

# CHAPTER 5

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## ASSESSING THE POVERTY IMPACT OF POLICY CHANGE

- Mechanisms for Poverty Reduction
- Current Poverty Impact Assessment Practice at ADB
- Review of Current ADB Practice
- Modifying the PIA Matrix
- Operational Considerations

## A. Introduction

The discussion so far emphasizes that, depending on the nature of the policy reform, the effects on poverty reduction involves interlinking macro-meso-micro causal mechanisms and, importantly, political economy factors. In terms of these factors, vested interests who prefer to maintain the status quo can be key obstacles to reform and to the subsequent realization of possible poverty reducing effects. In fact, in a deteriorating economic situation, the opportunity cost of not reforming may be a decline in growth rates and a worsening incidence of poverty.

Chapter 3 discussed the importance of issues such as incentives and greater access to opportunity through institutions and markets. Whether the “win-win” situation of growth and greater market opportunities, for example, is a feasible outcome for poor groups, depends on the conditions and development path specific to the economy in question. Further, the poverty reduction impact of a given rate of economic growth will vary with the form that growth takes, since the various sector patterns of economic growth have different poverty consequences.

## B. Mechanisms for Poverty Reduction

Reform has various mechanisms through which it can reduce poverty. First is the effect of reform on employment creation. If economic activity responds positively to reform, the poor can find their wage employment increasing. It is this link that has led to the focus on labor-intensive growth in

discussions of poverty reduction (World Bank 1990). However, in terms of employment creation, even successful policy reform could lead to negative short-run employment effects. The most obvious example is the curtailment of import-substitution activities as a result of a more outward-looking export-oriented strategy. In the short run, the number of people below the poverty line may even rise, not fall, and employment reallocation, where needed, may take time. So, the transitional poverty effects cannot be disregarded.

A second mechanism is macroeconomic stabilization. It is often argued that while inflation is a tax on the whole of society, it falls most heavily on the poor, whose monetary incomes are not just low, but relatively inflexible. A significant source of income for the poorest is likely to be casual employment or the monetary equivalent of government-provided services, both of which may rise sluggishly at a time of accelerating inflation. Hence, the implication is that if inflation can be stabilized through fiscal and monetary policies, this loss of real income can be avoided. Also, in principle, any real decline in government expenditures on services, as part of the fiscal retrenchment required for macro stabilization, can have serious short-run consequences for the poor, or some measures to introduce user charges do not make adequate exemptions for the poor. However, in cases where the poor place little or no value on these services, fiscal reform may negatively affect the better-off to a greater extent and it may actually benefit the poor in cases where public expenditure reduction or switching may realign resources more efficiently.

A third and potentially complex area in which reform can interact with poverty is through relative price shifts. Chapter 3.D described, for example, how price policy changes can favor producers but negatively affect consumers. In most macro adjustment or stabilization programs, two important relative price shifts can be expected. One is a rise in prices of goods traded relative to nontraded, which occurs when real exchange rate depreciation is required to, for example, remove internal and external imbalances. The other is within the nontraded sector where a rise in prices for publicly supplied services may be needed to reduce the fiscal burden of service delivery. How the poor will be affected by such shifts will depend upon their situation as net producers or consumers of the goods and services concerned. However, these relative price shifts will occur at a time when real incomes are also changing and so the full impact on the poor will be determined by the net effect, allowing for both income and price changes. Even in the short run, this can be difficult to predict.

Finally, in recent years, reforms have focused on various aspects of institutional changes, since it is recognized that market relations operate with widely different levels of efficiency in various institutional contexts. Such institutional changes have been widespread in some economies, covering enterprise restructuring and privatization, financial sector reform, civil service downsizing and reorganization, and various forms of change to social service delivery mechanisms and organization. These reforms are intended to strengthen the growth impact of more conventional

macroeconomic adjustments—and to the degree that they succeed, they should have some positive impact on poverty reduction.<sup>22</sup> However it is far from clear how such changes will impact on the poor in the short run. For example, while financial sector reform is widely seen as essential for sustained economic growth, it is not immediately obvious whether and how soon the commercialization of publicly owned development banks will affect the poor positively.

Overall, economies developing and reforming in a dynamic environment often face limits to identifying and tracing, *ex ante*, where the impacts associated with an economy- or sector-wide policy loan start and end, and their specific poverty impacts. The same can be said for projects, although usually to a lesser extent because of their greater focus and clearer specified boundary. The World Bank (2001c) considers that exogenous influences on operations that address poverty—as well as the indirect effects on poverty of operations that address the underlying (systemic) constraints to growth, social development, and improved governance—can be greater than the direct effects of targeted interventions. Furthermore, as all ADB operations are required to show their direct and indirect effects on poverty, it is essential to identify and understand exogenous and endogenous macro- and sector-wide influences.

In such a way, poverty assessment at the country and sector levels may often be

<sup>22</sup> See Aron (2000) for a discussion of the evidence on institutional change and economic growth.

more appropriate than at the project or program level, especially where the causes and effects of poverty can only be considered meaningfully at the macro and sector levels rather than at the project or program level. In a similar way that the costs and benefits of a project are shared among different groups such as consumers, producers, and governments (ADB 1987), reforms and policy changes may have distribution, as well as efficiency, implications that need to be understood as part of the decision-making process. So, the analyst must not only comprehend the net effect of change, but also understand who gains and who loses from reforms.

### C. Current Poverty Impact Assessment Practice at ADB

Recently, distribution analysis of policy reforms at ADB has focused substantially on poverty impact implications. Operational work at international aid agencies can apply the most appropriate approaches among those discussed before in Chapter 4, depending on the resources and skills available. For current practice at ADB, a uniform minimum requirement for policy operations preparation is a poverty impact assessment (PIA) matrix (discussed below). Rather than a quantitative tool, such as those discussed in the previous chapter, it is a simple but pragmatic way of establishing the economic logic that assesses the impact of proposed policy changes. ADB has applied the PIA matrix to its policy operations since 1995 (ADB 1995). The matrix was reexamined in a subsequent study and given a generally favorable review (Nelson 1998).

The logic of the matrix is that the welfare of a poor household is affected through four key channels: (i) the labor earnings of household members in the workforce; (ii) prices that they face in selling and purchasing goods; (iii) access to and the return on the nonlabor assets of the household; and (iv) their net receipts of public and private transfers. A similar approach is discussed in a more formal way in Behrman (1993). The importance of these channels varies between different poor groups and any framework for poverty impact assessment must be sufficiently broad to cover a range of possible scenarios.

The PIA matrix involves two dimensions or axes: one relates to the channels mentioned in the previous paragraph, and the other to the timing and degree of impact. The channels, specified on the rows, are labor market, prices, access of the poor to non-labor assets, and net transfers. The impacts, on the columns, are subdivided into direct effects, indirect effects, macro effects, and impact on the nonpoor. Table 8 provides the basic layout of ADB's current PIA matrix.

This framework was never intended to be more than a means of organizing thoughts on how particular policy changes might impact on the poor. Nevertheless, its usefulness is setting out clearly the underlying assumptions required to achieve the envisaged outcomes. In this sense, the nature of the matrix is similar to the program logical framework that is now widely used by funding agencies. The advantage of the program logical framework is that it sets out objectives a project is to achieve and the assumptions that must

**TABLE 8: ADB's Current Poverty Impact Assessment Matrix**

Channels\Impacts	Type of Effects			
	Direct	Indirect	Macro	Nonpoor
<b>Labor Market</b>				
<b>Prices</b>				
<b>Access for Poor</b>				
<b>Transfers</b>				
<b>Net Effects</b>				
<b>Narrative</b>				

Source: Asian Development Bank. 1995. Staff instruction on Poverty Impact Assessment. Strategy and Policy Office. Manila.

hold for these objectives to be met. The realism of the critical assumptions must then be tested, and if necessary, measures applied to ensure that, as far as practicable, reality matches these assumptions. An analogous procedure is adopted in the PIA matrix. However, the longer the chain of assumptions required, the less likely the envisaged poverty impact will be attributable to specific reform measures.

**D. Review of Current ADB Practice**

Review of ADB's core program loan reports revealed several areas of concern about the way the PIA matrix has been applied. The use of the matrix in these reports is largely qualitative. The cells in the matrix are either completed with a narrative or more simply with a positive or negative sign to indicate direction of impact on the income of the poor, or left blank where inapplicable. Several of the program loan reports adopt the same

judgment on short-run impacts of interventions on the poor. For example, the Pakistan Trade, Export Promotion and Industry Program loan report recognized negative short-run employment effects for the poor from tariff reform and privatization, as well as higher prices for the poor as a result of privatization, although in the long run, the report argues that these will be offset by improved allocative efficiency and rising exports. Several program loan reports also acknowledge that higher user charges due to market-oriented reform programs cause negative effects on poor consumers, such as the Mongolia Health Sector Development Program. In such instances, however, the reports argue that longer-term improvements in efficiency will benefit the poor as service purchasers. Similarly, liberalization of agricultural trade and the breakup of state farms are recognized as causing a loss of agricultural jobs among the poor

in the short run, but higher long-run producer prices are assumed to boost their incomes.

For reasons discussed above, there are cases where policy changes will impact negatively on the poor in the short run. How the poverty situation improves over time will depend on a number of factors: principally, the effectiveness of safety nets; the supply response of various sectors to the new set of price and other incentives created by reform; the labor-intensity of expanding sectors; and the general fiscal position. Even where the intervention in question is assumed to be growth enhancing in the longer term, it is far too simplistic to assert that it always has net positive impacts overall, especially when there are large tangible short-run costs. Furthermore, in principle, the short-run effects have higher values than the medium- and long-run effects due to discounting, thereby complicating the intertemporal aggregation of the net benefits associated with reform programs. For example, privatization or trade liberalization measures may be growth enhancing in the longer term, but how far the poor share in this growth and how long they will have to wait to receive any of the benefits is unclear. In a number of program loan reports, assertions about potential long-run effects are made in place of detailed analysis. Modeling in either the full or partial versions (discussed in Chapter 4.C) can provide some of the answers to test such assertions.

Another limitation with the current use of the PIA matrix is the over-simplistic use of a poor/nonpoor distinction. If a

poverty focus is to be a major element in the analysis, it is preferable to disaggregate the “poor” in some way, because different “poor” groups may be affected in various ways by particular interventions. For example, the circumstances and problems of the urban and rural poor are very different. Within the rural group, there are usually smallholders with land and those who are landless. Further, within the landholding group, there are those who grow cash crops, export crops, and import-competing crops. These distinctions need to be considered when completing the matrix to ensure that the context is clear.

The key point is that it would be very rare for “poor” groups to be affected uniformly by a policy change. Privatization may cause job losses to those with formal urban employment, but may have little impact on the rural poor (or may benefit them as consumers). Financial sector reform that leads to greater availability of credit, at interest rates below those in the informal credit sector, may benefit poor rural borrowers with some land to offer as collateral, but not borrowers who have no land to offer. Similarly, agriculture sector reform that liberalizes marketing, and as a consequence, raises prices to farmers near world market levels, may benefit rural poor farmers of export crops but may hurt the urban poor and farmers of nontraded crops. Also, since there can be wide variations in standards of social sector provision among a country’s regions—the poor in one region may receive a different level of health or education from the poor in another region—there would be no standard

way of decomposing the poor as a category. Depending on the depth of the socioeconomic assessment on, for example, the segment of the poor that is likely to be affected most directly, such information can augment the explanation in the PIA matrix.

A further limitation of the current use of the PIA matrix is the ambiguity of the result in terms of poverty targets. Even where targets are set out in the program logical framework, these are for total population served rather than the poor explicitly. A recent exception is the Uzbekistan Education Sector Development Program, which has an explicit poverty loan component and, therefore, targets regions and schools in poor areas. Part of the reason for this is that many policy-based loans are designed primarily to promote improved efficiency of the sector as a whole rather than targeting the poverty reduction of specific groups. Other reasons are that the complex causal mechanisms through which reform measures impact on the poor and the need for data-intensive ex-ante empirical analysis make the estimation costly and uncertain. Consequently, at best, a priori reasoning is relied upon.

## E. Modifying the PIA Matrix

### I. Key Refinements

As a simple framework, the current PIA matrix can be modified in various ways to articulate the likely or possible poverty impacts of policy changes.<sup>23</sup> A modified PIA matrix is laid out in Table 9. The first focus should be on the channels through which the poor are

affected and the distribution considerations, bearing in mind that specific reform measures will unlikely work through all channels and the relevant main and specific channels should be identified. The second focus should be on the intertemporal considerations of the impacts on the poor and other stakeholder groups of the intervention. The third focus should be on the degree to which the reform impact is direct or indirect. The fourth focus should be the mitigation and enhancement measures to reduce the negative effects on the poor or enhance their inclusion as appropriate. These measures, as with the reforms themselves, are a design rather than an analytical issue. These impacts can be described qualitatively, but it is preferable for these to be quantified, for example, in terms of losses/gains in jobs and incomes. Any assumptions, especially when the assessment is made qualitatively, that are critical for these mechanisms to work or for the analysis to be valid should be listed in the PIA matrix.

### 2. Channels of Effect (Rows)

Channels of effect will be different depending on the nature of the reform measure, and should be identified for individual reform measures. Several points are worth clarifying concerning ways in which reforms may work through respective channels of effect. First, in relation to labor markets and wages (row

<sup>23</sup> "Likely" when empirical evidence is used, or "possible" in the case of a priori reasoning.

**TABLE 9: Modified Poverty Impact Assessment Matrix**

Possible Channels of Effect	Example of specific channels	Effect on the Poor			Effects on Other Stakeholders	Mitigation or Enhancement Measures
		Direct Short Run	Indirect Short Run	Indirect Medium Run		
<b>Access to Labor Markets and Wages</b>	Formal Informal					
<b>Access to Markets and Prices</b>	As output consumer As output supplier As input consumer As input supplier					
<b>Access to Assets</b>	Physical Financial Social Human Natural					
<b>Service Access</b>	Nonmarketed Public services					
<b>Direct Transfers</b>	Private transfer Public transfer					
<b>Net Impact</b>						
<b>Information Basis or Crucial Assumptions</b>						

1), it is often helpful to distinguish between formal employment and jobs in the informal sector, since policy change can affect these differently. Much of the criticism of public sector reform programs is that they can replace the first type of employment with the second. To more fully assess whether the effects are positive or negative, a fuller account of the structure of the labor market needs to be considered, including the existence of labor market rigidities and fragmentation and new and transient employment opportunities that may arise as a result of structural change. Such an account includes assessing the flexibility and absorptive capacity of the labor market as a whole and wage effects

on different segments of the labor market.

Second, it is necessary to distinguish between relative price effects of goods and services that exert different impacts on the poor, depending on whether the poor are market suppliers or consumers. Lifting controls on commodity prices, for example, may benefit poor farmers who are producers, but may hurt the poor who are net consumers of the goods concerned. In addition, it is important to analyze the impacts on the poor of aggregate price changes that follow policy reforms. A refinement that helps remove the potential ambiguity in price changes is to decompose the price

mechanism category into three subgroups: (i) relative price changes for suppliers and producers; (ii) relative price changes for consumers; and (iii) relative price changes between sectors such as agriculture, industry and services. Prices can include expected policy reform-induced macro-level variables such as interest rates. A further aspect involves institution-related issues of market access and performance, as discussed in Chapter 3.E, that the policy reform may address. Under this heading fall, for example, reforms that affect market access and equal opportunity through information dissemination and practices that, in turn, influence market entry, transaction costs, and regulations affecting competition. However, depending on the nature of the policy reform, quantification of the likely effects on market volume and prices arising from market institution changes can be difficult, and qualitative assessments may need to be used.

Third, assessment of policy reform-induced changes in access by the poor to assets is needed, as lack of assets is an important dimension of poverty. A grouping of assets, in terms of physical, financial, human, social, and natural dimensions, is suggested (World Bank 2002b). To assess this channel of effect, an adequate account is needed of different types of assets and how issues such as property rights and contract enforcement affect access and control. As with market institutions, quantification of asset ownership aspects is likely to be difficult. Qualitative analysis of mechanisms that improve (or diminish) asset access is acceptable in most cases.

Fourth, the channel in terms of access of the poor to publicly provided services, such as schools, hospitals, and clinics should cover access to nonmarketed public services for which only a nominal or zero charge is made. This is because, if the poor are to be provided with public services on commercial terms, then these will be equivalent to any other market-intermediated commodities and should logically be covered under the access to markets and prices row.

Fifth, the mechanism of direct transfers will largely occur through public or private transfers that arise due to the policy reforms in question. Examples include tax reforms, social security reforms, and workfare programs where the poor are offered work opportunities on publicly organized infrastructure and related schemes. Subsidized systems of supply will be covered by the previous categories of price effects and publicly supplied services. However, these more indirect transfer impacts of a policy are more difficult to predict as they require knowledge of endogenous public finance mechanisms or household-level behavioral responses, for determining public and private transfers, respectively.

### 3. Timing and Other Considerations (Columns)

The columns of ADB's current PIA matrix (Table 8), can lead to ambiguity in distinguishing between direct, indirect, and macro effects on the poor. For example, removing a fertilizer subsidy will have a direct effect in raising farm costs and thus, indirectly, in lowering wage employment among hired

farm laborers. On the other hand, if the removal of the subsidy stimulates higher production, there will be positive indirect employment effects. Any employment consequences under the macro effect column would arise from the way in which the subsidy had been financed and the way in which the saved funds are utilized. This direct, indirect, macro distinction makes sense when there is a clearly defined market involved. However, once one considers more broad-based policy interventions and, especially, various institutional reforms, the distinction between an indirect and macro effect becomes blurred, so offering less justification for maintaining separate categories.

In general, the distinction between short- and medium-run effects on the poor needs to be clearer where inter-temporal trade-off considerations are important. While direct effects can all be considered short run, indirect effects can be viewed in both short and medium terms. Institutional reforms, because of the time needed for implementation, are often medium term in impact and can have both direct and indirect effects. Regarding long-run effects, since so many other factors will be at work, isolating long-run policy impacts is unpredictable and speculative. A short-to medium-run focus seems to be most practical in the PIA matrix.

Most policy changes will affect those above the poverty line as well as those below it. The use of a column for other stakeholders is intended to capture broader impacts. However, this broad categorization implies homogeneity

across the two groups, which is clearly not the case. Identification of other stakeholders, such as consumers, producers, or residents of particular regions, is recommended.

Furthermore, as some policy reforms will result in gainers and losers, the issue of how to handle negative effects should be explicitly addressed to the extent possible. This may include compensation for redundant workers, or adding investments that facilitate adjustment, such as worker retraining. Measures that enhance inclusion and access by the poor can also help increase the positive impact of reforms on the poor. Modifying the current PIA to add the column for corresponding mitigation or enhancement measures allows for more explicit design considerations to mitigate the negative potential impacts on the poor or to include enhancement measures, such as ensuring that the poor have access to services.

## **F. Operational Considerations**

The refinements, as recommended, are intended to reinforce the existing analytical requirement for systematic assessment of poverty impacts of policy changes. The modifications are largely based on already applied innovations in the use of the current PIA matrix and, as such, have already been adopted to a large degree. The intention is to promote more consistent and wider application of innovative practice.

To conclude this chapter, three practical considerations in the application of the PIA matrix are outlined.

- Internal design consistency between the program logical framework, program policy matrix, and PIA matrix is necessary. The PIA matrix is naturally linked to the program policy matrix as currently practiced, but the linkage of these two matrixes with the program logical framework needs to be clear. The program policy matrix can be considered as a road map for government commitment to specific policy actions in order to ensure that the implementation of the reform is on the right track. The PIA matrix is considered as a further elaboration of impacts of selected policy actions focusing on the poor. To ensure clear linkage, the three matrixes should be presented as a package of logical and supporting analysis in a coherent way (see Chapter 7 for a further elaboration).
- To ensure that the PIA matrix is underpinned by reasonable analysis, sufficient time should be given for preparation of the matrix, and commencing early in the analytical

work. Thinking through the possible reform effects of using the PIA can help determine the scope of the analysis that underpins the reforms in general. The government and stakeholders must understand the PIA. To ensure this understanding and input by stakeholders in aspects such as mitigation and enhancement, the PIA matrix should be used as a loan design tool rather than an end-of-design reporting exercise.

- Where there are clear limitations in ex-ante analysis of individual program operations, economic sector work can play a crucial role in providing an analysis of wider scope and greater depth, and in highlighting key indicators for monitoring during implementation (see Chapter 3).

Used in a pragmatic way the PIA matrix is a useful framework to help assess each policy measure's channel of effect, analyze the intertemporal and distribution implications, and identify areas for further analysis or monitoring.