

Ali, Ifzal; Son, Hyun H.

**Working Paper**

## Defining and Measuring Inclusive Growth: Application to the Philippines

ERD Working Paper Series, No. 98

**Provided in Cooperation with:**

Asian Development Bank (ADB), Manila

*Suggested Citation:* Ali, Ifzal; Son, Hyun H. (2007) : Defining and Measuring Inclusive Growth: Application to the Philippines, ERD Working Paper Series, No. 98, Asian Development Bank (ADB), Manila,  
<https://hdl.handle.net/11540/1857>

This Version is available at:

<https://hdl.handle.net/10419/109292>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<http://creativecommons.org/licenses/by/3.0/igo>

ADB

# ERD Working Paper

ECONOMICS AND RESEARCH DEPARTMENT

## SERIES No. 98

### Defining and Measuring Inclusive Growth: Application to the Philippines

Ifzal Ali and Hyun H. Son

July 2007

Asian Development Bank



ERD Working Paper No. 98

# **DEFINING AND MEASURING INCLUSIVE GROWTH: APPLICATION TO THE PHILIPPINES**

**IFZAL ALI AND HYUN H. SON**

**JULY 2007**

*Ifzal Ali is Chief Economist, and Hyun H. Son is Economist in the Economic Analysis and Operations Support Division, Economics and Research Department, Asian Development Bank.*

Asian Development Bank  
6 ADB Avenue, Mandaluyong City  
1550 Metro Manila, Philippines  
[www.adb.org/economics](http://www.adb.org/economics)

©2007 by Asian Development Bank  
July 2007  
ISSN 1655-5252

The views expressed in this paper  
are those of the author(s) and do not  
necessarily reflect the views or policies  
of the Asian Development Bank.

## **FOREWORD**

The ERD Working Paper Series is a forum for ongoing and recently completed research and policy studies undertaken in the Asian Development Bank or on its behalf. The Series is a quick-disseminating, informal publication meant to stimulate discussion and elicit feedback. Papers published under this Series could subsequently be revised for publication as articles in professional journals or chapters in books.



## CONTENTS

Abstract	vii
I. Introduction	1
II. Defining Inclusive Growth	1
III. Key Elements in Inclusive Growth	3
A. Employment and Productivity	3
B. Development in Human Capabilities	7
C. Social Safety Nets and Targeted Intervention	8
IV. Methodology	9
V. Empirical Illustration	13
VI. Some Issues for Further Research	21
References	22





## **ABSTRACT**

This study proposes an approach to defining and measuring inclusive growth using a new methodology to capture inclusive growth. In this context, the paper introduces the idea of a social opportunity function that is similar to a social welfare function. In this study, growth is defined as inclusive if it increases the social opportunity function, which depends on two factors: (i) average opportunities available to the population, and (ii) how opportunities are shared among the population. This idea is made operational by means of the opportunity curve, which has a one-to-one relationship with the social opportunity function. To complement the shortcoming of the opportunity curve particularly partial ranking, the study also develops the opportunity index to provide a complete ranking. The proposed methodologies are applied to the Philippines using its micro unit record household survey. Empirical applications analyze access to and equity of such opportunities as employment (total and also by gender); education; health; and basic infrastructure such as electricity, clean drinking water, and sanitation.



## I. INTRODUCTION

The dramatic reduction in poverty achieved in parts of Asia is well-documented. Overall between 1990 and 2001, the number of people living on less than \$1-a-day declined from 931 to 679 million, or from 31% to 20% of a growing population (ADB 2005). These successes are closely associated with rapid growth, and driven in particular by high growth rates in a few countries including People's Republic of China, India, and Viet Nam.

While some level of growth is obviously a necessary condition for sustained poverty reduction, and strong average growth has been accompanied by a sharp reduction in poverty, the evidence is clear that growth by itself is not a sufficient condition. Growth does not guarantee that all persons will benefit equally. Growth can bypass the poor or marginalized groups, resulting in increasing inequality. High and rising levels of income inequality can lower the impact of poverty reduction of a given rate of growth, and can also reduce the growth rate itself. High inequality also has implications for political stability and social cohesion needed for sustainable growth. Hence, reducing inequality has become a major concern of development policy, a concern that has generated interest in inclusive growth. While there remains no consensus on how to define or measure inclusive growth, the issue has generated a certain amount of policy and academic debate.

The objective of this paper is to provide an approach to defining and measuring inclusive growth. The study proposes a new methodology to capture inclusive growth, based on a social opportunity function similar to the idea of a social welfare function. The paper is organized in the following manner. Section II is devoted to defining inclusive growth, outcomes of inclusive growth, and key measures to achieve such outcomes. Detailed discussions on key measures are presented in Section III. While Section IV sets out the analytical framework describing the methodology, Section V provides discussion of the empirical results. For the empirical study, we have used the Philippines's Annual Poverty Indicator Survey (APIS) conducted in 1998. Finally, Section VI concludes the study.

## II. DEFINING INCLUSIVE GROWTH

Very recently, the report of the Eminent Persons Group that was initiated by ADB (2007) made reference to the term "inclusive growth", which emphasizes ensuring that the economic opportunities created by growth are available to all—particularly the poor—to the maximum possible extent.<sup>1</sup> The growth process creates new economic opportunities that are unevenly distributed. The poor are generally constrained by circumstances or market failures that disable them to avail of these opportunities. As a result, the poor generally benefit less from growth than the nonpoor. Thus, growth will generally be not pro-poor if left completely to markets. The government, however, can formulate policies and programs that facilitate the full participation in the new economic opportunities of those less well off. We may thus define inclusive growth as growth that not only creates new economic opportunities, but also one that ensures equal access to the opportunities

---

<sup>1</sup> See also Ali and Zhuang (2007) where inclusive growth as a development goal emphasizes both the creation of and equal access to opportunities for all, not just for the poor.

created for all segments of society. Growth is inclusive when it allows all members of a society to participate in, and contribute to, the growth process on an equal basis regardless of their individual circumstances.

The ultimate outcomes of inclusive growth are (i) sustainable and equitable growth, (ii) social inclusion, (iii) empowerment, and (iv) security. Economic growth is indeed an essential requirement for inclusive growth. For growth to be rapid and sustained, it should be broad-based across sectors and regions, and inclusive of the large part of the labor force, including the poor and vulnerable groups of the population. Social inclusion is the removal of institutional barriers and the enhancement of incentives to increase the access of all segments of the society to development opportunities. Empowerment is the enhancement of the assets and capabilities of diverse individuals and groups to function in and to participate in the growth process. Security encompasses improved management of the social risks arising out of development interventions.

There can be many measures that are required to achieve outcomes of inclusive growth. This paper is particularly concerned with three key measures.

One key measure is related to providing job opportunities and promoting productivity. The Eminent Persons Group report argues that inclusive growth continues to emphasize the importance of economic growth. Rapid economic growth can benefit all segments of society including the poor. Indeed, a rise in growth rate potentially creates more job opportunities and may also improve labor productivity, hence raising individual's income on average. Economic growth also benefits the poor: it provides them with productive job opportunities and generates more government revenues for programs to help the poor. In recent years, much attention has been given to the "jobless growth" phenomenon in many parts of the world economy (e.g., India), where while the growth in gross domestic product (GDP) is impressive, its effect on employment creation is rather sluggish. Similarly, falling labor productivity with rising employment growth has also attracted much debate in some economies such as the Philippines. Hence, creating job opportunities and improving productivity are indeed pertinent to achieving the outcomes of inclusive growth such as sustainable and equitable growth and social inclusion. Moreover, promoting social inclusion also requires the removal of institutional barriers that are constraints to economic growth. Even when the state functions well, its policies and practices may block or discourage development opportunities for the people, particularly for the poor. In some societies, the borders between the formal and informal economy may be further reinforced by considerations of ethnicity or gender, thereby imposing additional barriers to opportunity and to the equitable distribution of the benefits of growth.

Another key measure involves strengthening capabilities in the form of human or social capital. People's capabilities are as important as their assets. Capability allows persons to function, to exercise their freedom to convert their entitlements, in the form of command over goods and services (i.e., assets), into well-being. From this perspective, economic development is not a matter of expanding supplies of commodities, but of enhancing the capabilities of people (Sen 1985). To develop human capabilities, emphasis should be on investing directly in public provision of basic social services in education, health, and infrastructure. Improving education and health services and providing basic infrastructure services are critical for both sustainable growth and development in human capabilities. The two-way causation between the two parameters will be discussed in the next section.

A third key measure is providing social safety nets and targeted interventions. There could be various types of social risks that could arise in the process of economic development. A common example of social risks could be vulnerability risk or increased exposure to endemic risks or external shocks.<sup>2</sup> Such social risks are likely to affect outcomes of economic development. In particular, the poor lack the means to manage social risks and to cope with external shocks. Hence, there should be risk management measures—such as social safety nets and targeted intervention to the poor—that need to be taken into account in achieving the outcomes of inclusive growth.

Finally and more fundamentally, these three key measures cannot be addressed unless institutional and governance issues are embedded in inclusive growth.<sup>3</sup> In other words, *institutional and governance issues* should be considered as the foundation to make progress on the three key measures and hence to achieve the outcomes of inclusive growth. The problem of deprivation is much deeper than the mere shortage of economic and financial resources. Inclusive growth has a strong interface with law and development, particularly when it comes to ensuring access to justice for the poor and vulnerable. According to Wolfensohn and Bourguignon (2004), a prime challenge for developing countries is further progress to build capacity, fight corruption, improve the investment climate, and empower the whole population. In addition, stronger representation and rule of law or legal institutions, which are inclusive and accessible to the poor, are imperative to guarantee the rights of participation, especially for those most likely to be excluded.

### III. KEY ELEMENTS IN INCLUSIVE GROWTH

As discussed in the previous section, there are three key measures that play a critical role in achieving the outcomes of inclusive growth: (i) creating employment opportunities and promoting higher productivity, (ii) developing human capabilities through adequate investment in basic social services of education and health, and (iii) providing social safety nets and targeted interventions to help those who are vulnerable and/or suffer from extreme deprivation. These three measures will be discussed in turn.

#### A. Employment and Productivity

The *World Employment Report 2004-05* (ILO 2004) deals with the twin issues of creating employment opportunities and promoting higher productivity in order for countries to improve the standards of living of their citizens and obtain long-term sustainable growth. Indeed, achieving inclusive growth requires both the creation of full employment and productive employment, distinguishing between the creation of low-quality jobs and decent-quality jobs.

Increasing productivity and employment for long-run sustainable growth requires a twin strategy of investing in dynamically growing sectors while at the same time building capacity in sectors where the majority of labor is employed. Investing only in the dynamic sectors may suffice to accelerate growth, albeit this may not be inclusive for all—particularly the poor—mainly because

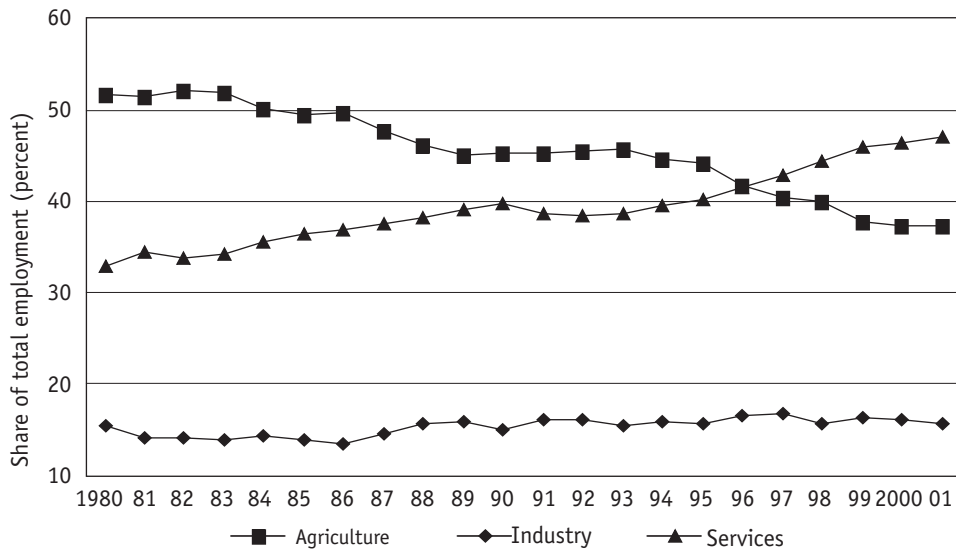
<sup>2</sup> Other types of social risks might include country risks (e.g., political instability, ethnic or religious tensions, violent conflict, militarization of society); political economy and institutional risks (e.g., weak governance and limited administrative capacity); and exogenous risks (e.g., regional conflict, macroeconomic changes, climate change).

<sup>3</sup> Ali (2007) argues that the core requirement of inclusive growth is leveling the economic and political playing field so that everyone in society can participate in, contribute to, and benefit from the new opportunities. He goes on to argue that fundamental institutional and governance reforms aimed at addressing market, policy, and institutional failures would be required to achieve inclusive growth.

the fastest growing sectors may often not be where the majority of the vulnerable or poor are employed, and may require skills and training that these people are unlikely to possess. India is a case in point. Currently India's information technology sector employs about 800,000 people, a figure that is expected to rise to 2 million by 2008 (*The Economist 2004*). However job growth in the rest of India's economy has not been sufficient to provide adequate employment opportunities for the over 400 million people who make up the labor force, two-thirds of whom are located in the rural sector and who lack the education and skills to compete for these information technology jobs. The challenge then is to broaden the dynamic sectors of the economy, while deepening their linkages with other sectors in the economy where majority of labor is employed.

As illustrated for the Philippines in Figure 1 and Table 1, a considerable shift has been taking place away from agriculture toward the nonagricultural sectors of the economy, i.e., industry and services. This trend is likely to continue to 2010 and 2020. It is imperative thus to equip workers with skills and training so that they can be absorbed in these growing areas of the economy, a strategy that is tantamount to increasing their productivity.

**FIGURE 1**  
**CHANGES IN THE SHARE OF TOTAL EMPLOYMENT BY SECTOR IN THE PHILIPPINES,**  
**1980–2001**



Source: Authors' calculations based on the *World Development Indicators 2006*.

**TABLE 1**  
**SECTORAL DISTRIBUTION OF EMPLOYMENT IN THE PHILIPPINES, 1980–2020**

	PERCENTAGE SHARE OF TOTAL EMPLOYMENT			
	AGRICULTURE	INDUSTRY	SERVICES	TOTAL
1980	51.80	15.40	32.80	100.00
2001	37.40	15.60	47.00	100.00
Projected in 2010	<b>33.02</b>	<b>17.55</b>	<b>49.43</b>	100.00
Projected in 2020	<b>28.09</b>	<b>18.88</b>	<b>53.03</b>	100.00

Source: Authors' estimation based on *Key Indicators of the Labour Market 2006* (ILO 2006).

This strategy will have the largest impact on workers' lives not only in the short and medium run, but also in the long term. In the interim, it will provide workers with decent employment opportunities, defined by security, opportunities, basic workers' rights, and representation. In the long run, workers will be equipped with the necessary skills and training to compete for job opportunities in a dynamic economy.

Of the many economic indicators, elasticity of employment with respect to growth is useful in analyzing structural changes in employment over time. Employment–growth elasticity estimates the percentage change in the number of employed persons associated with a percentage change in output, measured by GDP. Table 2 shows that in the Philippines, a 1 percentage point increase in GDP was associated with a decrease in agricultural employment of 0.63 percentage point, an increase in industrial employment of 0.07 percentage point, and an increase in services employment of 0.73 percentage point.<sup>4</sup> These figures are indicative of an ongoing structural change toward a larger share of the industry and service sectors in the Philippine economy.

**TABLE 2**  
**EMPLOYMENT–GROWTH ELASTICITY BY SECTOR IN THE PHILIPPINES**

	TOTAL	AGRICULTURE	INDUSTRY	SERVICES
1980–1989	0.27	-0.75	-0.07	1.09
1990–2001	0.10	-0.57	0.14	0.53
1980–2001	0.16	-0.63	0.07	0.73

Source: Authors' estimation based on the *World Development Indicators 2006*.

As illustrated in the case of the Philippines, the shift in employment toward services would be expected as an economy becomes more developed (i.e., moves toward high income).<sup>5</sup> Labor

<sup>4</sup> Kahn (2001) argues that employment elasticities in developing countries should ideally be around 0.7 until these countries become upper-middle-income status. He demonstrates that employment elasticities gradually decline as a country becomes more developed and more labor-scarce. Kahn argues that labor-abundant economies, and especially those with a relatively high incidence of poverty, need to achieve relatively higher employment intensity than do less labor-abundant economies.

<sup>5</sup> Kapsos (2006) finds that at the global level, the elasticity of services employment to GDP was nearly three times as large as the corresponding figures for agriculture and industry during 1991–2003.



absorption by the services sector is a very diverse process. Economic growth in general implies the increasing contribution of services in response to an increased demand for finance, trade, transport, communication, and social services. This service–employment growth effect can be considered partly as a classic type of economic development based on the integration of markets, the increase of scale-enhancing specialization, and the division of labor. As a result, many service activities have become independent activities, outsourced from agriculture and, to an even larger extent, the industrial sector in which they were once embedded.

Moreover, employment growth in the service sector can be a residual, i.e., stemming from a lack of productivity growth in the rest of the economy. In particular, demographic pressures in rural areas that lack sufficient employment opportunities have caused large flows of rural–urban migration. These migrants are mostly absorbed by the urban informal sector (ADB 2007). In particular, the service sector is much more able to absorb hidden unemployment than the industrial sector, because of the possibilities of small-scale production and less capital-intensive work.

Along with the number of jobs created in the growth process, it is equally important to look into the quality of jobs or the creation of productive jobs. It is often claimed that there is a strong link between productivity and decent work, or work that provides a sufficient level of income but also ensures social security, good working conditions, and a voice at work. In this respect, the concept of “working poor” in the developing world adds a new dimension to the study of labor markets by placing decent and productive employment at the forefront of the poverty discussion.

The fundamental reason for addressing these issues is based on the simple observation that a substantial share of poor people in the world is already at work. In other words, it is not the absence of economic activity that is the source of their poverty, but the less productive nature of that activity. In purely empirical terms, the link between work of low productivity and poverty is starkly clear. A proposition is that if the 555 million people working in poverty were able to earn more from their work, then poverty would decline (ILO 2004). But it is not just any work that can raise people out of poverty. Rather what is needed is productive work. Hence a key element of achieving an effective inclusive growth strategy is whether men and women can earn enough from their work to lift themselves and their families out of poverty.

Table 3 shows historical and forecasts of the share of employed persons earning below the \$1-a-day and \$2-a-day poverty line for the Philippines. The forecasts reveal that there will still be a significant proportion of working poor in the Philippines in 2020, when the working poor are defined as those earning less than \$2-a-day.

**TABLE 3**  
**PERCENTAGE OF WORKING POOR IN TOTAL EMPLOYMENT, PHILIPPINES**

	SHARE OF WORKING POOR IN TOTAL EMPLOYMENT (PERCENT)	
	AT \$1-A-DAY	AT \$2-A-DAY
1991	26.60	77.00
2000	21.10	67.30
Projected in 2010	<b>14.28</b>	<b>52.58</b>
Projected in 2020	<b>10.39</b>	<b>43.29</b>

Source: Authors' estimation based on *Key Indicators of the Labour Market 2006* (ILO 2006).

In general, the main reason why productivity growth impacts poverty is because productivity is the main determinant of income growth. Gains in productivity mean that there is more real income in the economy that can be distributed to workers in the form of increased wages. In developing countries, it is not only employment that is necessary for poverty reduction, but also productive employment that leads to increased wages, allowing workers to rise above the poverty threshold.

It is also important to note productive growth and poverty reduction can move in a virtuous circle. Productivity growth raises incomes and reduces poverty. In turn, the reduction in poverty can lead to improved productivity as those that move from poor to nonpoor status enjoy better health and acquire more education. Both these developments enhance productivity growth.

## B. Development in Human Capabilities

According to the United Nations Development Programme (UNDP 1990), human development is defined as a process of enlarging people's choices. Human development is increasingly viewed as the ultimate objective of development beyond economic growth. The importance of human development is even greater in the context of inclusive growth. The link between human development and inclusive growth remains critical as economic growth is foremost to sustain progress in human development. Moreover, over time, human development is itself an important contributor to growth.

There is an undoubtedly strong link between growth and human development. On one hand, growth provides the resources to permit sustained improvements in human development. On the other hand, improvements in human development raise the capacities of economic agents who make the critical contributions to economic growth.

- (i) *Growth can fuel human development.* The propensity of households to spend their income on items that contribute most directly to the promotion of human development—e.g., education and health, food and potable water—varies depending upon the level and distribution of income across households, as well as on who controls the allocation of expenditure within households. In general, as the incomes of the poor rise, the proportion of income spent on human development increases (Behrman 1996). This means that higher and more equally distributed growth is likely to enhance expenditure on human development.

Government, both central and local, plays a critical role in improving human development. More specifically, the government's resources to improve human development is a function of the total public sector expenditure, how much of this expenditure flows to human development sectors, and the allocation within these sectors.<sup>6</sup> Those expenditures that are clearly much more productive than others in terms of achieving advances in human development are defined as priorities. For example, basic education, especially at an early stage of development, is generally recognized to have a larger impact on human development than tertiary education. Yet the precise definition of what constitutes a "priority" will inevitably vary according to a country's stage of development.

<sup>6</sup> What is more important is the effectiveness of these expenditures in raising human development levels. For instance, there is abundant empirical evidence to show that female education can improve infant survival and nutrition (Rosenzweig and Schultz 1982). Other research has demonstrated that the provision of basic health services improve child health and increases survival significantly (Lavy et al. 1995).

- (ii) *Human development causes economic growth.* Higher levels of human development affect the economy by enhancing people's capacities and thus their productivity. Ample evidence suggests that as people become healthier, better nourished, and educated, they contribute more to economic growth through higher labor productivity, improved technology, attracting more foreign capital, and higher exports. This, of course, does not detract from the intrinsic value of improving the lives of those who cannot find employment because of disability or age, for instance.

Numerous studies indicate that increases in earnings are associated with additional years of education, with the rate of return varying with the level of education (Behrman 1995, Schultz 1993). Moreover, in agriculture, evidence suggests education positively affects the productivity among farmers using modern technologies (Schultz 1975, Rosenzweig 1995). In Thailand, farmers with four or more years of schooling were three times more likely to adopt fertilizer and other modern inputs than less educated farmers (Birdsall 1993).

Improved education can also favorably lead to greater income equality. As education becomes more broad-based, people with low incomes are better able to seek out economic opportunities that improve income distribution over time. In addition, improved health and nutrition have also been shown to have direct effects on labor productivity, especially among poorer individuals (Behrman 1996).

Given the strong two-way relationship between economic growth and development in human capabilities, one has to simultaneously promote both in order to sustain progress in either. Economic growth, which is important to improving human development, is itself not sustainable without enhancing the latter. Experience suggests that economic policy tends to focus priority on getting the economic fundamentals "right" as a necessary precondition for economic growth, arguing that human development improvement must await such economic growth. In contrast, the concept of inclusive growth does not support postponing improvements in human development until economic resource expansion makes it affordable. Any postponement may neglect to sustain growth itself.

### **C. Social Safety Nets and Targeted Intervention**

In developing countries, market failures are common. Markets connect every man and woman including the poor to the growth process. When markets fail, outcomes will undermine inclusive growth in the sense that market failures prevent the poor from participating in the economy. Even if markets do not fail, the outcome may not be inclusive when the disadvantaged participate in markets through discriminatory formal or informal institutions. Under these circumstances, there is scope for government to inevitably intervene so as to provide goods and services to the disadvantaged and poor. In this respect, social safety net programs and targeted interventions to those who suffer extreme deprivation are crucial for achieving inclusive growth. Safety nets are programs that protect a person or household against two adverse outcomes: (i) chronic incapacity to work and earn (chronic poverty); and (ii) a decline in this capacity from a marginal situation that provides minimal means for survival with few reserves (transient poverty).

There are various mechanisms for protecting individuals from acute deprivation or inadvertent declines in income. In some societies, informal or community-based arrangements (private safety nets) help mitigate the adverse outcomes in welfare. In addition, publicly supported social safety nets

also help the vulnerable, which include social services (in health and education); social assistance programs (e.g., old age and disability pensions); all publicly funded transfers (e.g., cash transfers such as family allowances and in-kind transfers such as food subsidies); and income-generation programs targeted to the poor (e.g., public works programs).

More importantly, targeted assistance is necessary to reach those who still cannot make use of market opportunities because they lack assets such as knowledge and skills, capital, land, or certain basic needs. The rationale for targeting is that the social returns for a given level of transfer are higher for individuals or households at the lower end of the income distribution than at the upper end. To maximize the welfare effect of a transfer program, the appropriate target would be the population segment deemed poor according to some criteria. Hence the ability to measure poverty and identify the poor is essential for designing any targeted transfer program.

#### IV. METHODOLOGY

This section discusses the measurement of inclusive growth. Inclusive growth may be measured using the idea of a social opportunity function, which is similar to a social welfare function. Hence, it can be said that inclusive growth leads to the maximization of the social opportunity function. To be consistent with our definition of inclusive growth in Section II, we propose a methodology to measure growth inclusiveness in terms of increasing the social opportunity function, which depends on two factors: (i) average opportunities available to the population, and (ii) how opportunities are shared or distributed among the population. This social opportunity function gives greater weight to the opportunities enjoyed by the poor: the poorer a person is, the greater the weight will be. Such a weighting scheme will ensure that opportunities created for the poor are more important than those created for the nonpoor, i.e., if the opportunity enjoyed by a person is transferred to a poorer person in society, then social opportunity must increase, thus making growth more inclusive.

Suppose there are  $n$  persons in the population with incomes  $x_1, x_2, \dots, x_n$ , where  $x_1$  is the poorest person and  $x_n$  is the richest. Then we define a social welfare function as

$$W = W(x_1, x_2, \dots, x_n) \quad (1)$$

which is an increasing function of its arguments. Similar to this idea of social welfare function, we can define a social opportunity function:

$$O = O(y_1, y_2, \dots, y_n) \quad (2)$$

where  $y_i$  is the opportunity enjoyed by the  $i$ th person who has income  $x_i$ . Opportunity can be defined in terms of various services, e.g., access to a health or educational service, access to job opportunity in the labor market, etc.

$y_i$  can take binary values 0 and 100. It takes the value 0 if the  $i$ th person is deprived of a certain opportunity and takes the value 100 when the  $i$ th person has that opportunity. The average opportunity for the population is then defined as

$$\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i \quad (3)$$

which is the percentage of the population who enjoys a given opportunity.<sup>7</sup>

The opportunity function should be an increasing function of its arguments. If the opportunity of any person increases, then social opportunity function must increase. Economic growth must expand the average opportunities available to the population. This is a necessary, but, by no means, sufficient requirement to achieve inclusive growth. The poor are generally constrained in availing these opportunities. Inclusive growth therefore should not only expand average opportunities, but also improve the distribution of opportunities across the population. If our development model is entirely focused on the maximization of  $\bar{y}$  as defined in (3), we are completely ignoring the distribution of opportunities. To bring in distribution considerations, we require the social opportunity function to satisfy the transfer principle: any transfer of opportunity from a poorer person to a richer person must decrease the social opportunity function. Without loss of generality, we can suppose that  $t$  amount of opportunity is transferred from a poorer person with income  $x_1$  to a richer person with income  $x_2$ . After the transfer, the poorer person will have  $y_1 - t$  opportunities and the richer person will enjoy  $y_2 + t$  opportunities. Such transfers should reduce the social opportunity function. Following from that, the social opportunity function must satisfy the following requirement:

$$O(y_1 - t, y_2 + t, y_3, \dots, y_n) \leq O(y_1, y_2, y_3, \dots, y_n) \quad (4)$$

which must hold for all non-negative values of  $t$ .

Let us denote the opportunity distribution vector  $Q(t)$  by

$$Q(t) \approx (y_1 - t, y_2 + t, y_3, \dots, y_n) \quad (5)$$

From (4), it can be said that the vector  $Q(0)$  is opportunity superior to the vector  $Q(t)$ , i.e., the vector  $Q(0)$  will always provide equal or greater social opportunities than the vector  $Q(t)$  for all non-negative values of  $t$ . A cumulative distribution of  $Q(t)$  can be constructed as:

$$Q^c(t) \approx \left( y_1 - t, \frac{y_1 + y_2}{2}, \frac{y_1 + y_2 + y_3}{3}, \dots, \frac{y_1 + y_2 + \dots + y_n}{n} \right) \quad (6)$$

which is the distribution of cumulative means of  $Q(t)$  when the individuals are arranged in ascending order of their incomes.  $Q^c(t)$  represents the concentration curve of the distribution  $Q(t)$ .<sup>8</sup> Similarly, the concentration curve of the distribution  $Q(0)$  is given by

$$Q^c(0) \approx \left( y_1, \frac{y_1 + y_2}{2}, \frac{y_1 + y_2 + y_3}{3}, \dots, \frac{y_1 + y_2 + \dots + y_n}{n} \right) \quad (7)$$

Comparing (6) and (7) it is evident that the concentration curve  $Q^c(0)$  will always be higher than the concentration curve  $Q^c(t)$  for all  $t$  and  $t > 0$  (i.e., non-negative values of  $t$ ). Thus we have shown that if the distribution  $y$  denotes opportunity superior to the distribution  $y^*$ , then the distribution  $y$  will always have a higher concentration curve. Similarly, we can prove that if the distribution  $y$  has a higher concentration curve than  $y^*$ , then distribution  $y$  will always give a greater social opportunity function. Thus, by looking at the concentration curves of two distributions, we can judge which of these two will provide greater social opportunities, provided the two concentration curves do not intersect.

<sup>7</sup> Since  $y_i$  is a binary variable that takes a value 0 or 100, the average  $\bar{y}$  is exactly equal to the percentage of the population who has access to a certain opportunity. To clarify this, suppose  $p$  is the probability that an individual selected from the population has access to an opportunity and  $(1-p)$  is the probability that the selected individual does not have access to the opportunity. Given that, the average opportunity available to the population is equal to  $100 \times p + 0 \times (1-p) = 100 \times p$ , which is simply the percentage of the people that has access to the opportunity.

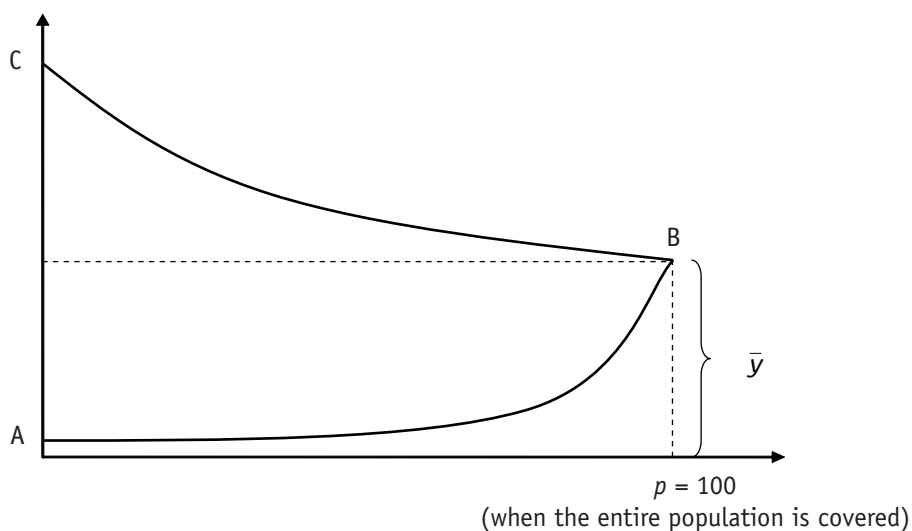
<sup>8</sup> See Kakwani (1980) for detailed discussions on the concentration curve.

To make the above idea operational, it will be useful to formulate the problem in terms of continuous distribution. Suppose we arrange the population in ascending order of their incomes. Suppose further that  $\bar{y}_p$  is the average opportunity enjoyed by the bottom  $p$  percent of the population, where  $p$  varies from 0 to 100 and  $\bar{y}$  is the mean opportunity that is available to the whole population, then  $\bar{y}_p$  will be equal to  $\bar{y}$  when  $p = 100$  (which covers the whole population).

As  $\bar{y}_p$  varies with  $p$ , we can draw a curve  $\bar{y}_p$  for different values of  $p$ . This is, in fact, a concentration curve of opportunity when the individuals are arranged in ascending order of their incomes. We may call this curve as the opportunity curve: the higher the curve, the greater the social opportunity function. Thus growth will be inclusive if it shifts the opportunity curve upward at all points. If the entire opportunity curve shifts upward, this implies that everyone in society—including the poor—is enjoying an increase in opportunities, and hence we may call such a growth process as unambiguously inclusive. The degree of inclusiveness, however, will depend on (i) how much the curve is shifting upward and (ii) in which part of the income distribution the shift is taking place.

If the opportunity curve is sloping downward, then we can say that opportunities available to the poor are more than those available to the nonpoor (i.e., the opportunities are distributed equitably). Similarly, if the curve is sloping upward, opportunities are distributed inequitably (antipoor). Figure 2 depicts two opportunity curves with the same mean ( $\bar{y}$ ): one is sloping upward (AB) and the other is sloping downward (CB). The curve CB indicates equitable distribution of opportunities, meaning that the poor at the bottom end of the distribution have greater opportunity than the nonpoor at the top end. The upward-sloping curve AB, on the other hand, indicates the opposite: the poor enjoy less opportunities than the nonpoor.

FIGURE 2  
OPPORTUNITY CURVES



The opportunity curve can be useful to assess the pattern of growth that is defined in terms of access to and equity of opportunities available to the population, without specifying a social

opportunity function. However, it is unable to quantify the precise magnitude of the change, i.e., one cannot be conclusive as to how much changes in opportunities have occurred over time. In this respect, the opportunity curve provides only partial rankings of opportunity distributions.

To be able to capture the magnitude of the change in opportunity distributions, we need to make a stronger assumption about the form of the social opportunity function used. One simple form of the social opportunity function may be obtained by calculating an index from the area under the opportunity curve as denoted below:

$$\bar{y}^* = \int_0^1 \bar{y}_p dp \quad (8)$$

which is our proposed opportunity index (OI). The greater  $\bar{y}^*$  is, the greater will be the opportunities available to the population. Our development objective should be to maximize the value of  $\bar{y}^*$ .

If everyone in the population enjoys exactly the same opportunity, then it can be shown that  $\bar{y}^*$  will be equal to  $\bar{y}$ . As such, the deviation of  $\bar{y}^*$  from  $\bar{y}$  provides an indication of how opportunities are distributed across the population. If  $\bar{y}^*$  is greater than  $\bar{y}$ , then opportunities are equitably distributed (pro-poor). Similarly, if  $\bar{y}^*$  is less than  $\bar{y}$ , then opportunities are inequitably distributed (antipoor). Thus we propose an equity index of opportunity (EIO):

$$\varphi = \frac{\bar{y}^*}{\bar{y}} \quad (9)$$

which implies that opportunities are equitably (inequitably) distributed if  $\varphi$  is greater (less) than 1. From (9), it immediately follows that

$$\bar{y}^* = \varphi \bar{y} \quad (10)$$

which shows that our proposed OI is the product of EIO and the average level of opportunities available to the population.

To achieve inclusive growth, we need to increase  $\bar{y}^*$ , which can be accomplished by: (i) increasing the average level of opportunities  $\bar{y}$ , (ii) increasing the equity index of opportunities  $\varphi$ , or (iii) both (i) and (ii). To understand the dynamics of inclusive growth, we differentiate (10) both sides to obtain:

$$d\bar{y}^* = \varphi d\bar{y} + \bar{y} d\varphi \quad (11)$$

where  $d\bar{y}^*$  measures the change in the degree of growth inclusiveness. Growth becomes more inclusive if  $d\bar{y}^* > 0$ . The first term in the right side of equation (11) is the contribution to inclusiveness of growth by increasing the average opportunity in society when the relative distribution of the opportunity does not change; the second term of the equation shows the contribution of changes in the distribution when the average opportunity does not change.

The two contributions carry important policy implications: they tell us how government policies or development strategies can influence the inclusiveness of growth. Consider a case where the second term of the right side in equation (11) is larger than the first term. In this case, a development



strategy is focused on creating opportunities for the poor, rather than on expanding the average opportunities for all. There could be a trade-off between  $\bar{y}$  and  $\phi$ , which will be evident from the first and second terms of the equation: if  $\bar{y}$  is increased,  $\phi$  may decrease and vice versa. If the first term is positive but the second term is negative, higher average opportunity for the society as a whole is achieved at the expense of reducing equitable access to opportunity. Similarly, if the first term is negative but the second term is positive, then the equity objective is achieved at the cost of the foregone average opportunity for the society. The inclusiveness of growth will depend on which contribution outweighs the other. It should be noted that there will not always be a trade-off between  $\bar{y}$  and  $\phi$ : one can increase (or decrease) concurrently with the other. If both terms are positive ( $d\bar{y} > 0$  and  $d\phi > 0$ ), growth will always be inclusive; similarly, if both terms are negative ( $d\bar{y} < 0$  and  $d\phi < 0$ ), growth will not always be inclusive.

In addition, it will be interesting to investigate if one unit of increase in the average opportunity  $\bar{y}$  will result in more than one unit of increase in the degree of growth inclusiveness, when the initial value of  $\phi$  is greater than 1 (i.e., opportunity is equitably distributed in favor of the poor). Thus, the initial distribution of opportunity plays an important role in determining inclusive growth: the more equitable the initial distribution, the greater the impact will be on the growth inclusiveness by expanding the average opportunity for all. Similarly, the initial level of  $\bar{y}$  can also enhance the impact of equity on growth inclusiveness. These findings, therefore, suggest that both  $\bar{y}$  and  $\phi$  are important policy instruments that reinforce each other in achieving a more inclusive growth.

## V. EMPIRICAL ILLUSTRATION

The proposed methodology outlined in Section IV is applied to the Philippines. For this purpose, we have used the Annual Poverty Indicator Survey (APIS) conducted in 1998 and sourced from the National Statistical Office in Manila.<sup>9</sup> The APIS is a nationwide survey designed to provide poverty indicators at the province level. This household survey is micro unit recorded. Note that the data requirement for the proposed methodology is micro unit record household surveys for an individual country.

APIS gathers information on many aspects of well-being for all of the Philippines's 78 provinces, including all cities and municipalities of Metro Manila. It provides detailed information on demographic and economic characteristics; health status and education of family members; awareness and use of family planning methods; housing, water, and sanitation conditions of families; availability of credit to finance family business or enterprise; and family income and expenditures. The 1998 APIS collected such detailed information from more than 38,000 households and 190,000 individuals across the Philippines.

In terms of the social opportunity function, inclusive growth can be measured by two approaches, namely partial and full. The partial approach is derived based on a curve called the "opportunity curve." The full approach is based on an index quantified from the area under the opportunity curve.

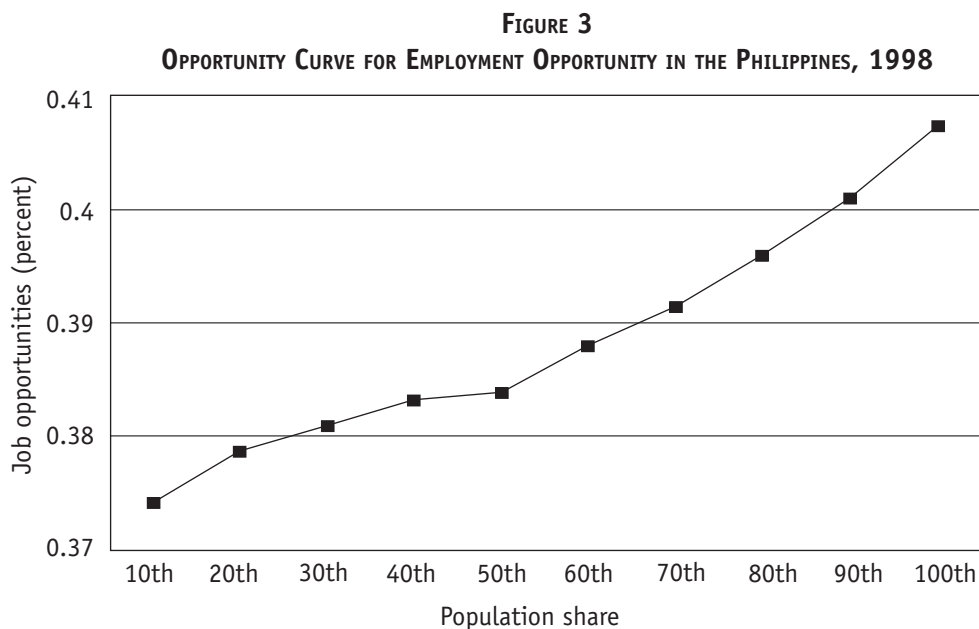
The slope of the opportunity curve may be helpful in examining the extent to which opportunities are distributed equally or unequally among the people at a given point in time. As discussed earlier, if

<sup>9</sup> We utilized the 1998 APIS for this study because we only had this data set for the Philippines. Yet it can also be applied to the 2002 and 2004 APIS, which will be our future research.



the opportunity curve slopes downward, then it suggests that opportunities are distributed equitably among the population. Conversely, an upward sloping curve suggests inequitable distribution of opportunities among the people.

Figure 3 shows the opportunity curve for employment opportunities available to the population in 1998. From the opportunity curve, there are two points to consider. First, when the entire population is covered ( $p = 100$ ), the opportunity curve coincides with the average job opportunity available for the population. Hence, the average per capita job opportunity in the Philippine economy was 0.407 in 1998, or almost 41% percent of the population was employed in the economy. Second, the opportunity curve is upward-sloping. This suggests that the poor belonging to the bottom of the income distribution have less job opportunities than the nonpoor.<sup>10</sup>



Source: Authors' calculations based on the 1998 APIS.

The analysis can be extended to different socioeconomic groups, e.g., by gender, by urban/rural areas, etc. In this study, we have looked into whether there is a significant disparity in job opportunities in the Philippines between the male and female population. Results are presented in Table 4.

<sup>10</sup> It is possible that the poor are poor because they have fewer job opportunities.

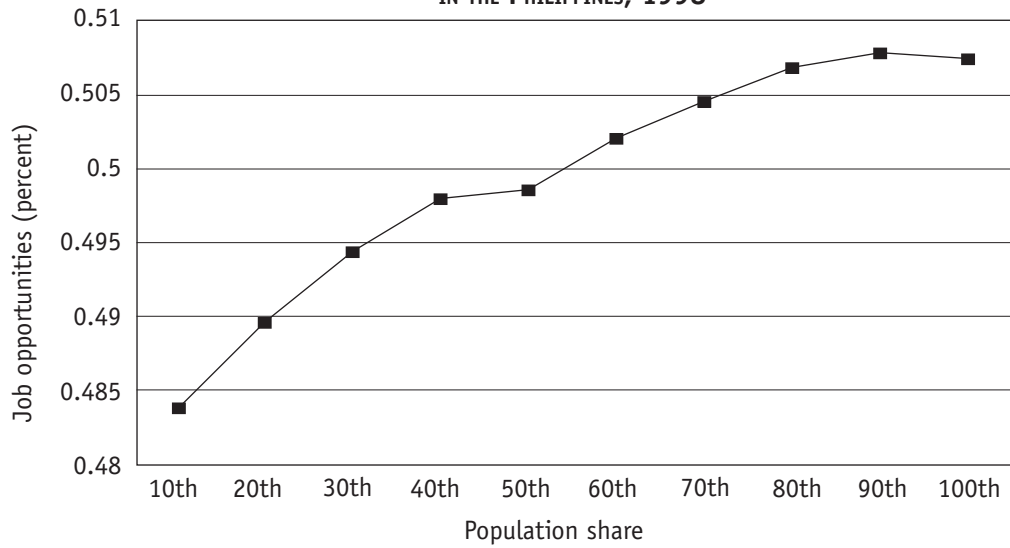
**TABLE 4**  
**OPPORTUNITY INDEX FOR EMPLOYMENT BY GENDER IN THE PHILIPPINES**

PERCENTILE	MALE	FEMALE	TOTAL
10th	0.48	0.25	0.37
20th	0.49	0.25	0.38
30th	0.49	0.25	0.38
40th	0.50	0.25	0.38
50th	0.50	0.25	0.38
60th	0.50	0.26	0.39
70th	0.50	0.27	0.39
80th	0.51	0.27	0.40
90th	0.51	0.28	0.40
100th	0.51	0.30	0.41
Opportunity index	0.50	0.26	0.39
Equity index of opportunity	0.98	0.88	0.95
Comments	Not equitable	Not equitable	Not equitable

Source: Authors' calculation based on the 1998 APIS.

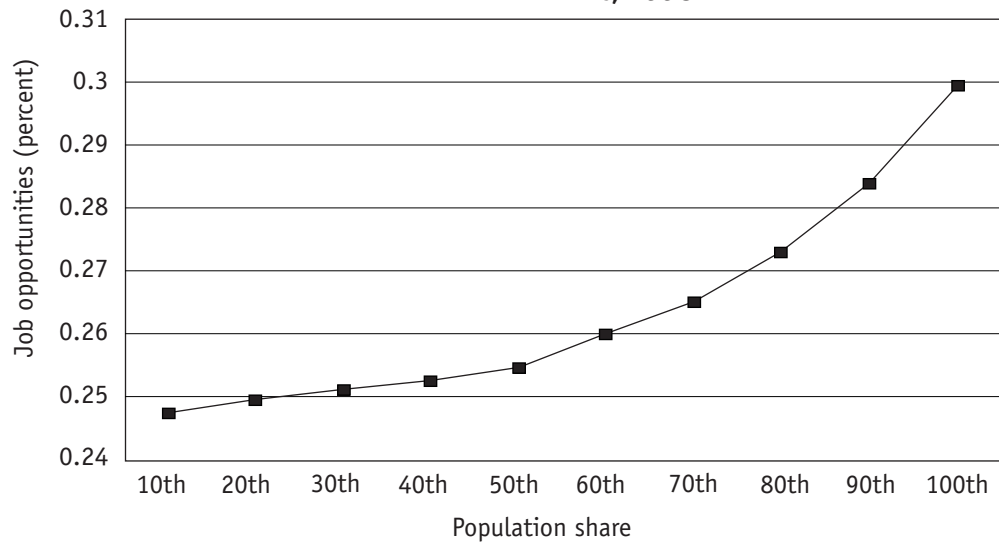
The results suggest that while more than half of the male population is employed, the corresponding figure for the female population is only 30 percent. This indicates greater access to job opportunities by the male population. Moreover, the distribution of job opportunities across the male population is shown to be more equitable than that of the female population. This finding is also supported by the opportunity curves for the two groups (see Figures 4 and 5). The entire curve for job opportunity among males (shown in Figure 4) lies above the opportunity curve for females (shown in Figure 5). At every income level, males tend to have more job opportunities than their female counterparts. This implies that (i) men enjoy greater job opportunities on average and (ii) the distribution of job opportunities among men is more equitable than among women.

**FIGURE 4**  
**OPPORTUNITY CURVE FOR EMPLOYMENT OPPORTUNITIES AMONG THE MALE POPULATION**  
**IN THE PHILIPPINES, 1998**



Source: Authors' calculations based on the 1998 APIS.

**FIGURE 5**  
**OPPORTUNITY CURVE FOR EMPLOYMENT OPPORTUNITIES AMONG THE FEMALE POPULATION**  
**IN THE PHILIPPINES, 1998**



Source: Authors' calculations based on the 1998 APIS.

The opportunity curve can be a useful tool in understanding the pattern of inclusive growth in terms of opportunities available to the population. But it does not provide a complete ranking of opportunity distributions (e.g., when the two curves cross each other). Moreover, this curve does not capture the magnitude of inclusive growth in terms of opportunities. To compensate for these shortfalls, the opportunity index is estimated, calculated from the area under the opportunity curve. The greater the value of OI, the greater will be the opportunities available to the population including the poor. The proposed OI is simply the product of the average level of opportunities available to the population and the equity index of opportunity. Note that the EIO captures the extent to which opportunities are distributed equally (or unequally) among the people. Hence, if the EIO takes a value greater (less) than 1, one can say that opportunities are distributed equitably (inequitably). Equivalently, one can define growth as inclusive (not inclusive) if the estimated value of OI is greater (less) than the average opportunities available to all.

To effectively achieve inclusive growth, the objective should be to increase the value of the opportunity index. Maximizing the value of OI can be achieved by: (i) increasing the average level of opportunities available to all; (ii) increasing the equity index of opportunity through an equitable distribution of opportunities; or (iii) both (i) and (ii). This methodology is applied in the case of the Philippines. The results in Tables 5–7 show (i) whether basic opportunities in health, education, and infrastructure are provided to all; and (ii) whether those opportunities are equally shared among the population.

Table 5 is concerned with opportunities in terms of access to health facilities, utilized when individuals are sick. The results suggest that in 1998, only 18.92% of sick individuals sought treatment.<sup>11</sup> Moreover, the overall health services in the Philippines appear to be inequitable in the sense that the health services are largely utilized by the top end of the income distribution. This is depicted in the opportunity curve in Figure 6. The inequitable opportunity of health services is also reflected by the value of the EIO for the overall health service (0.90) being less than 1, or the value of OI (17.08) being less than the average opportunity for the population (18.92).

Table 5 also shows the types of health facilities utilized by sick individuals in the Philippines. Nationally, majority of the people prefer private clinics or rural health unit (RHU) health centers: 5.13% of sick people utilize private clinics and another 4.79% utilize RHU health centers.

---

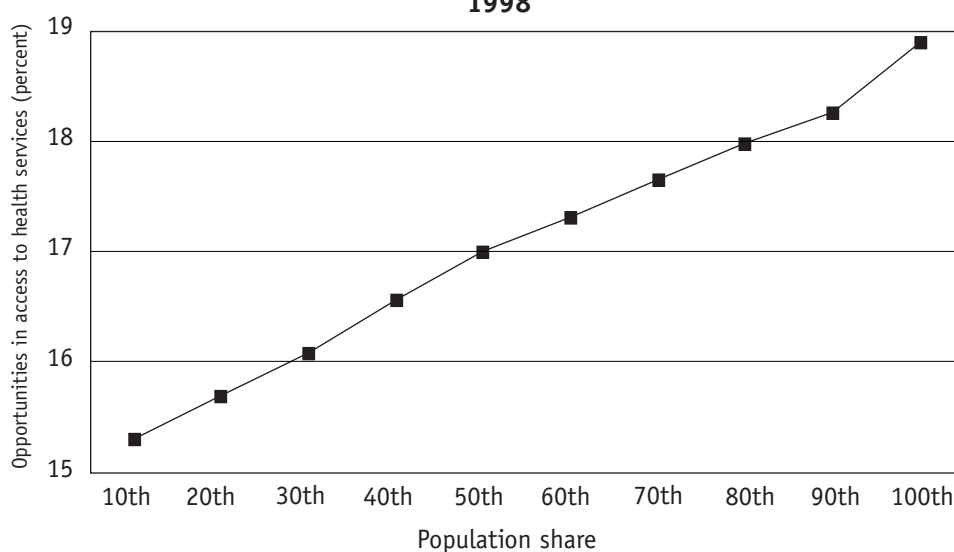
<sup>11</sup> The reasons for those not seeking medical treatment are not dealt with in detail as it is beyond the scope of the current study.

**TABLE 5**  
**OPPORTUNITY INDEX FOR ACCESS TO VARIOUS HEALTH FACILITIES IN THE PHILIPPINES, 1998**

PERCENTILE	HEALTH FACILITY	GOVERNMENT HOSPITAL	PRIVATE HOSPITAL	PRIVATE CLINIC	RURAL HEALTH UNIT HEALTH CENTRE	BARANGAY HEALTH STATION	OTHER HEALTH FACILITY
10th	15.31	2.48	0.91	1.91	6.16	3.60	0.50
20th	15.69	2.83	0.96	2.08	6.31	3.43	0.41
30th	16.09	3.10	1.06	2.26	6.20	3.47	0.39
40th	16.56	3.27	1.22	2.66	6.13	3.36	0.34
50th	17.00	3.43	1.34	2.99	6.06	3.30	0.32
60th	17.32	3.52	1.50	3.35	5.91	3.19	0.30
70th	17.67	3.64	1.80	3.70	5.70	3.00	0.28
80th	18.00	3.69	2.06	4.14	5.47	2.84	0.27
90th	18.28	3.72	2.46	4.50	5.16	2.66	0.27
100th	18.92	3.70	3.06	5.13	4.79	2.45	0.27
Opportunity index	17.08	3.34	1.64	3.27	5.79	3.13	0.33
Equity index of opportunity	0.90	0.90	0.53	0.64	1.21	1.28	1.25
Comments	Not equitable	Not equitable	Not equitable	Not equitable	Equitable	Equitable	Equitable

Note: *Barangay* is the smallest political unit in the Philippines.  
 Source: Authors' calculation based on the 1998 APIS.

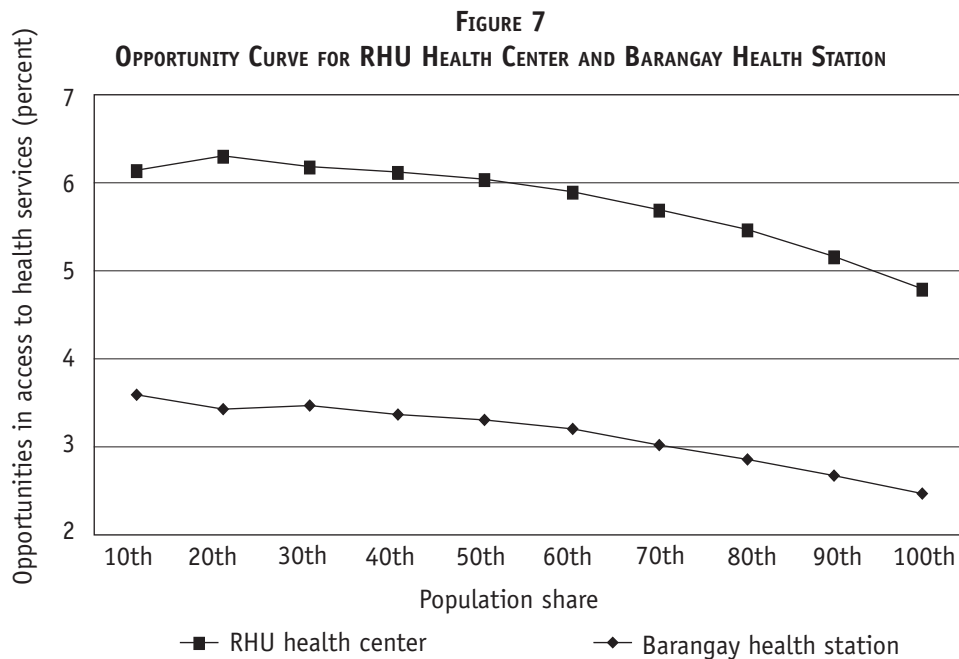
**FIGURE 6**  
**OPPORTUNITY CURVE FOR HEALTH SERVICES IN THE PHILIPPINES, 1998**



Source: Authors' calculations based on the 1998 APIS.

More interestingly, although the average opportunity in terms of access to private clinics is greater than the others, the distribution is highly skewed toward the top end of the income distribution. In other words, the health service provided by private clinics tends to be highly inequitable in the Philippines: the EIO for private clinic (0.64) is less than 1; or the OI (3.27) is less than the average opportunity for the population of 5.13. Similarly, the health services provided by government and private hospitals are heavily utilized by the richer segments of the society. This is also evident in Figure 6.

On the contrary, health facilities such as RHU and *barangay* health stations are utilized more by the people at the lower end of the income distribution. This is evident in the downward-sloping opportunity curves shown in Figure 7. The values for EIO and OI confirm the finding that both health services are highly utilized by the poor segments of the society.



Source: Authors' calculations based on the 1998 APIS.

The methodology is applied similarly to explore to what extent the opportunities of education at primary and secondary levels are shared among children from the poor and nonpoor households in the Philippines. Table 6 shows that a very high proportion (95.9%) of children aged between 7 and 12 years attend primary school in the Philippines. The corresponding figure for secondary education is rather lower at 83.25% of children aged between 13–16 years.

These school attendance figures do not indicate whether the educational opportunities are equally shared among the children irrespective of their income status. The distribution of the educational opportunities is in fact unequal: it is even more unequal at the secondary level. In this case, the opportunity curves for both educational levels have an upward slope. This suggests that

children at the bottom end of the income distribution have lower access to primary and secondary education. This finding is confirmed by the estimated opportunity indices: the values of the EIO are lower than 1 and the values of the OI are lower than the national average at both primary and secondary levels.

**TABLE 6**  
**OPPORTUNITY INDEX FOR ACCESS TO PRIMARY AND SECONDARY SCHOOLS**  
**IN THE PHILIPPINES, 1998**

PERCENTILE	CHILDREN	CHILDREN
	7–12 YEARS	13–16 YEARS
	ATTENDING SCHOOL	ATTENDING SCHOOL
10th	89.66	69.22
20th	90.72	70.80
30th	92.01	72.53
40th	92.97	74.28
50th	93.52	76.14
60th	94.10	77.28
70th	94.61	78.77
80th	95.09	80.18
90th	95.53	81.72
100th	95.90	83.25
Opportunity index	93.41	76.42
Equity index of opportunity	0.97	0.92
Comments	Not equitable	Not equitable

Source: Authors' calculation based on the 1998 APIS.

Basic infrastructure services make significant contributions to people's well-being. Basic services such as electricity, sanitary toilets, and clean drinking water have direct impacts on people's health status and overall well-being. A number of studies reveal that a household's access to such basic services is highly and significantly correlated with a lower probability of being poor.

In the case of the Philippines, Table 7 shows that the benefits generated from all types of basic infrastructure services are not equally shared across the population, particularly for electricity and clean drinking water. The table shows that the poor at the lower end of the income distribution have far less access to basic infrastructure services than the rich at the upper end of the distribution.<sup>12</sup>

<sup>12</sup> The proposed methodology is applied only to two key measures outlined in Section III, employment; and basic social services in education, health, and infrastructure. In other words, the key measure of "social safety nets and targeted intervention" is not covered in the empirical section. This is because the key measure discussed in Section IIIC requires a different methodology to capture targeting efficiency, rather than accessibility and equity of safety programs. The critical issues pertinent to the third key measure are (i) how well social safety net programs are targeted at specific groups who are in need; and (ii) to what extent the targeted groups (compared to the nontargeted groups) have been benefited from such programs. Developing a measure to monitor the third key measure could be a scope for future research.

**TABLE 7**  
**OPPORTUNITY INDEX FOR ACCESS TO BASIC INFRASTRUCTURE IN THE PHILIPPINES, 1998**

PERCENTILE	ELECTRICITY	SANITARY TOILETS	CLEAN DRINKING WATER
10th	29.34	73.73	27.16
20th	35.67	76.18	29.01
30th	41.95	78.39	31.06
40th	48.15	80.44	32.32
50th	53.42	82.26	33.73
60th	58.28	83.99	35.67
70th	62.62	85.54	37.71
80th	66.36	86.92	40.12
90th	69.58	88.23	42.53
100th	72.45	89.37	45.48
Opportunity index	53.78	82.51	35.48
Equity index of opportunity	0.74	0.92	0.78
Comments	Not equitable	Not equitable	Not equitable

Source: Authors' calculation based on the 1998 APIS.

## VI. SOME ISSUES FOR FURTHER RESEARCH

This paper introduces a systematic way of measuring inclusive growth. Similar to the idea of a social welfare function, the paper has attempted to introduce the idea of a social opportunity function. Growth is defined as inclusive if it increases the social opportunity function, which depends on two factors: (i) average opportunities available to the population and (ii) how opportunities are distributed in the population. This idea has been made operational by means of the opportunity curve, which has a one-to-one relationship with the social opportunity function: the higher the opportunity curve, the greater will be the social opportunity function. The opportunity curve can be empirically calculated using unit record household surveys. Empirical applications to the Philippines presented in the paper show that the opportunity curve is a useful device to analyze the inclusiveness of growth in quantitative terms.

But a more relevant question is how to assess the equitable opportunities over time. This type of dynamic analysis can be done by examining how the opportunity curves shifts over two periods. For instance, if the entire opportunity curve shifts upward, this suggests that growth is inclusive: growth is not only increasing the average opportunities available to the whole population, but is also increasing the opportunities for the poor that belong to the bottom of the income distribution. The degree of inclusiveness will depend on (i) how much the curve shifts upward and (ii) in which part of the income distribution the shift takes place. This dynamic analysis will also allow for monitoring of the inclusiveness of growth over time for an individual country.

Finally, the proposed opportunity index is largely concerned with access to and equity of opportunities available to the population in society. In this respect, the proposed index is entirely



different from indicators developed by the UNDP for the Millennium Development Goals (MDG) and the human development index (HDI). While our opportunity index describes the process to meet an end (or means to an end), the UNDP indicators focus on the outcomes of well-being (e.g., life expectancy at birth, gross enrollment rates, etc). Monitoring the means or process will ensure achieving the outcomes. Yet, the mere focus on achieving an outcome may ignore the means to meet the end. For instance, gross enrollment rate is an important indicator for both MDG and HDI. However, both MDG and HDI tend to simply focus on improvement in the average gross enrollment rate for a country. Assessing access to basic education is indeed important, but evaluating whether the access to basic education is equally shared among all segments of population is also important (or may be more important than the issue of accessibility). The proposed opportunity index takes into account both issues.

Similar to the HDI, we may be able to develop a single composite index that consists of four key opportunities that are critical for people's overall well-being, namely employment, health and educational services, and material standard of living. This composite index may be useful for cross-country rankings, although it does suffer from two shortcomings: (i) it is derived based solely on the equity of opportunity among the population (i.e., average of the equity index of opportunity for five key opportunities); and (ii) the composite index may have the virtue of being simple but it uses a simple average of the five key components included in the index (i.e., equal weights assigned to each component). Developing an index that can fully address such shortcomings could be another scope for future research.

Nevertheless, it is not necessary to convert several indicators of well-being into one single index, as correctly argued by Sen (1989). The concept of well-being has an inherent plurality and should not be seen as a unidimensional measure such as that of weight or height. Therefore, inclusiveness of growth could be monitored better for a specific country rather than across countries. In addition to the key monitoring indicators discussed in this study, other additional indicators could be chosen by a country, depending on its policy objectives. Monitoring these associated indicators for growth inclusiveness over time would involve very high demands on information. Micro household data should be available on a regular basis and comparable over time and across space.

## REFERENCES

- Ali, I. 2007. *Pro-Poor to Inclusive Growth: Asian Prescriptions*. ERD Policy Brief No. 48, Economics and Research Department, Asian Development Bank, Manila.
- Ali, I., and J. Zhuang. *Inclusive Growth toward a Prosperous Asia: Policy Implications*. ERD Working Paper No. 97, Economics and Research Department, Asian Development Bank, Manila.
- Asian Development Bank. 2005. *Asian Development Outlook 2006*. Hong Kong, China.
- . 2007a. *Asian Development Outlook*. Hong Kong, China.
- . 2007b. *Toward A New Asian Development Bank in a New Asia*. Report of the Eminent Persons Group to the President of the Asian Development Bank. Manila.
- Behrman, J. 1995. "The Impact of Distributive Policies, Governmental Expenditure Patterns and Decentralization on Human Resources." University of Pennsylvania, Philadelphia. Processed.
- . 1996. "Impact of Health and Nutrition on Education." *World Bank Research Observer* 11(1):23–37.
- Birdsall, N. 1993. *Social Development is Economic Development*. Policy Research Working Paper No. 1123, World Bank, Washington, DC.

- 
- International Labour Organization. 2004. *World Employment Report 2004-2005: Employment, Productivity, and Poverty Reduction*. Geneva.
- . 2006. *Key Indicators of the Labour Market 2006*. Geneva.
- Kahn, A. 2001. "Employment Policies for Poverty Reduction." Recovery and Reconstruction Department, International Labor Organization, Geneva. Processed.
- Kakwani, N. 1980. *Income Inequality and Poverty: Methods of Estimation and Policy Applications*. New York: Oxford University Press.
- Kapsos, S. 2006. "The Employment Intensity of Growth: Trends and Macroeconomic Determinants." In J. Felipe and R. Hasan, eds., *Labor Markets in Asia: Issues and Perspectives*. United Kingdom: Palgrave Macmillan.
- Lavy, V., J. Strauss, D. Thomas, and P. de Vreyer. 1995. Impact of the Quality of Health Care on Children's Nutrition and Survival in Ghana. LSMS Working Paper No. 106, World Bank, Washington, DC.
- National Statistical Office of the Philippines. 1998. *Annual Poverty Indicator Survey*. Manila.
- Rosenzweig, M. R. 1995. "Why are there returns to schooling?," *American Economic Review* 85: 153-158.
- Rosenzweig, M., and T. Schultz. 1982. "Market Opportunities, Genetic Endowments, and Intra-family Resource Distribution." *American Economic Review* 72:803-15.
- Sen, A. 1985. *Commodities and Capabilities*. Oxford: Oxford University Press.
- . 1989. "Development as Capability Expansion." *Journal of Development Planning* 19:41-58.
- Schultz, T. 1975. "The Value of the Ability to Deal with Disequilibria." *Journal of Economic Literature* 13(3):803-15.
- . 1993. "Investment in Schooling and Health of Women and Men." *Journal of Human Resources* 28:694-734.
- The Economist*. 2004. "A Survey of Outsourcing." November 13. Page 54.
- . 1996. *Human Development Report 1996—Economic Growth and Human Development*. New York.
- Wolfensohn, J., and F. Bourguignon. 2004. *Development and Poverty Reduction: Looking Back, Looking Ahead*. World Bank, Washington, DC.
- World Bank. 2006. *World Development Indicators 2006*. Washington, DC.

# PUBLICATIONS FROM THE ECONOMICS AND RESEARCH DEPARTMENT

## ERD WORKING PAPER SERIES (WPS)

(Published in-house; Available through ADB Office of External Relations; Free of Charge)

- |  |  |
|--|--|
| <p>No. 1 Capitalizing on Globalization<br/>—<i>Barry Eichengreen, January 2002</i></p> <p>No. 2 Policy-based Lending and Poverty Reduction: An Overview of Processes, Assessment and Options<br/>—<i>Richard Bolt and Manabu Fujimura, January 2002</i></p> <p>No. 3 The Automotive Supply Chain: Global Trends and Asian Perspectives<br/>—<i>Francisco Veloso and Rajiv Kumar, January 2002</i></p> <p>No. 4 International Competitiveness of Asian Firms: An Analytical Framework<br/>—<i>Rajiv Kumar and Doren Chadee, February 2002</i></p> <p>No. 5 The International Competitiveness of Asian Economies in the Apparel Commodity Chain<br/>—<i>Gary Gereffi, February 2002</i></p> <p>No. 6 Monetary and Financial Cooperation in East Asia—The Chiang Mai Initiative and Beyond<br/>—<i>Pradumna B. Rana, February 2002</i></p> <p>No. 7 Probing Beneath Cross-national Averages: Poverty, Inequality, and Growth in the Philippines<br/>—<i>Arsenio M. Balisacan and Ernesto M. Pernia, March 2002</i></p> <p>No. 8 Poverty, Growth, and Inequality in Thailand<br/>—<i>Anil B. Deolalikar, April 2002</i></p> <p>No. 9 Microfinance in Northeast Thailand: Who Benefits and How Much?<br/>—<i>Brett E. Coleman, April 2002</i></p> <p>No. 10 Poverty Reduction and the Role of Institutions in Developing Asia<br/>—<i>Anil B. Deolalikar, Alex B. Brillantes, Jr., Raghav Gaiha, Ernesto M. Pernia, Mary Racelis with the assistance of Marita Concepcion Castro-Guevara, Liza L. Lim, Pilipinas F. Quising, May 2002</i></p> <p>No. 11 The European Social Model: Lessons for Developing Countries<br/>—<i>Assar Lindbeck, May 2002</i></p> <p>No. 12 Costs and Benefits of a Common Currency for ASEAN<br/>—<i>Srinivasa Madhur, May 2002</i></p> <p>No. 13 Monetary Cooperation in East Asia: A Survey<br/>—<i>Raul Fabella, May 2002</i></p> <p>No. 14 Toward A Political Economy Approach to Policy-based Lending<br/>—<i>George Abonyi, May 2002</i></p> <p>No. 15 A Framework for Establishing Priorities in a Country Poverty Reduction Strategy<br/>—<i>Ron Duncan and Steve Pollard, June 2002</i></p> <p>No. 16 The Role of Infrastructure in Land-use Dynamics and Rice Production in Viet Nam's Mekong River Delta<br/>—<i>Christopher Edmonds, July 2002</i></p> <p>No. 17 Effect of Decentralization Strategy on Macroeconomic Stability in Thailand<br/>—<i>Kanokpan Lao-Araya, August 2002</i></p> <p>No. 18 Poverty and Patterns of Growth<br/>—<i>Rana Hasan and M. G. Quibria, August 2002</i></p> <p>No. 19 Why are Some Countries Richer than Others? A Reassessment of Mankiw-Romer-Weil's Test of</p> | <p>the Neoclassical Growth Model<br/>—<i>Jesus Felipe and John McCombie, August 2002</i></p> <p>No. 20 Modernization and Son Preference in People's Republic of China<br/>—<i>Robin Burgess and Juzhong Zhuang, September 2002</i></p> <p>No. 21 The Doha Agenda and Development: A View from the Uruguay Round<br/>—<i>J. Michael Finger, September 2002</i></p> <p>No. 22 Conceptual Issues in the Role of Education Decentralization in Promoting Effective Schooling in Asian Developing Countries<br/>—<i>Jere R. Behrman, Anil B. Deolalikar, and Lee-Ying Son, September 2002</i></p> <p>No. 23 Promoting Effective Schooling through Education Decentralization in Bangladesh, Indonesia, and Philippines<br/>—<i>Jere R. Behrman, Anil B. Deolalikar, and Lee-Ying Son, September 2002</i></p> <p>No. 24 Financial Opening under the WTO Agreement in Selected Asian Countries: Progress and Issues<br/>—<i>Yun-Hwan Kim, September 2002</i></p> <p>No. 25 Revisiting Growth and Poverty Reduction in Indonesia: What Do Subnational Data Show?<br/>—<i>Arsenio M. Balisacan, Ernesto M. Pernia, and Abuzar Asra, October 2002</i></p> <p>No. 26 Causes of the 1997 Asian Financial Crisis: What Can an Early Warning System Model Tell Us?<br/>—<i>Juzhong Zhuang and J. Malcolm Dowling, October 2002</i></p> <p>No. 27 Digital Divide: Determinants and Policies with Special Reference to Asia<br/>—<i>M. G. Quibria, Shamsun N. Ahmed, Ted Tschang, and Mari-Len Reyes-Macasaquit, October 2002</i></p> <p>No. 28 Regional Cooperation in Asia: Long-term Progress, Recent Retrogression, and the Way Forward<br/>—<i>Ramgopal Agarwala and Brahm Prakash, October 2002</i></p> <p>No. 29 How can Cambodia, Lao PDR, Myanmar, and Viet Nam Cope with Revenue Lost Due to AFTA Tariff Reductions?<br/>—<i>Kanokpan Lao-Araya, November 2002</i></p> <p>No. 30 Asian Regionalism and Its Effects on Trade in the 1980s and 1990s<br/>—<i>Ramon Clarete, Christopher Edmonds, and Jessica Seddon Wallack, November 2002</i></p> <p>No. 31 New Economy and the Effects of Industrial Structures on International Equity Market Correlations<br/>—<i>Cyn-Young Park and Jaejoon Woo, December 2002</i></p> <p>No. 32 Leading Indicators of Business Cycles in Malaysia and the Philippines<br/>—<i>Wenda Zhang and Juzhong Zhuang, December 2002</i></p> <p>No. 33 Technological Spillovers from Foreign Direct Investment—A Survey<br/>—<i>Emma Xiaojin Fan, December 2002</i></p> |
|--|--|

- No. 34 Economic Openness and Regional Development in the Philippines  
—*Ernesto M. Pernia and Pilipinas F. Quising, January 2003*
- No. 35 Bond Market Development in East Asia: Issues and Challenges  
—*Raul Fabella and Srinivasa Madhur, January 2003*
- No. 36 Environment Statistics in Central Asia: Progress and Prospects  
—*Robert Ballance and Bishnu D. Pant, March 2003*
- No. 37 Electricity Demand in the People's Republic of China: Investment Requirement and Environmental Impact  
—*Bo Q. Lin, March 2003*
- No. 38 Foreign Direct Investment in Developing Asia: Trends, Effects, and Likely Issues for the Forthcoming WTO Negotiations  
—*Douglas H. Brooks, Emma Xiaoqin Fan, and Lea R. Sumulong, April 2003*
- No. 39 The Political Economy of Good Governance for Poverty Alleviation Policies  
—*Narayan Lakshman, April 2003*
- No. 40 The Puzzle of Social Capital  
A Critical Review  
—*M. G. Quibria, May 2003*
- No. 41 Industrial Structure, Technical Change, and the Role of Government in Development of the Electronics and Information Industry in Taipei, China  
—*Yeo Lin, May 2003*
- No. 42 Economic Growth and Poverty Reduction in Viet Nam  
—*Arsenio M. Balisacan, Ernesto M. Pernia, and Gemma Esther B. Estrada, June 2003*
- No. 43 Why Has Income Inequality in Thailand Increased? An Analysis Using 1975-1998 Surveys  
—*Taizo Motonishi, June 2003*
- No. 44 Welfare Impacts of Electricity Generation Sector Reform in the Philippines  
—*Natsuko Toba, June 2003*
- No. 45 A Review of Commitment Savings Products in Developing Countries  
—*Nava Ashraf, Nathalie Gons, Dean S. Karlan, and Wesley Yin, July 2003*
- No. 46 Local Government Finance, Private Resources, and Local Credit Markets in Asia  
—*Roberto de Vera and Yun-Hwan Kim, October 2003*
- No. 47 Excess Investment and Efficiency Loss During Reforms: The Case of Provincial-level Fixed-Asset Investment in People's Republic of China  
—*Duo Qin and Haiyan Song, October 2003*
- No. 48 Is Export-led Growth Passe? Implications for Developing Asia  
—*Jesus Felipe, December 2003*
- No. 49 Changing Bank Lending Behavior and Corporate Financing in Asia—Some Research Issues  
—*Emma Xiaoqin Fan and Akiko Terada-Hagiwara, December 2003*
- No. 50 Is People's Republic of China's Rising Services Sector Leading to Cost Disease?  
—*Duo Qin, March 2004*
- No. 51 Poverty Estimates in India: Some Key Issues  
—*Savita Sharma, May 2004*
- No. 52 Restructuring and Regulatory Reform in the Power Sector: Review of Experience and Issues  
—*Peter Choynowski, May 2004*
- No. 53 Competitiveness, Income Distribution, and Growth in the Philippines: What Does the Long-run Evidence Show?  
—*Jesus Felipe and Grace C. Sipin, June 2004*
- No. 54 Practices of Poverty Measurement and Poverty Profile of Bangladesh  
—*Faizuddin Ahmed, August 2004*
- No. 55 Experience of Asian Asset Management Companies: Do They Increase Moral Hazard?—Evidence from Thailand  
—*Akiko Terada-Hagiwara and Gloria Pasadilla, September 2004*
- No. 56 Viet Nam: Foreign Direct Investment and Postcrisis Regional Integration  
—*Vittorio Leproux and Douglas H. Brooks, September 2004*
- No. 57 Practices of Poverty Measurement and Poverty Profile of Nepal  
—*Devendra Chhetry, September 2004*
- No. 58 Monetary Poverty Estimates in Sri Lanka: Selected Issues  
—*Neranjana Gunetilleke and Dinushka Senanayake, October 2004*
- No. 59 Labor Market Distortions, Rural-Urban Inequality, and the Opening of People's Republic of China's Economy  
—*Thomas Hertel and Fan Zhai, November 2004*
- No. 60 Measuring Competitiveness in the World's Smallest Economies: Introducing the SSMECI  
—*Ganeshan Wignaraja and David Joiner, November 2004*
- No. 61 Foreign Exchange Reserves, Exchange Rate Regimes, and Monetary Policy: Issues in Asia  
—*Akiko Terada-Hagiwara, January 2005*
- No. 62 A Small Macroeconometric Model of the Philippine Economy  
—*Geoffrey Ducanes, Marie Anne Cagas, Duo Qin, Pilipinas Quising, and Nedelyn Magtibay-Ramos, January 2005*
- No. 63 Developing the Market for Local Currency Bonds by Foreign Issuers: Lessons from Asia  
—*Tobias Hoschka, February 2005*
- No. 64 Empirical Assessment of Sustainability and Feasibility of Government Debt: The Philippines Case  
—*Duo Qin, Marie Anne Cagas, Geoffrey Ducanes, Nedelyn Magtibay-Ramos, and Pilipinas Quising, February 2005*
- No. 65 Poverty and Foreign Aid  
Evidence from Cross-Country Data  
—*Abuzar Asra, Gemma Estrada, Yangseom Kim, and M. G. Quibria, March 2005*
- No. 66 Measuring Efficiency of Macro Systems: An Application to Millennium Development Goal Attainment  
—*Ajay Tandon, March 2005*
- No. 67 Banks and Corporate Debt Market Development  
—*Paul Dickie and Emma Xiaoqin Fan, April 2005*
- No. 68 Local Currency Financing—The Next Frontier for MDBs?  
—*Tobias C. Hoschka, April 2005*
- No. 69 Export or Domestic-Led Growth in Asia?  
—*Jesus Felipe and Joseph Lim, May 2005*
- No. 70 Policy Reform in Viet Nam and the Asian Development Bank's State-owned Enterprise Reform and Corporate Governance Program Loan  
—*George Abonyi, August 2005*
- No. 71 Policy Reform in Thailand and the Asian Development Bank's Agricultural Sector Program Loan  
—*George Abonyi, September 2005*
- No. 72 Can the Poor Benefit from the Doha Agenda? The Case of Indonesia  
—*Douglas H. Brooks and Guntur Sugiyarto, October 2005*
- No. 73 Impacts of the Doha Development Agenda on People's Republic of China: The Role of Complementary Education Reforms

- Fan Zhai and Thomas Hertel, October 2005*
- No. 74 Growth and Trade Horizons for Asia: Long-term Forecasts for Regional Integration  
—*David Roland-Holst, Jean-Pierre Verbiest, and Fan Zhai, November 2005*
- No. 75 Macroeconomic Impact of HIV/AIDS in the Asian and Pacific Region  
—*Ajay Tandon, November 2005*
- No. 76 Policy Reform in Indonesia and the Asian Development Bank's Financial Sector Governance Reforms Program Loan  
—*George Abonyi, December 2005*
- No. 77 Dynamics of Manufacturing Competitiveness in South Asia: ANalysis through Export Data  
—*Hans-Peter Brunner and Massimiliano Cali, December 2005*
- No. 78 Trade Facilitation  
—*Teruo Ujiie, January 2006*
- No. 79 An Assessment of Cross-country Fiscal Consolidation  
—*Bruno Carrasco and Seung Mo Choi, February 2006*
- No. 80 Central Asia: Mapping Future Prospects to 2015  
—*Malcolm Dowling and Ganeshan Wignaraja, April 2006*
- No. 81 A Small Macroeconometric Model of the People's Republic of China  
—*Duo Qin, Marie Anne Cagas, Geoffrey Ducanes, Nedelyn Magtibay-Ramos, Pilipinas Quising, Xinhua He, Rui Liu, and Shi-Guo Liu, June 2006*
- No. 82 Institutions and Policies for Growth and Poverty Reduction: The Role of Private Sector Development  
—*Rana Hasan, Devashish Mitra, and Mehmet Ulubasoglu, July 2006*
- No. 83 Preferential Trade Agreements in Asia: Alternative Scenarios of "Hub and Spoke"  
—*Fan Zhai, October 2006*
- No. 84 Income Disparity and Economic Growth: Evidence from People's Republic of China  
—*Duo Qin, Marie Anne Cagas, Geoffrey Ducanes, Xinhua He, Rui Liu, and Shiguo Liu, October 2006*
- No. 85 Macroeconomic Effects of Fiscal Policies: Empirical Evidence from Bangladesh, People's Republic of China, Indonesia, and Philippines  
—*Geoffrey Ducanes, Marie Anne Cagas, Duo Qin, Pilipinas Quising, and Mohammad Abdur Razzaque, November 2006*
- No. 86 Economic Growth, Technological Change, and Patterns of Food and Agricultural Trade in Asia  
—*Thomas W. Hertel, Carlos E. Ludena, and Alla Golub, November 2006*
- No. 87 Expanding Access to Basic Services in Asia and the Pacific Region: Public-Private Partnerships for Poverty Reduction  
—*Adrian T. P. Panggabean, November 2006*
- No. 88 Income Volatility and Social Protection in Developing Asia  
—*Vandana Siphahimalani-Rao, November 2006*
- No. 89 Rules of Origin: Conceptual Explorations and Lessons from the Generalized System of Preferences  
—*Teruo Ujiie, December 2006*
- No. 90 Asia's Imprint on Global Commodity Markets  
—*Cyn-Young Park and Fan Zhai, December 2006*
- No. 91 Infrastructure as a Catalyst for Regional Integration, Growth, and Economic Convergence: Scenario Analysis for Asia  
—*David Roland-Holst, December 2006*
- No. 92 Measuring Underemployment: Establishing the Cut-off Point  
—*Guntur Sugiyarto, March 2007*
- No. 93 An Analysis of the Philippine Business Process Outsourcing Industry  
—*Nedelyn Magtibay-Ramos, Gemma Estrada, and Jesus Felipe, March 2007*
- No. 94 Theory and Practice in the Choice of Social Discount Rate for Cost-Benefit Analysis: A Survey  
—*Juzhong Zhuang, Zhihong Liang, Tun Lin, and Franklin De Guzman, May 2007*
- No. 95 Can East Asia Weather a US Slowdown?  
—*Cyn-Young Park, June 2007*
- No. 96 Interrelationship between Growth, Inequality, and Poverty: the Asian Experience  
—*Hyun H. Son, June 2007*
- No. 97 Inclusive Growth toward a Prosperous Asia: Policy Implications  
—*Ifzal Ali and Juzhong Zhuang, July 2007*
- No. 98 Defining and Measuring Inclusive Growth: Application to the Philippines  
—*Ifzal Ali and Hyun H. Son, July 2007*

## ERD TECHNICAL NOTE SERIES (TNS)

(Published in-house; Available through ADB Office of External Relations; Free of Charge)

- No. 1 Contingency Calculations for Environmental Impacts with Unknown Monetary Values  
—*David Dole, February 2002*
- No. 2 Integrating Risk into ADB's Economic Analysis of Projects  
—*Nigel Rayner, Anneli Lagman-Martin, and Keith Ward, June 2002*
- No. 3 Measuring Willingness to Pay for Electricity  
—*Peter Choynowski, July 2002*
- No. 4 Economic Issues in the Design and Analysis of a Wastewater Treatment Project  
—*David Dole, July 2002*
- No. 5 An Analysis and Case Study of the Role of Environmental Economics at the Asian Development Bank  
—*David Dole and Piya Abeygunawardena, September 2002*
- No. 6 Economic Analysis of Health Projects: A Case Study in Cambodia  
—*Erik Bloom and Peter Choynowski, May 2003*
- No. 7 Strengthening the Economic Analysis of Natural Resource Management Projects  
—*Keith Ward, September 2003*
- No. 8 Testing Savings Product Innovations Using an Experimental Methodology  
—*Nava Ashraf, Dean S. Karlan, and Wesley Yin, November 2003*
- No. 9 Setting User Charges for Public Services: Policies and Practice at the Asian Development Bank  
—*David Dole, December 2003*
- No. 10 Beyond Cost Recovery: Setting User Charges for Financial, Economic, and Social Goals  
—*David Dole and Ian Bartlett, January 2004*
- No. 11 Shadow Exchange Rates for Project Economic Analysis: Toward Improving Practice at the Asian Development Bank  
—*Anneli Lagman-Martin, February 2004*
- No. 12 Improving the Relevance and Feasibility of Agriculture and Rural Development Operational Designs: How Economic Analyses Can Help  
—*Richard Bolt, September 2005*



- No. 13 Assessing the Use of Project Distribution and Poverty Impact Analyses at the Asian Development Bank  
—*Franklin D. De Guzman, October 2005*
- No. 14 Assessing Aid for a Sector Development Plan: Economic Analysis of a Sector Loan  
—*David Dole, November 2005*
- No. 15 Debt Management Analysis of Nepal's Public Debt  
—*Sungsup Ra, Changyong Rhee, and Joon-Ho Hahn, December 2005*
- No. 16 Evaluating Microfinance Program Innovation with Randomized Control Trials: An Example from Group Versus Individual Lending  
—*Xavier Giné, Tomoko Harigaya, Dean Karlan, and Binh T. Nguyen, March 2006*
- No. 17 Setting User Charges for Urban Water Supply: A Case Study of the Metropolitan Cebu Water District in the Philippines  
—*David Dole and Edna Balucan, June 2006*
- No. 18 Forecasting Inflation and GDP Growth: Automatic Leading Indicator (ALI) Method versus Macro Econometric Structural Models (MESMs)  
—*Marie Anne Cagas, Geoffrey Ducanes, Nedelyn Magtibay-Ramos, Duo Qin and Pilipinas Quising, July 2006*
- No. 19 Willingness-to-Pay and Design of Water Supply and Sanitation Projects: A Case Study  
—*Herath Gunatilake, Jui-Chen Yang, Subhrendu Pattanayak, and Caroline van den Berg, December 2006*
- No. 20 Tourism for Pro-Poor and Sustainable Growth: Economic Analysis of ADB Tourism Projects  
—*Tun Lin and Franklin D. De Guzman, January 2007*
- No. 21 Critical Issues of Fiscal Decentralization  
—*Norio Usui, February 2007*
- No. 22 Pro-Poor Growth: Concepts and Measures  
—*Hyun H. Son, June 2007*

## ERD POLICY BRIEF SERIES (PBS)

(Published in-house; Available through ADB Office of External Relations; Free of charge)

- No. 1 Is Growth Good Enough for the Poor?  
—*Ernesto M. Pernia, October 2001*
- No. 2 India's Economic Reforms  
What Has Been Accomplished?  
What Remains to Be Done?  
—*Arvind Panagariya, November 2001*
- No. 3 Unequal Benefits of Growth in Viet Nam  
—*Indu Bhushan, Erik Bloom, and Nguyen Minh Thang, January 2002*
- No. 4 Is Volatility Built into Today's World Economy?  
—*J. Malcolm Dowling and J.P. Verbiest, February 2002*
- No. 5 What Else Besides Growth Matters to Poverty Reduction? Philippines  
—*Arsenio M. Balisacan and Ernesto M. Pernia, February 2002*
- No. 6 Achieving the Twin Objectives of Efficiency and Equity: Contracting Health Services in Cambodia  
—*Indu Bhushan, Sheryl Keller, and Brad Schwartz, March 2002*
- No. 7 Causes of the 1997 Asian Financial Crisis: What Can an Early Warning System Model Tell Us?  
—*Juzhong Zhuang and Malcolm Dowling, June 2002*
- No. 8 The Role of Preferential Trading Arrangements in Asia  
—*Christopher Edmonds and Jean-Pierre Verbiest, July 2002*
- No. 9 The Doha Round: A Development Perspective  
—*Jean-Pierre Verbiest, Jeffrey Liang, and Lea Sumulong, July 2002*
- No. 10 Is Economic Openness Good for Regional Development and Poverty Reduction? The Philippines  
—*E. M. Pernia and Pilipinas Quising, October 2002*
- No. 11 Implications of a US Dollar Depreciation for Asian Developing Countries  
—*Emma Fan, July 2002*
- No. 12 Dangers of Deflation  
—*D. Brooks and Pilipinas Quising, December 2002*
- No. 13 Infrastructure and Poverty Reduction—  
What is the Connection?  
—*Ifzal Ali and Ernesto Pernia, January 2003*
- No. 14 Infrastructure and Poverty Reduction—  
Making Markets Work for the Poor  
—*Xianbin Yao, May 2003*
- No. 15 SARS: Economic Impacts and Implications  
—*Emma Xiaoqin Fan, May 2003*
- No. 16 Emerging Tax Issues: Implications of Globalization and Technology  
—*Kanokpan Lao Araya, May 2003*
- No. 17 Pro-Poor Growth: What is It and Why is It Important?  
—*Ernesto M. Pernia, May 2003*
- No. 18 Public-Private Partnership for Competitiveness  
—*Jesus Felipe, June 2003*
- No. 19 Reviving Asian Economic Growth Requires Further Reforms  
—*Ifzal Ali, June 2003*
- No. 20 The Millennium Development Goals and Poverty: Are We Counting the World's Poor Right?  
—*M. G. Quibria, July 2003*
- No. 21 Trade and Poverty: What are the Connections?  
—*Douglas H. Brooks, July 2003*
- No. 22 Adapting Education to the Global Economy  
—*Olivier Dupriez, September 2003*
- No. 23 Avian Flu: An Economic Assessment for Selected Developing Countries in Asia  
—*Jean-Pierre Verbiest and Charissa Castillo, March 2004*
- No. 25 Purchasing Power Parities and the International Comparison Program in a Globalized World  
—*Bishnu Pant, March 2004*
- No. 26 A Note on Dual/Multiple Exchange Rates  
—*Emma Xiaoqin Fan, May 2004*
- No. 27 Inclusive Growth for Sustainable Poverty Reduction in Developing Asia: The Enabling Role of Infrastructure Development  
—*Ifzal Ali and Xianbin Yao, May 2004*
- No. 28 Higher Oil Prices: Asian Perspectives and Implications for 2004-2005  
—*Cyn-Young Park, June 2004*
- No. 29 Accelerating Agriculture and Rural Development for Inclusive Growth: Policy Implications for Developing Asia  
—*Richard Bolt, July 2004*
- No. 30 Living with Higher Interest Rates: Is Asia Ready?  
—*Cyn-Young Park, August 2004*
- No. 31 Reserve Accumulation, Sterilization, and Policy Dilemma  
—*Akiko Terada-Hagiwara, October 2004*

- No. 32 The Primacy of Reforms in the Emergence of People's Republic of China and India  
—Ifzal Ali and Emma Xiaoqin Fan, November 2004
- No. 33 Population Health and Foreign Direct Investment: Does Poor Health Signal Poor Government Effectiveness?  
—Ajay Tandon, January 2005
- No. 34 Financing Infrastructure Development: Asian Developing Countries Need to Tap Bond Markets More Rigorously  
—Yun-Hwan Kim, February 2005
- No. 35 Attaining Millennium Development Goals in Health: Isn't Economic Growth Enough?  
—Ajay Tandon, April 2005
- No. 36 Instilling Credit Culture in State-owned Banks— Experience from Lao PDR  
—Robert Boumphrey, Paul Dickie, and Samiuela Tukuafu, April 2005
- No. 37 Coping with Global Imbalances and Asian Currencies  
—Cyn-Young Park, May 2005
- No. 38 Asia's Long-term Growth and Integration: Reaching beyond Trade Policy Barriers  
—Douglas H. Brooks, David Roland-Holst, and Fan Zhai, September 2005
- No. 39 Competition Policy and Development  
—Douglas H. Brooks, October 2005
- No. 40 Highlighting Poverty as Vulnerability: The 2005 Earthquake in Pakistan  
—Rana Hasan and Ajay Tandon, October 2005
- No. 41 Conceptualizing and Measuring Poverty as Vulnerability: Does It Make a Difference?  
—Ajay Tandon and Rana Hasan, October 2005
- No. 42 Potential Economic Impact of an Avian Flu Pandemic on Asia  
—Erik Bloom, Vincent de Wit, and Mary Jane Carangal-San Jose, November 2005
- No. 43 Creating Better and More Jobs in Indonesia: A Blueprint for Policy Action  
—Guntur Sugiyarto, December 2005
- No. 44 The Challenge of Job Creation in Asia  
—Jesus Felipe and Rana Hasan, April 2006
- No. 45 International Payments Imbalances  
—Jesus Felipe, Frank Harrigan, and Aashish Mehta, April 2006
- No. 46 Improving Primary Enrollment Rates among the Poor  
—Ajay Tandon, August 2006
- No. 47 Inclusiveness of Economic Growth in the People's Republic of China: What Do Population Health Outcomes Tell Us?  
—Ajay Tandon and Juzhong Zhuang, January 2007
- No. 48 Pro-Poor to Inclusive Growth: Asian Prescriptions  
—Ifzal Ali, May 2007
- No. 49 Technology and Development in Asia  
—Frank Harrigan, June 2007

## SPECIAL STUDIES, COMPLIMENTARY

(Available through ADB Office of External Relations)

1. Improving Domestic Resource Mobilization Through Financial Development: Overview *September 1985*
2. Improving Domestic Resource Mobilization Through Financial Development: Bangladesh *July 1986*
3. Improving Domestic Resource Mobilization Through Financial Development: Sri Lanka *April 1987*
4. Improving Domestic Resource Mobilization Through Financial Development: India *December 1987*
5. Financing Public Sector Development Expenditure in Selected Countries: Overview *January 1988*
6. Study of Selected Industries: A Brief Report *April 1988*
7. Financing Public Sector Development Expenditure in Selected Countries: Bangladesh *June 1988*
8. Financing Public Sector Development Expenditure in Selected Countries: India *June 1988*
9. Financing Public Sector Development Expenditure in Selected Countries: Indonesia *June 1988*
10. Financing Public Sector Development Expenditure in Selected Countries: Nepal *June 1988*
11. Financing Public Sector Development Expenditure in Selected Countries: Pakistan *June 1988*
12. Financing Public Sector Development Expenditure in Selected Countries: Philippines *June 1988*
13. Financing Public Sector Development Expenditure in Selected Countries: Thailand *June 1988*
14. Towards Regional Cooperation in South Asia: ADB/EWC Symposium on Regional Cooperation in South Asia *February 1988*
15. Evaluating Rice Market Intervention Policies: Some Asian Examples *April 1988*
16. Improving Domestic Resource Mobilization Through Financial Development: Nepal *November 1988*
17. Foreign Trade Barriers and Export Growth *September 1988*
18. The Role of Small and Medium-Scale Industries in the Industrial Development of the Philippines *April 1989*
19. The Role of Small and Medium-Scale Manufacturing Industries in Industrial Development: The Experience of Selected Asian Countries *January 1990*
20. National Accounts of Vanuatu, 1983-1987 *January 1990*
21. National Accounts of Western Samoa, 1984-1986 *February 1990*
22. Human Resource Policy and Economic Development: Selected Country Studies *July 1990*
23. Export Finance: Some Asian Examples *September 1990*
24. National Accounts of the Cook Islands, 1982-1986 *September 1990*
25. Framework for the Economic and Financial Appraisal of Urban Development Sector Projects *January 1994*
26. Framework and Criteria for the Appraisal and Socioeconomic Justification of Education Projects *January 1994*
27. Investing in Asia 1997 (Co-published with OECD)
28. The Future of Asia in the World Economy 1998 (Co-published with OECD)
29. Financial Liberalisation in Asia: Analysis and Prospects 1999 (Co-published with OECD)
30. Sustainable Recovery in Asia: Mobilizing Resources for Development 2000 (Co-published with OECD)
31. Technology and Poverty Reduction in Asia and the Pacific 2001 (Co-published with OECD)
32. Asia and Europe 2002 (Co-published with OECD)
33. Economic Analysis: Retrospective 2003
34. Economic Analysis: Retrospective: 2003 Update 2004
35. Development Indicators Reference Manual: Concepts and Definitions 2004
35. Investment Climate and Productivity Studies Philippines: Moving Toward a Better Investment Climate 2005
- The Road to Recovery: Improving the Investment Climate in Indonesia 2005
- Sri Lanka: Improving the Rural and Urban Investment Climate 2005

## OLD MONOGRAPH SERIES

(Available through ADB Office of External Relations; Free of charge)

## EDRC REPORT SERIES (ER)

- No. 1 ASEAN and the Asian Development Bank  
—*Seiji Naya, April 1982*
- No. 2 Development Issues for the Developing East and Southeast Asian Countries and International Cooperation  
—*Seiji Naya and Graham Abbott, April 1982*
- No. 3 Aid, Savings, and Growth in the Asian Region  
—*J. Malcolm Dowling and Ulrich Hiemenz, April 1982*
- No. 4 Development-oriented Foreign Investment and the Role of ADB  
—*Kiyoshi Kojima, April 1982*
- No. 5 The Multilateral Development Banks and the International Economy's Missing Public Sector  
—*John Lewis, June 1982*
- No. 6 Notes on External Debt of DMCs  
—*Evelyn Go, July 1982*
- No. 7 Grant Element in Bank Loans  
—*Dal Hyun Kim, July 1982*
- No. 8 Shadow Exchange Rates and Standard Conversion Factors in Project Evaluation  
—*Peter Warr, September 1982*
- No. 9 Small and Medium-Scale Manufacturing Establishments in ASEAN Countries: Perspectives and Policy Issues  
—*Mathias Bruch and Ulrich Hiemenz, January 1983*
- No. 10 A Note on the Third Ministerial Meeting of GATT  
—*Jungsoo Lee, January 1983*
- No. 11 Macroeconomic Forecasts for the Republic of China, Hong Kong, and Republic of Korea  
—*J.M. Dowling, January 1983*
- No. 12 ASEAN: Economic Situation and Prospects  
—*Seiji Naya, March 1983*
- No. 13 The Future Prospects for the Developing Countries of Asia  
—*Seiji Naya, March 1983*
- No. 14 Energy and Structural Change in the Asia-Pacific Region, Summary of the Thirteenth Pacific Trade and Development Conference  
—*Seiji Naya, March 1983*
- No. 15 A Survey of Empirical Studies on Demand for Electricity with Special Emphasis on Price Elasticity of Demand  
—*Wisarn Pupphavesa, June 1983*
- No. 16 Determinants of Paddy Production in Indonesia: 1972-1981—A Simultaneous Equation Model Approach  
—*T.K. Jayaraman, June 1983*
- No. 17 The Philippine Economy: Economic Forecasts for 1983 and 1984  
—*J.M. Dowling, E. Go, and C.N. Castillo, June 1983*
- No. 18 Economic Forecast for Indonesia  
—*J.M. Dowling, H.Y. Kim, Y.K. Wang, and C.N. Castillo, June 1983*
- No. 19 Relative External Debt Situation of Asian Developing Countries: An Application of Ranking Method  
—*Jungsoo Lee, June 1983*
- No. 20 New Evidence on Yields, Fertilizer Application, and Prices in Asian Rice Production  
—*William James and Teresita Ramirez, July 1983*
- No. 21 Inflationary Effects of Exchange Rate Changes in Nine Asian LDCs  
—*Pradumna B. Rana and J. Malcolm Dowling, Jr., December 1983*
- No. 22 Effects of External Shocks on the Balance of Payments, Policy Responses, and Debt Problems of Asian Developing Countries  
—*Seiji Naya, December 1983*
- No. 23 Changing Trade Patterns and Policy Issues: The Prospects for East and Southeast Asian Developing Countries  
—*Seiji Naya and Ulrich Hiemenz, February 1984*
- No. 24 Small-Scale Industries in Asian Economic Development: Problems and Prospects  
—*Seiji Naya, February 1984*
- No. 25 A Study on the External Debt Indicators Applying Logit Analysis  
—*Jungsoo Lee and Clarita Barretto, February 1984*
- No. 26 Alternatives to Institutional Credit Programs in the Agricultural Sector of Low-Income Countries  
—*Jennifer Sour, March 1984*
- No. 27 Economic Scene in Asia and Its Special Features  
—*Kedar N. Kohli, November 1984*
- No. 28 The Effect of Terms of Trade Changes on the Balance of Payments and Real National Income of Asian Developing Countries  
—*Jungsoo Lee and Lutgarda Labios, January 1985*
- No. 29 Cause and Effect in the World Sugar Market: Some Empirical Findings 1951-1982  
—*Yoshihiro Iwasaki, February 1985*
- No. 30 Sources of Balance of Payments Problem in the 1970s: The Asian Experience  
—*Pradumna Rana, February 1985*
- No. 31 India's Manufactured Exports: An Analysis of Supply Sectors  
—*Ifzal Ali, February 1985*
- No. 32 Meeting Basic Human Needs in Asian Developing Countries  
—*Jungsoo Lee and Emma Banaria, March 1985*
- No. 33 The Impact of Foreign Capital Inflow on Investment and Economic Growth in Developing Asia  
—*Evelyn Go, May 1985*
- No. 34 The Climate for Energy Development in the Pacific and Asian Region: Priorities and Perspectives  
—*V.V. Desai, April 1986*
- No. 35 Impact of Appreciation of the Yen on Developing Member Countries of the Bank  
—*Jungsoo Lee, Pradumna Rana, and Ifzal Ali, May 1986*
- No. 36 Smuggling and Domestic Economic Policies in Developing Countries  
—*A.H.M.N. Chowdhury, October 1986*
- No. 37 Public Investment Criteria: Economic Internal Rate of Return and Equalizing Discount Rate  
—*Ifzal Ali, November 1986*
- No. 38 Review of the Theory of Neoclassical Political Economy: An Application to Trade Policies  
—*M.G. Quibria, December 1986*
- No. 39 Factors Influencing the Choice of Location: Local and Foreign Firms in the Philippines  
—*E.M. Pernia and A.N. Herrin, February 1987*
- No. 40 A Demographic Perspective on Developing Asia and Its Relevance to the Bank  
—*E.M. Pernia, May 1987*



- No. 41 Emerging Issues in Asia and Social Cost Benefit Analysis  
—*I. Ali, September 1988*
- No. 42 Shifting Revealed Comparative Advantage: Experiences of Asian and Pacific Developing Countries  
—*P.B. Rana, November 1988*
- No. 43 Agricultural Price Policy in Asia: Issues and Areas of Reforms  
—*I. Ali, November 1988*
- No. 44 Service Trade and Asian Developing Economies  
—*M.G. Quibria, October 1989*
- No. 45 A Review of the Economic Analysis of Power Projects in Asia and Identification of Areas of Improvement  
—*I. Ali, November 1989*
- No. 46 Growth Perspective and Challenges for Asia: Areas for Policy Review and Research  
—*I. Ali, November 1989*
- No. 47 An Approach to Estimating the Poverty Alleviation Impact of an Agricultural Project  
—*I. Ali, January 1990*
- No. 48 Economic Growth Performance of Indonesia, the Philippines, and Thailand: The Human Resource Dimension  
—*E.M. Pernia, January 1990*
- No. 49 Foreign Exchange and Fiscal Impact of a Project: A Methodological Framework for Estimation  
—*I. Ali, February 1990*
- No. 50 Public Investment Criteria: Financial and Economic Internal Rates of Return  
—*I. Ali, April 1990*
- No. 51 Evaluation of Water Supply Projects: An Economic Framework  
—*Arlene M. Tadle, June 1990*
- No. 52 Interrelationship Between Shadow Prices, Project Investment, and Policy Reforms: An Analytical Framework  
—*I. Ali, November 1990*
- No. 53 Issues in Assessing the Impact of Project and Sector Adjustment Lending  
—*I. Ali, December 1990*
- No. 54 Some Aspects of Urbanization and the Environment in Southeast Asia  
—*Ernesto M. Pernia, January 1991*
- No. 55 Financial Sector and Economic Development: A Survey  
—*Jungsoo Lee, September 1991*
- No. 56 A Framework for Justifying Bank-Assisted Education Projects in Asia: A Review of the Socioeconomic Analysis and Identification of Areas of Improvement  
—*Etienne Van De Walle, February 1992*
- No. 57 Medium-term Growth-Stabilization Relationship in Asian Developing Countries and Some Policy Considerations  
—*Yun-Hwan Kim, February 1993*
- No. 58 Urbanization, Population Distribution, and Economic Development in Asia  
—*Ernesto M. Pernia, February 1993*
- No. 59 The Need for Fiscal Consolidation in Nepal: The Results of a Simulation  
—*Filippo di Mauro and Ronald Antonio Butiong, July 1993*
- No. 60 A Computable General Equilibrium Model of Nepal  
—*Timothy Buehrer and Filippo di Mauro, October 1993*
- No. 61 The Role of Government in Export Expansion in the Republic of Korea: A Revisit  
—*Yun-Hwan Kim, February 1994*
- No. 62 Rural Reforms, Structural Change, and Agricultural Growth in the People's Republic of China  
—*Bo Lin, August 1994*
- No. 63 Incentives and Regulation for Pollution Abatement with an Application to Waste Water Treatment  
—*Sudipto Mundle, U. Shankar, and Shekhar Mehta, October 1995*
- No. 64 Saving Transitions in Southeast Asia  
—*Frank Harrigan, February 1996*
- No. 65 Total Factor Productivity Growth in East Asia: A Critical Survey  
—*Jesus Felipe, September 1997*
- No. 66 Foreign Direct Investment in Pakistan: Policy Issues and Operational Implications  
—*Ashfaq H. Khan and Yun-Hwan Kim, July 1999*
- No. 67 Fiscal Policy, Income Distribution and Growth  
—*Sailesh K. Jha, November 1999*

#### ECONOMIC STAFF PAPERS (ES)

- No. 1 International Reserves: Factors Determining Needs and Adequacy  
—*Evelyn Go, May 1981*
- No. 2 Domestic Savings in Selected Developing Asian Countries  
—*Basil Moore, assisted by A.H.M. Nuruddin Chowdhury, September 1981*
- No. 3 Changes in Consumption, Imports and Exports of Oil Since 1973: A Preliminary Survey of the Developing Member Countries of the Asian Development Bank  
—*Dal Hyun Kim and Graham Abbott, September 1981*
- No. 4 By-Passed Areas, Regional Inequalities, and Development Policies in Selected Southeast Asian Countries  
—*William James, October 1981*
- No. 5 Asian Agriculture and Economic Development  
—*William James, March 1982*
- No. 6 Inflation in Developing Member Countries: An Analysis of Recent Trends  
—*A.H.M. Nuruddin Chowdhury and J. Malcolm Dowling, March 1982*
- No. 7 Industrial Growth and Employment in Developing Asian Countries: Issues and Perspectives for the Coming Decade  
—*Ulrich Hiemenz, March 1982*
- No. 8 Petrodollar Recycling 1973-1980. Part I: Regional Adjustments and the World Economy  
—*Burnham Campbell, April 1982*
- No. 9 Developing Asia: The Importance of Domestic Policies  
—*Economics Office Staff under the direction of Seiji Naya, May 1982*
- No. 10 Financial Development and Household Savings: Issues in Domestic Resource Mobilization in Asian Developing Countries  
—*Wan-Soon Kim, July 1982*
- No. 11 Industrial Development: Role of Specialized Financial Institutions  
—*Kedar N. Kohli, August 1982*
- No. 12 Petrodollar Recycling 1973-1980. Part II: Debt Problems and an Evaluation of Suggested Remedies  
—*Burnham Campbell, September 1982*
- No. 13 Credit Rationing, Rural Savings, and Financial Policy in Developing Countries  
—*William James, September 1982*

- No. 14 Small and Medium-Scale Manufacturing Establishments in ASEAN Countries: Perspectives and Policy Issues  
—*Mathias Bruch and Ulrich Hiemenz, March 1983*
- No. 15 Income Distribution and Economic Growth in Developing Asian Countries  
—*J. Malcolm Dowling and David Soo, March 1983*
- No. 16 Long-Run Debt-Servicing Capacity of Asian Developing Countries: An Application of Critical Interest Rate Approach  
—*Jungsoo Lee, June 1983*
- No. 17 External Shocks, Energy Policy, and Macroeconomic Performance of Asian Developing Countries: A Policy Analysis  
—*William James, July 1983*
- No. 18 The Impact of the Current Exchange Rate System on Trade and Inflation of Selected Developing Member Countries  
—*Pradumna Rana, September 1983*
- No. 19 Asian Agriculture in Transition: Key Policy Issues  
—*William James, September 1983*
- No. 20 The Transition to an Industrial Economy in Monsoon Asia  
—*Harry T. Oshima, October 1983*
- No. 21 The Significance of Off-Farm Employment and Incomes in Post-War East Asian Growth  
—*Harry T. Oshima, January 1984*
- No. 22 Income Distribution and Poverty in Selected Asian Countries  
—*John Malcolm Dowling, Jr., November 1984*
- No. 23 ASEAN Economies and ASEAN Economic Cooperation  
—*Narongchai Akrasanee, November 1984*
- No. 24 Economic Analysis of Power Projects  
—*Nitin Desai, January 1985*
- No. 25 Exports and Economic Growth in the Asian Region  
—*Pradumna Rana, February 1985*
- No. 26 Patterns of External Financing of DMCs  
—*E. Go, May 1985*
- No. 27 Industrial Technology Development the Republic of Korea  
—*S.Y. Lo, July 1985*
- No. 28 Risk Analysis and Project Selection: A Review of Practical Issues  
—*J.K. Johnson, August 1985*
- No. 29 Rice in Indonesia: Price Policy and Comparative Advantage  
—*I. Ali, January 1986*
- No. 30 Effects of Foreign Capital Inflows on Developing Countries of Asia  
—*Jungsoo Lee, Pradumna B. Rana, and Yoshihiro Iwasaki, April 1986*
- No. 31 Economic Analysis of the Environmental Impacts of Development Projects  
—*John A. Dixon et al., EAPI, East-West Center, August 1986*
- No. 32 Science and Technology for Development: Role of the Bank  
—*Kedar N. Kohli and Ifzal Ali, November 1986*
- No. 33 Satellite Remote Sensing in the Asian and Pacific Region  
—*Mohan Sundara Rajan, December 1986*
- No. 34 Changes in the Export Patterns of Asian and Pacific Developing Countries: An Empirical Overview  
—*Pradumna B. Rana, January 1987*
- No. 35 Agricultural Price Policy in Nepal  
—*Gerald C. Nelson, March 1987*
- No. 36 Implications of Falling Primary Commodity Prices for Agricultural Strategy in the Philippines  
—*Ifzal Ali, September 1987*
- No. 37 Determining Irrigation Charges: A Framework  
—*Prabhakar B. Ghatge, October 1987*
- No. 38 The Role of Fertilizer Subsidies in Agricultural Production: A Review of Select Issues  
—*M.G. Quibria, October 1987*
- No. 39 Domestic Adjustment to External Shocks in Developing Asia  
—*Jungsoo Lee, October 1987*
- No. 40 Improving Domestic Resource Mobilization through Financial Development: Indonesia  
—*Philip Erquiaga, November 1987*
- No. 41 Recent Trends and Issues on Foreign Direct Investment in Asian and Pacific Developing Countries  
—*P.B. Rana, March 1988*
- No. 42 Manufactured Exports from the Philippines: A Sector Profile and an Agenda for Reform  
—*I. Ali, September 1988*
- No. 43 A Framework for Evaluating the Economic Benefits of Power Projects  
—*I. Ali, August 1989*
- No. 44 Promotion of Manufactured Exports in Pakistan  
—*Jungsoo Lee and Yoshihiro Iwasaki, September 1989*
- No. 45 Education and Labor Markets in Indonesia: A Sector Survey  
—*Ernesto M. Pernia and David N. Wilson, September 1989*
- No. 46 Industrial Technology Capabilities and Policies in Selected ADCs  
—*Hiroshi Kakazu, June 1990*
- No. 47 Designing Strategies and Policies for Managing Structural Change in Asia  
—*Ifzal Ali, June 1990*
- No. 48 The Completion of the Single European Community Market in 1992: A Tentative Assessment of its Impact on Asian Developing Countries  
—*J.P. Verbiest and Min Tang, June 1991*
- No. 49 Economic Analysis of Investment in Power Systems  
—*Ifzal Ali, June 1991*
- No. 50 External Finance and the Role of Multilateral Financial Institutions in South Asia: Changing Patterns, Prospects, and Challenges  
—*Jungsoo Lee, November 1991*
- No. 51 The Gender and Poverty Nexus: Issues and Policies  
—*M.G. Quibria, November 1993*
- No. 52 The Role of the State in Economic Development: Theory, the East Asian Experience, and the Malaysian Case  
—*Jason Brown, December 1993*
- No. 53 The Economic Benefits of Potable Water Supply Projects to Households in Developing Countries  
—*Dale Whittington and Venkateswarlu Swarna, January 1994*
- No. 54 Growth Triangles: Conceptual Issues and Operational Problems  
—*Min Tang and Myo Thant, February 1994*
- No. 55 The Emerging Global Trading Environment and Developing Asia  
—*Arvind Panagariya, M.G. Quibria, and Narhari Rao, July 1996*
- No. 56 Aspects of Urban Water and Sanitation in the Context of Rapid Urbanization in Developing Asia  
—*Ernesto M. Pernia and Stella LF. Alabastro, September 1997*
- No. 57 Challenges for Asia's Trade and Environment  
—*Douglas H. Brooks, January 1998*
- No. 58 Economic Analysis of Health Sector Projects—A Review of Issues, Methods, and Approaches  
—*Ramesh Adhikari, Paul Gertler, and Anneli Lagman, March 1999*
- No. 59 The Asian Crisis: An Alternate View  
—*Rajiv Kumar and Bibek Debroy, July 1999*
- No. 60 Social Consequences of the Financial Crisis in Asia  
—*James C. Knowles, Ernesto M. Pernia, and Mary Racelis, November 1999*

## OCCASIONAL PAPERS (OP)

- |   |   |
|---|---|
| <p>No. 1 Poverty in the People's Republic of China: Recent Developments and Scope for Bank Assistance<br/>—<i>K.H. Moinuddin, November 1992</i></p> <p>No. 2 The Eastern Islands of Indonesia: An Overview of Development Needs and Potential<br/>—<i>Brien K. Parkinson, January 1993</i></p> <p>No. 3 Rural Institutional Finance in Bangladesh and Nepal: Review and Agenda for Reforms<br/>—<i>A.H.M.N. Chowdhury and Marcelia C. Garcia, November 1993</i></p> <p>No. 4 Fiscal Deficits and Current Account Imbalances of the South Pacific Countries: A Case Study of Vanuatu<br/>—<i>T.K. Jayaraman, December 1993</i></p> <p>No. 5 Reforms in the Transitional Economies of Asia<br/>—<i>Pradumna B. Rana, December 1993</i></p> <p>No. 6 Environmental Challenges in the People's Republic of China and Scope for Bank Assistance<br/>—<i>Elisabetta Capannelli and Omkar L. Shrestha, December 1993</i></p> <p>No. 7 Sustainable Development Environment and Poverty Nexus<br/>—<i>K.F. Jalal, December 1993</i></p> <p>No. 8 Intermediate Services and Economic Development: The Malaysian Example<br/>—<i>Sutanu Behuria and Rahul Khullar, May 1994</i></p> <p>No. 9 Interest Rate Deregulation: A Brief Survey of the Policy Issues and the Asian Experience<br/>—<i>Carlos J. Glower, July 1994</i></p> <p>No. 10 Some Aspects of Land Administration in Indonesia: Implications for Bank Operations<br/>—<i>Sutanu Behuria, July 1994</i></p> <p>No. 11 Demographic and Socioeconomic Determinants of Contraceptive Use among Urban Women in the Melanesian Countries in the South Pacific: A Case Study of Port Vila Town in Vanuatu<br/>—<i>T.K. Jayaraman, February 1995</i></p> | <p>No. 12 Managing Development through Institution Building<br/>— <i>Hilton L. Root, October 1995</i></p> <p>No. 13 Growth, Structural Change, and Optimal Poverty Interventions<br/>—<i>Shiladitya Chatterjee, November 1995</i></p> <p>No. 14 Private Investment and Macroeconomic Environment in the South Pacific Island Countries: A Cross-Country Analysis<br/>—<i>T.K. Jayaraman, October 1996</i></p> <p>No. 15 The Rural-Urban Transition in Viet Nam: Some Selected Issues<br/>—<i>Sudipto Mundle and Brian Van Arkadie, October 1997</i></p> <p>No. 16 A New Approach to Setting the Future Transport Agenda<br/>—<i>Roger Allport, Geoff Key, and Charles Melhuish, June 1998</i></p> <p>No. 17 Adjustment and Distribution: The Indian Experience<br/>—<i>Sudipto Mundle and V.B. Tulasidhar, June 1998</i></p> <p>No. 18 Tax Reforms in Viet Nam: A Selective Analysis<br/>—<i>Sudipto Mundle, December 1998</i></p> <p>No. 19 Surges and Volatility of Private Capital Flows to Asian Developing Countries: Implications for Multilateral Development Banks<br/>—<i>Pradumna B. Rana, December 1998</i></p> <p>No. 20 The Millennium Round and the Asian Economies: An Introduction<br/>—<i>Dilip K. Das, October 1999</i></p> <p>No. 21 Occupational Segregation and the Gender Earnings Gap<br/>—<i>Joseph E. Zveglic, Jr. and Yana van der Meulen Rodgers, December 1999</i></p> <p>No. 22 Information Technology: Next Locomotive of Growth?<br/>—<i>Dilip K. Das, June 2000</i></p> |
|---|---|

## STATISTICAL REPORT SERIES (SR)

- |  |  |
|--|--|
| <p>No. 1 Estimates of the Total External Debt of the Developing Member Countries of ADB: 1981-1983<br/>—<i>I.P. David, September 1984</i></p> <p>No. 2 Multivariate Statistical and Graphical Classification Techniques Applied to the Problem of Grouping Countries<br/>—<i>I.P. David and D.S. Maligalig, March 1985</i></p> <p>No. 3 Gross National Product (GNP) Measurement Issues in South Pacific Developing Member Countries of ADB<br/>—<i>S.G. Tiwari, September 1985</i></p> <p>No. 4 Estimates of Comparable Savings in Selected DMCs<br/>—<i>Hananto Sigit, December 1985</i></p> <p>No. 5 Keeping Sample Survey Design and Analysis Simple<br/>—<i>I.P. David, December 1985</i></p> <p>No. 6 External Debt Situation in Asian Developing Countries<br/>—<i>I.P. David and Jungsoo Lee, March 1986</i></p> <p>No. 7 Study of GNP Measurement Issues in the South Pacific Developing Member Countries. Part I: Existing National Accounts of SPDMCs—Analysis of Methodology and Application of SNA Concepts<br/>—<i>P. Hodgkinson, October 1986</i></p> | <p>No. 8 Study of GNP Measurement Issues in the South Pacific Developing Member Countries. Part II: Factors Affecting Inter-country Comparability of Per Capita GNP<br/>—<i>P. Hodgkinson, October 1986</i></p> <p>No. 9 Survey of the External Debt Situation in Asian Developing Countries, 1985<br/>—<i>Jungsoo Lee and I.P. David, April 1987</i></p> <p>No. 10 A Survey of the External Debt Situation in Asian Developing Countries, 1986<br/>—<i>Jungsoo Lee and I.P. David, April 1988</i></p> <p>No. 11 Changing Pattern of Financial Flows to Asian and Pacific Developing Countries<br/>—<i>Jungsoo Lee and I.P. David, March 1989</i></p> <p>No. 12 The State of Agricultural Statistics in Southeast Asia<br/>—<i>I.P. David, March 1989</i></p> <p>No. 13 A Survey of the External Debt Situation in Asian and Pacific Developing Countries: 1987-1988<br/>—<i>Jungsoo Lee and I.P. David, July 1989</i></p> <p>No. 14 A Survey of the External Debt Situation in Asian and Pacific Developing Countries: 1988-1989<br/>—<i>Jungsoo Lee, May 1990</i></p> <p>No. 15 A Survey of the External Debt Situation in Asian and Pacific Developing Countries: 1989-1992</p> |
|--|--|

- Min Tang, June 1991*
- No. 16 Recent Trends and Prospects of External Debt Situation and Financial Flows to Asian and Pacific Developing Countries  
—*Min Tang and Aludia Pardo, June 1992*
- No. 17 Purchasing Power Parity in Asian Developing Countries: A Co-Integration Test

- Min Tang and Ronald Q. Butiong, April 1994*
- No. 18 Capital Flows to Asian and Pacific Developing Countries: Recent Trends and Future Prospects  
—*Min Tang and James Villafuerte, October 1995*

## SPECIAL STUDIES, CO-PUBLISHED

(Available commercially through Oxford University Press Offices, Edward Elgar Publishing, and Palgrave MacMillan)

### FROM OXFORD UNIVERSITY PRESS:

Oxford University Press (China) Ltd  
18th Floor, Warwick House East  
Taikoo Place, 979 King's Road  
Quarry Bay, Hong Kong  
Tel (852) 2516 3222  
Fax (852) 2565 8491  
E-mail: [webmaster@oupchina.com.hk](mailto:webmaster@oupchina.com.hk)  
Web: [www.oupchina.com.hk](http://www.oupchina.com.hk)

1. Informal Finance: Some Findings from Asia  
*Prabhu Ghate et. al., 1992*  
\$15.00 (paperback)
2. Mongolia: A Centrally Planned Economy in Transition  
*Asian Development Bank, 1992*  
\$15.00 (paperback)
3. Rural Poverty in Asia, Priority Issues and Policy Options  
*Edited by M.G. Quibria, 1994*  
\$25.00 (paperback)
4. Growth Triangles in Asia: A New Approach to Regional Economic Cooperation  
*Edited by Myo Thant, Min Tang, and Hiroshi Kakazu*  
1st ed., 1994 \$36.00 (hardbound)  
Revised ed., 1998 \$55.00 (hardbound)
5. Urban Poverty in Asia: A Survey of Critical Issues  
*Edited by Ernesto Pernia, 1994*  
\$18.00 (paperback)
6. Critical Issues in Asian Development: Theories, Experiences, and Policies  
*Edited by M.G. Quibria, 1995*  
\$15.00 (paperback)  
\$36.00 (hardbound)
7. Financial Sector Development in Asia  
*Edited by Shahid N. Zahid, 1995*  
\$50.00 (hardbound)
8. Financial Sector Development in Asia: Country Studies  
*Edited by Shahid N. Zahid, 1995*  
\$55.00 (hardbound)
9. Fiscal Management and Economic Reform in the People's Republic of China  
*Christine P.W. Wong, Christopher Heady, and Wing T. Woo, 1995*  
\$15.00 (paperback)
10. From Centrally Planned to Market Economies: The Asian Approach  
*Edited by Pradumna B. Rana and Naved Hamid, 1995*  
Vol. 1: Overview  
\$36.00 (hardbound)  
Vol. 2: People's Republic of China and Mongolia  
\$50.00 (hardbound)  
Vol. 3: Lao PDR, Myanmar, and Viet Nam  
\$50.00 (hardbound)
11. Current Issues in Economic Development: An Asian Perspective

*Edited by M.G. Quibria and J. Malcolm Dowling, 1996*  
\$50.00 (hardbound)

12. The Bangladesh Economy in Transition  
*Edited by M.G. Quibria, 1997*  
\$20.00 (hardbound)
13. The Global Trading System and Developing Asia  
*Edited by Arvind Panagariya, M.G. Quibria, and Narhari Rao, 1997*  
\$55.00 (hardbound)
14. Social Sector Issues in Transitional Economies of Asia  
*Edited by Douglas H. Brooks and Myo Thant, 1998*  
\$25.00 (paperback)  
\$55.00 (hardbound)
15. Intergovernmental Fiscal Transfers in Asia: Current Practice and Challenges for the Future  
*Edited by Yun-Hwan Kim and Paul Smoke, 2003*  
\$15.00 (paperback)
16. Local Government Finance and Bond Markets  
*Edited by Yun-Hwan Kim, 2003*  
\$15.00 (paperback)

### FROM EDWARD ELGAR:

Marston Book Services Limited  
PO Box 269, Abingdon  
Oxon OX14 4YN, United Kingdom  
Tel +44 1235 465500  
Fax +44 1235 465555  
Email: [direct.order@marston.co.uk](mailto:direct.order@marston.co.uk)  
Web: [www.marston.co.uk](http://www.marston.co.uk)

1. Reducing Poverty in Asia: Emerging Issues in Growth, Targeting, and Measurement  
*Edited by Christopher M. Edmonds, 2003*

### FROM PALGRAVE MACMILLAN:

Palgrave Macmillan Ltd  
Houndmills, Basingstoke  
Hampshire RG21 6XS, United Kingdom  
Tel: +44 (0)1256 329242  
Fax: +44 (0)1256 479476  
Email: [orders@palgrave.com](mailto:orders@palgrave.com)  
Web: [www.palgrave.com/home/](http://www.palgrave.com/home/)

1. Labor Markets in Asia: Issues and Perspectives  
*Edited by Jesus Felipe and Rana Hasan, 2006*
2. Competition Policy and Development in Asia  
*Edited by Douglas H. Brooks and Simon Evenett, 2005*
3. Managing FDI in a Globalizing Economy  
Asian Experiences  
*Edited by Douglas H. Brooks and Hal Hill, 2004*
4. Poverty, Growth, and Institutions in Developing Asia  
*Edited by Ernesto M. Pernia and Anil B. Deolalikar, 2003*



## SPECIAL STUDIES, IN-HOUSE

(Available commercially through ADB Office of External Relations)

1. Rural Poverty in Developing Asia  
*Edited by M.G. Quibria*  
Vol. 1: Bangladesh, India, and Sri Lanka, 1994  
\$35.00 (paperback)  
Vol. 2: Indonesia, Republic of Korea, Philippines, and Thailand, 1996  
\$35.00 (paperback)
2. Gender Indicators of Developing Asian and Pacific Countries  
*Asian Development Bank, 1993*  
\$25.00 (paperback)
3. External Shocks and Policy Adjustments: Lessons from the Gulf Crisis  
*Edited by Naved Hamid and Shahid N. Zahid, 1995*  
\$15.00 (paperback)
4. Indonesia-Malaysia-Thailand Growth Triangle: Theory to Practice  
*Edited by Myo Thant and Min Tang, 1996*  
\$15.00 (paperback)
5. Emerging Asia: Changes and Challenges  
*Asian Development Bank, 1997*  
\$30.00 (paperback)
6. Asian Exports  
*Edited by Dilip Das, 1999*  
\$35.00 (paperback)  
\$55.00 (hardbound)
7. Development of Environment Statistics in Developing Asian and Pacific Countries  
*Asian Development Bank, 1999*  
\$30.00 (paperback)
8. Mortgage-Backed Securities Markets in Asia  
*Edited by S.Ghon Rhee & Yutaka Shimomoto, 1999*  
\$35.00 (paperback)
9. Rising to the Challenge in Asia: A Study of Financial Markets  
*Asian Development Bank*  
Vol. 1: An Overview, 2000 \$20.00 (paperback)  
Vol. 2: Special Issues, 1999 \$15.00 (paperback)  
Vol. 3: Sound Practices, 2000 \$25.00 (paperback)  
Vol. 4: People's Republic of China, 1999 \$20.00 (paperback)  
Vol. 5: India, 1999 \$30.00 (paperback)  
Vol. 6: Indonesia, 1999 \$30.00 (paperback)  
Vol. 7: Republic of Korea, 1999 \$30.00 (paperback)  
Vol. 8: Malaysia, 1999 \$20.00 (paperback)  
Vol. 9: Pakistan, 1999 \$30.00 (paperback)  
Vol. 10: Philippines, 1999 \$30.00 (paperback)  
Vol. 11: Thailand, 1999 \$30.00 (paperback)  
Vol. 12: Socialist Republic of Viet Nam, 1999 \$30.00 (paperback)
10. Corporate Governance and Finance in East Asia: A Study of Indonesia, Republic of Korea, Malaysia, Philippines and Thailand  
*J. Zhuang, David Edwards, D. Webb, & Ma. Virginita Capulong*  
Vol. 1: A Consolidated Report, 2000 \$10.00 (paperback)  
Vol. 2: Country Studies, 2001 \$15.00 (paperback)
11. Financial Management and Governance Issues  
*Asian Development Bank, 2000*  
Cambodia \$10.00 (paperback)  
People's Republic of China \$10.00 (paperback)  
Mongolia \$10.00 (paperback)  
Pakistan \$10.00 (paperback)  
Papua New Guinea \$10.00 (paperback)  
Uzbekistan \$10.00 (paperback)  
Viet Nam \$10.00 (paperback)  
Selected Developing Member Countries \$10.00 (paperback)
12. Government Bond Market Development in Asia  
*Edited by Yun-Hwan Kim, 2001*  
\$25.00 (paperback)
13. Intergovernmental Fiscal Transfers in Asia: Current Practice and Challenges for the Future  
*Edited by Paul Smoke and Yun-Hwan Kim, 2002*  
\$15.00 (paperback)
14. Guidelines for the Economic Analysis of Projects  
*Asian Development Bank, 1997*  
\$10.00 (paperback)
15. Guidelines for the Economic Analysis of Telecommunications Projects  
*Asian Development Bank, 1997*  
\$10.00 (paperback)
16. Handbook for the Economic Analysis of Water Supply Projects  
*Asian Development Bank, 1999*  
\$10.00 (hardbound)
17. Handbook for the Economic Analysis of Health Sector Projects  
*Asian Development Bank, 2000*  
\$10.00 (paperback)
18. Handbook for Integrating Poverty Impact Assessment in the Economic Analysis of Projects  
*Asian Development Bank, 2001*  
\$10.00 (paperback)
19. Handbook for Integrating Risk Analysis in the Economic Analysis of Projects  
*Asian Development Bank, 2002*  
\$10.00 (paperback)
20. Handbook on Environment Statistics  
*Asian Development Bank, 2002*  
\$10.00 (hardback)
21. Defining an Agenda for Poverty Reduction, Volume 1  
*Edited by Christopher Edmonds and Sara Medina, 2002*  
\$15.00 (paperback)
22. Defining an Agenda for Poverty Reduction, Volume 2  
*Edited by Isabel Ortiz, 2002*  
\$15.00 (paperback)
23. Economic Analysis of Policy-based Operations: Key Dimensions  
*Asian Development Bank, 2003*  
\$10.00 (paperback)

## **About the Paper**

Ifzal Ali and Hyun H. Son define what inclusive growth is. They propose a new methodology to capture growth inclusiveness. The proposed methodology is applied to the Philippines using its micro household survey, the *Annual Poverty Indicator Survey*.

## **About the Asian Development Bank**

The work of the Asian Development Bank (ADB) is aimed at improving the welfare of the people in Asia and the Pacific, particularly the 1.9 billion who live on less than \$2 a day. Despite many success stories, Asia and the Pacific remains home to two thirds of the world's poor. ADB is a multilateral development finance institution owned by 67 members, 48 from the region and 19 from other parts of the globe. ADB's vision is a region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their citizens.

ADB's main instruments for providing help to its developing member countries are policy dialogue, loans, technical assistance, grants, guarantees, and equity investments. ADB's annual lending volume is typically about \$6 billion, with technical assistance usually totaling about \$180 million a year.

ADB's headquarters is in Manila. It has 26 offices around the world and has more than 2,000 employees from over 50 countries.