project, or that indicators are a substitute for economic analysis is a notion that would be rejected by any responsible economist—just as the analogous proposition for law or engineering or accounting would be rejected by responsible professionals in those fields.

49. ***Project too Complex for Economic Analysis?*** Some commentators wondered about the reasonableness of the goal of doing an economic analysis for all projects. Some objected to the use of partial equilibrium analysis where general equilibrium analysis was necessary; others stated that the world was too complicated to use any indicators. Others were less impressed with these points. Partial equilibrium and "back-of-the-envelope" estimates are more likely to point in the right direction than no analysis at all; the proper response to greater complexity is better indicators rather than no indicators.

50. Several commentators pointed out that the indicators proposed were too simple to capture the complexity of the projects. However, any project that is so complex that careful economic analysis yields no useful measures of performance or indicators should be assessed a high-risk penalty and only undertaken if the expected outcomes were so large as to outweigh these risks. This is consistent with the oft-expressed caution in the Bank concerning the risk of failure from projects of great complexity. One reviewer, responding to the issue of complexity, asked "What is the alternative in complex situations to logical/ordered thought leading to useful signals of project performance and predicted outcomes?"

51. One commentator on an earlier version of the paper observed of the suggested indicators that he "did not believe that many task managers will use them as they are now defined". We agree. As noted in the PSD contribution to the ARPP, quantification in project review is done in less than 10% of the projects. That applies to attempts both to match the objectives of the project with the data gathered in the portfolio review, and to quantify objectively verifiable criteria of project success. Task managers and their managers are unlikely to pay much attention to the development of

indicators unless there were some changes in incentives in the Bank to encourage them to pay attention to these.

Good Projects Raise Social Returns

52. The point of doing an economic analysis is to determine the social return from the project. A good project raises social return -- the excess of value over cost when prices of outputs and inputs are computed to reflect their real opportunity cost to the country. The best projects raise social return by the most relative to the investment required to get the change. A government project must raise social return more, relative to investment than would the same project if undertaken by private parties -- otherwise the private sector would better be left to do it and preserve the government's limited managerial resources for projects where the private sector is failing. Or looking at it another way, government should only be involved in projects where the social return is sufficiently high and where the private return is not sufficiently attractive to get the project done.

53. The economic analysis of a PSD project needs to be ultimately related to this objective of raising social return. Privatization, increasing private sector output, reforming laws, liberalizing trade, removing subsidies are not ends in themselves but rather instruments to increase social return.

General Experience in Indicator Use

54. This basic observation, unfortunately, is frequently not well documented in the design and supervision of PSD projects. Broadly, in reviewing over 100 PSD operations, we found few that attempted to quantify any part of the overall social gain from the recommended reforms. The absence of basic economic analysis makes it difficult to determine which components of the operation are most important and, therefore, which indicators would be most crucial to monitor. The PSD ARPP discusses this in more detail.

55. The Form 590s do not reflect much experience with indicator use in project evaluation in private sector development. These rarely compared the objectives of the project to the development impact indicators and rarely quantified the objectives of the project in a way that would permit precise discussion of whether the objectives were met. Many commentators noted that the absence of this information from the Form 590 didn't mean it couldn't be found in the Supervision Reports. But surely the task manager should be encouraged to include the most important information in the Form 590, particularly to save managers and other reviewers the labor of searching through the Supervision Reports.

56. The experience with the ARPP indicates that the absence of sufficient incentive for the staff to undertake better economic analysis and the resulting indicators may be more of a constraint than the complexity of the problem.