

About the Asian Development Bank

The Asian Development Bank (ADB)'s work is aimed at improving the welfare of the people of the Asia and Pacific region, particularly for the 1.9 billion who live on less than \$2 a day. Despite the 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 64 members, 46 from the region and 18 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 their quality of life.

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

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

ERD Working Paper

SERIES

No. 74

ECONOMICS AND RESEARCH DEPARTMENT

Growth and Trade Horizons for Asia: Long-term Forecasts for Regional Integration

David Roland-Holst,
Jean-Pierre Verbiest, and Fan Zhai

November 2005

Asian Development Bank

ERD Working Paper No. 74

GROWTH AND TRADE HORIZONS FOR ASIA: LONG-TERM FORECASTS FOR REGIONAL INTEGRATION

DAVID ROLAND-HOLST
JEAN-PIERRE VERBIEST
FAN ZHAI

November 2005

David Roland-Holst is Professor of Economics at University of California, Berkeley; Jean-Pierre Verbiest is Country Director, Thailand Resident Mission, and Fan Zhai is Economist in the Economics and Research Department, Asian Development Bank. Opinions expressed here are those of the authors and should not be attributed to their affiliated institutions. Special thanks to Dominique van der Mensbrugghe.

Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
www.adb.org/economics

©2005 by Asian Development Bank
November 2005
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. Background	2
III. Baseline and Policy Scenarios	6
A. A Baseline Scenario to 2025	6
B. Alternative Integration Scenarios	10
C. Regional and Subregional Growth Poles	16
IV. An Agenda for Asian Regional Integration	17
V. Policies that Facilitate Integration	22
A. Infrastructure Investment	22
B. Regional Capital Markets	24
C. Trade Policy and Regional Integration	24
D. Policies to Promote Labor Productivity Growth	24
VI. Conclusions	25
Appendix: Overview of the SAGE Model and Data	27
References	28

ABSTRACT

With the emergence of People's Republic of China (PRC) and India, the economic landscape of Asia and its relation to the global economy have been changed. Using the new dynamic global model, we present forecasts for Asian expansion over 2025. These baseline growth forecasts elucidate shifting patterns of regional specialization and their consequences for growth and structural change in the Asian economies. The central role of trade is examined through analysis of a variety of hypothetical global and regional trade agreements. Our results indicate that trade within the Asian region is far from reaching its potential, and policies that facilitate integration and more efficient regional trade can accelerate growth, especially for lower-income Asia. A deeper and more inclusive Asian free trade area can achieve for its members large benefits. As a emerging growth bridge between the PRC and India, ASEAN economies have the most to gain from Asian economic integration.

I. INTRODUCTION

Economic emergence of the world's two most populous countries, People's Republic of China (PRC) and India, is transforming the economic landscape of East and South Asia, contributing to fundamental shifts in global economic relations. While Asia's traditional trade with members of the Organisation for Economic Co-operation and Development (OECD) continues to expand and intensify, intra-Asian trade is accelerating as the most dynamic economies provide growth leverage to their neighbors. This trend is facilitated by official efforts to liberalize trade, and private agency that propagates growth linkages over regional supply networks. Intensified Asian regional integration has the potential to raise incomes among a majority of the world's poor, yet policymakers cannot foresee how trade patterns and domestic adjustments will evolve in the medium and long term.

Using the new GTAP (version 6)¹ database with a dynamic global model, we present forecasts for Asian expansion over the next two decades (2006–2025). These baseline growth forecasts elucidate shifting patterns of regional specialization and their consequences for domestic growth and structural change in the Asian economies. Regional differences in growth rates are then analyzed in terms of their fundamental determinants. In our examination of the central role of trade in regional growth, we provide detailed analysis of the impacts of a variety of hypothetical regional and global trade agreements.

Generally speaking, our results indicate that the sustainable growth potential of the region remains great, but policies facilitating both integration and adjustment will be needed to fulfill this potential. This is particularly the case with regard to poverty alleviation and differing growth experience. In the absence of more focused policy commitments, there are risks that real growth benefits may be very unevenly distributed across the region, both at the international and subnational level. Other salient issues that emerge in this analysis include:

- (i) Trade within the Asian region is far from reaching its potential, and policies that facilitate integration and more efficient regional trade can accelerate growth and expand its basis, especially for lower-income Asia.
- (ii) Tariff barriers are only part of the challenge to further economic integration and trade expansion in the region. If trade within the Asian region can be made more efficient, even by small but continuing improvements in reducing distribution costs, the gains would be much greater than those resulting from tariff or other trade policy reform. A deeper and more inclusive Asian Free Trade Area can achieve for its members larger benefits than that would arise from global trade liberalization along World Trade Organization (WTO) lines.

¹ Global Trade Analysis Project; see Hertel (1997).

- (iii) The economies of the Association of Southeast Asian Nations (ASEAN) have the most to gain (in domestic terms) from Asian economic integration, provided that this happens in a relatively uniform way. This is because ASEAN will emerge as a growth bridge between the larger dynamic emerging economies of the PRC and India.
- (iv) There will be a shift of emphasis across the region from export competition to competition for imports. As absorption by the larger and more dynamic regional economies increases, this presents new export opportunities, yet the same absorption includes raw materials needed for higher value-added production in other economies.

More empirical research of this kind can help policymakers better identify both the opportunities and challenges ahead. This ability to evaluate policy impacts *ex ante* will help them recruit beneficiaries in support of their policies and anticipate the adjustment needs of those who might be adversely affected.

II. BACKGROUND

Regional events of the last two decades have fundamentally changed the economic landscape of Asia and its relationship to the global economy. The PRC has moved from a command and control economy to a model of global resource allocation based on comparative advantage. In the process, the PRC's export competitiveness has provided new standards for efficient international division of labor. At the same time, sustained growth by this economy has also shifted attention from its export competitiveness to the new basis for Asian regional growth: internal demand. Over the last decade, the PRC's absorption has become one of the primary drivers of regional growth and development.

The recent acceleration of India's growth process, with attendant economic reforms, now promises to propagate rapid growth across the Asian region. As these two large economies proceed in tandem, they will confer growth leverage on their neighbors, directly via bilateral trade and indirectly across a web of supply chain linkages between their two economies and elsewhere across the region and beyond. Southeast Asia is especially well situated to benefit from the parallel expansion the PRC and India. Because of geography and established comparative advantages in resources, commercial facilitation, and intermediate production, ASEAN economies will emerge as a "growth bridge" between the dynamic markets of the PRC and India. In this process, growth externalities will be transmitted to some of the lowest-income and slower-growing ASEAN economies. Cambodia, Laos, Myanmar, and Viet Nam are all well situated to become pillars of the PRC-India growth bridge. This kind of recruitment into more dynamic growth trends will contribute significantly and positively to growth convergence across Asia.

To realize the full potential of this process, policies that facilitate trade will be essential. Most important among these will be institutional change and public and private commitments to infrastructure. Institutional approaches to trade facilitation include both traditional trade reform and more determined efforts at economic integration. The Asian policy environment has historically relied on informal and nonbinding agreements to promote regional commerce, but more recent initiatives are striving for greater exactitude, coherence, and transparency. In the areas of regulation, legal conventions, and technical standards, movement to greater formality and uniformity can do much to facilitate private agency, trade, and growth. Indeed, an Asian counterpart of the OECD might do much to consolidate the basis for integration and growth. This model is very different from a more disciplined economic

union like the European Union, which is striving for the benefits of standards without deeper policy coordination.

For commitments to infrastructure, the public sector can take leadership directly (both domestically and multilaterally) and indirectly by promoting the climate for long-term private capital commitments. Success in this area is an essential precondition for economic participation and growth, because infrastructure makes a fundamental contribution to both. By extending the horizon of profitable private investment wherever it is established, infrastructure multiplies growth benefits and strengthens the capacity of markets to allocate resources and opportunities. This in turn recruits new human and other resources to the growth process, extending a virtuous growth cycle around the region.

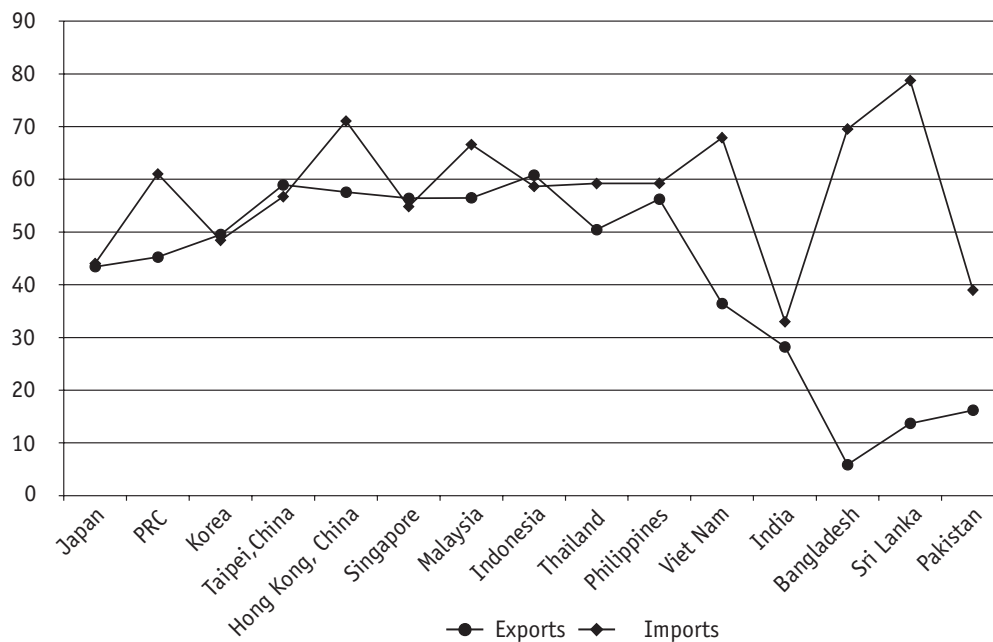
The next century begins with very different initial conditions for Asia. As political systems have become less polarized and inward-looking, economic systems have also evolved from head-to-head export competition to greater integration. In the process, regional ideology and rivalry have given way to new pragmatism and recognition of opportunities for mutual prosperity. Uncertainties and cycles will remain inevitable, but the region has now demonstrated its resilience against external and internal shocks. In addition to greater institutional coherence, two economic trends will help Asia secure the basis for growth. The first is a more diversified and collaborative foundation for future growth, based on more intensive regional trade linkages. Secondly, internal growth and the emergence of consumer majorities in these economies will mean that more and more growth will be internally generated, both inside Asian economies and within the Asian region. If these trends can be supported and extended, sustainable progress toward greater and uniform prosperity in the region can be realized.

As Figure 1 indicates, Asian economies direct a far greater share of their demand than supply to the region. The gap between these two graphs represents the structural trade surplus that has persisted between Asia and the western OECD. While burgeoning exports have an important source of external income for Asia, there are continuing and recently escalating concerns about whether these imbalances are sustainable. Rather than contemplate reducing them by attenuating east-west trade, we advocate measures to more rapidly increase intraregional trade, promoting domestic growth and absorption that can reduce dependence on traditional export markets, and their attendant relative imbalances, in ways that increase the volume of trade and achieve diversification for more sustainable progress and global economic security.

To better understand Asian regional trade and how it can contribute to progress, consider a schematic regional scheme as in Figure 2. Here we categorize Japan and selected Asian Development Bank developing member countries into three generic regions: East, South, and Southeast Asia. Our GTAP database actually details all the Asian countries listed in this diagram, but for the sake of general discussion this regionalization is convenient. While this simplification glosses over many differences as well as similarities between the economies, it has a strong geographical basis in history.

From this perspective, Figure 3 decomposes total Asian trade into bilateral flows between each of the three regions and with respect to the aggregate Rest of the World (ROW) residual. While this diagram is rather detailed, two facts emerge immediately. Firstly, Asia remains heavily reliant on external sources of demand for its export supplies. Since exports have been a decisive catalyst for Asian dynamism, this fact is especially significant from a growth perspective. Secondly, and just as

FIGURE 1
DEMAND IS ALREADY LEADING SUPPLY REGIONALLY
(INTRA-ASIAN IMPORT AND EXPORT SHARES BY COUNTRY IN 2003, PERCENT)



Source: *Direction of Trade Statistics* (IMF 2005).

FIGURE 2
SCHEMATIC VIEW OF ASIAN ECONOMIES

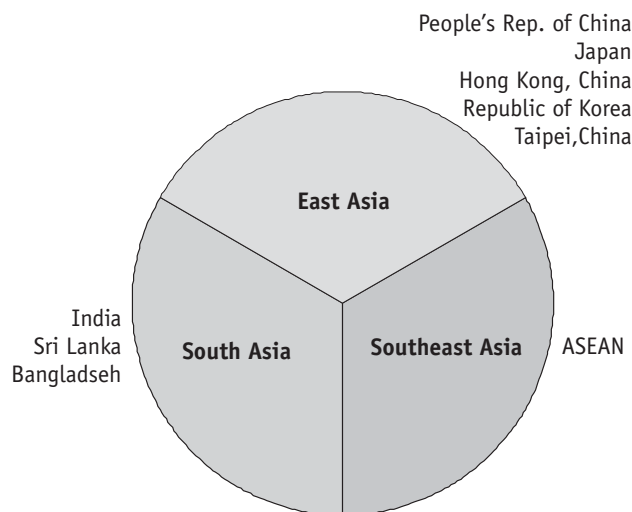
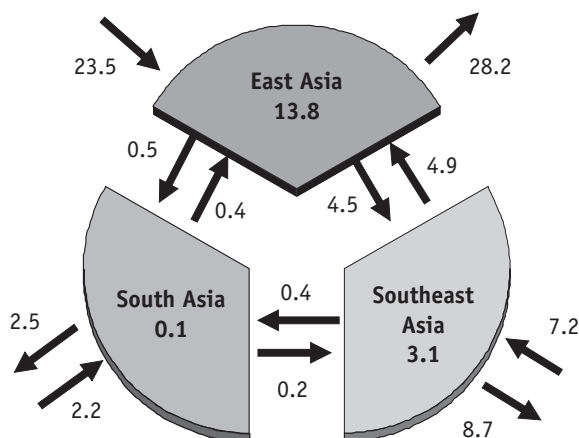


FIGURE 3
ASIAN TRADE SHARES
(TRADE FLOWS AS A PERCENT OF TOTAL ASIAN TRADE, 2001)



Source: GTAP database, v6

importantly, intra-Asian patterns of absorption indicate that Asia is far from its potential to stimulate and sustain regional growth.

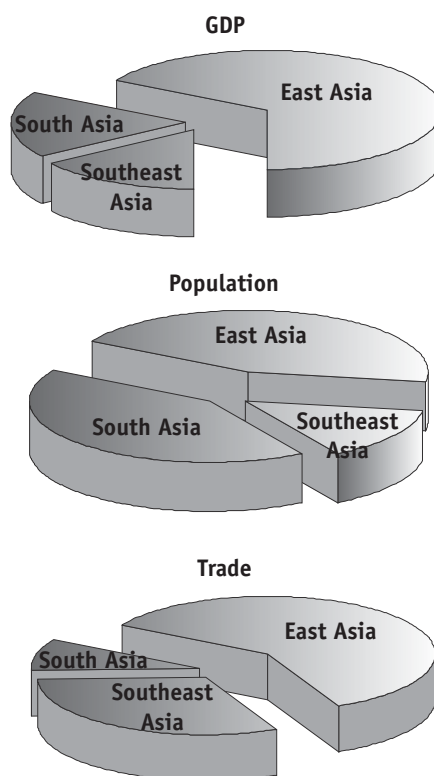
What we see most definitively in Figure 3 is the Asian legacy of third-market export competition. Over the last two generations, most resources for Asian export development have been targeted at affluent western OECD markets, inducing head-to-head competition and limiting reliance on regional demand as a growth source. This was partly an artifact of earlier trade regimes, and partly an inevitable consequence of relative incomes. The political and economic fundamentals of the Asian region have changed dramatically, however, and it is time for trade patterns to adjust to this reality.

Rapidly rising incomes in all three regions will create new absorption and markets for both domestic and foreign suppliers, and responses by the latter can sharply increase the minute bilateral trade shares observed in 2001. Demand alone will not be enough to accomplish this, however. Institutional changes that can overcome “soft” trade barriers, including protectionism, administrative inefficiency, and political dissonance are already progressing rapidly. The final barrier, explaining the small bilateral shares and threatening to keep them small, is distribution margins. As already emphasized, determined public and private commitments will be needed to reduce these to levels that make intra-Asian trade as efficient and profitable as, for example, its trans-Pacific counterpart.

Before moving on the policy analysis, it is worth reviewing a little more about the fundamentals of Asian regional development. As Figure 4 indicates, the three regions in question are quite diverse. East Asia currently leads in total economic activity by a margin of more than two to one. The importance of trade to the region has already been mentioned, so we know it is no coincidence that regional trade shares show a close relationship to gross domestic product (GDP) shares. The only significant difference here is for Southeast Asia, which is even more trade-dependent in GDP terms than East Asia and much more so than South Asia. This fact should be recalled below when the results for regional integration show dramatic gains for ASEAN.

The population figures are well known and widely understood, but comparing them to GDP shares emphasize the initial differences in relative living standards across Asia. Generally speaking, Southeast Asia is intermediate in terms of average per capita income, South Asia relatively low, and East Asia relatively high. Of course the East Asian results are biased somewhat by very high-income economies, yet the proximity of these to the PRC will be a persistent source of growth leverage to the entire East Asian population. Once again, only greater regional integration can transmit such Keynesian benefits more widely.

FIGURE 4
SUMMARY OF MACRO CONDITIONS, 2001



III. BASELINE AND POLICY SCENARIOS

A. A Baseline Scenario to 2025

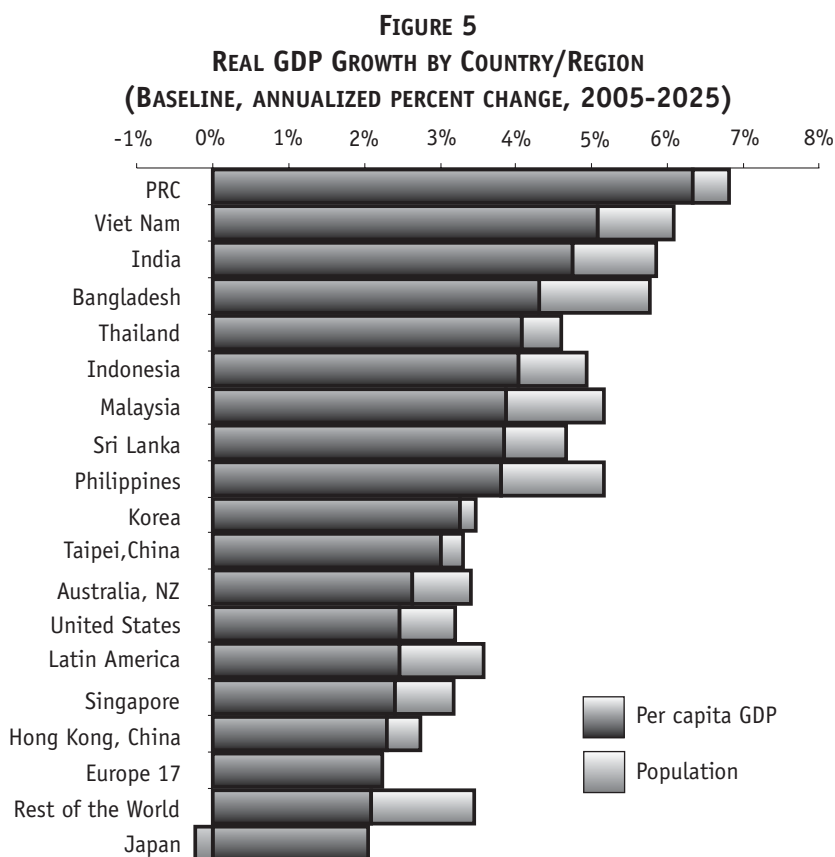
The starting point for this Asian regional trade analysis is a global trade database for 2001, which we extrapolate forward to 2025 with the Structural ADB General Equilibrium (SAGE) Model, a dynamic calibrated general equilibrium forecasting facility calibrated to the GTAP v6 global trade database.² The extrapolation is carried out as a dynamic calibration to baseline aggregate growth forecasting obtained from growth accounting calculations. The calibrated baseline then serves as

² See comments and references in the annex for more about the data source and model specification.

a reference point to evaluate policy scenarios and other counterfactual events, but it is also of independent interest as an indicator of changing long-term economic conditions. In this section we review some of the economic fundamentals from the baseline projection and compare them to scenarios for alternative trade regimes and changing conditions for regional trade and transport.

Figure 5 presents the average forecasted growth rates for Asian economies over the period in question, to primary calibration variable for our baseline. In this figure, we use a “league table” layout to highlight the ranking of per capita GDP growth rates and the effect of population growth on per capita real incomes. Note that we do not take account here of purchasing power parity or shifts in nominal exchange rates, so these results are subject to some qualification. In our baseline the main characteristics of Asian growth are expected to persist in a relatively stable regional and global policy environment. We also must assume no exogenous shocks (SARS, tsunami, avian influenza, etc.) are of sufficient magnitude to derail baseline growth more than temporarily.

Having made these caveats, we see that the PRC is expected to continue providing growth leadership in the region, followed by smaller economies, whose aggregate growth and real living standards will be linked by population growth. Bangladesh, India, Malaysia, Philippines, Viet Nam, and other places will all experience significant per capita income discounts because of high population growth, while Europe and Japan will actually experience higher per capita income because of shrinking populations. Rapid productivity improvement and capital accumulation will be the key driving forces of future Asian growth (Table 1).



Sources: Authors' forecasting, UN population projections (UN 2005).

TABLE 1
ASIA'S GROWTH AND ITS SOURCES, 2005-2025 (PERCENT)

	2005-10	2010-15	2015-20	2020-25
East Asia excluding Japan				
GDP	6.7	6.0	5.5	5.3
Contribution of: Labor	0.4	0.3	-0.1	-0.1
Capital	3.4	3.6	3.6	3.5
TFP	2.8	2.2	2.1	2.0
Southeast Asia				
GDP	6.9	6.8	6.1	5.5
Contribution of: Labor	1.0	0.8	0.6	0.4
Capital	1.8	2.1	2.4	2.6
TFP	4.4	4.2	3.4	3.0
South Asia				
GDP	7.0	6.1	5.7	5.3
Contribution of: Labor	1.0	0.9	0.8	0.7
Capital	2.2	2.2	2.2	2.2
TFP	3.8	3.0	2.6	2.4
Developing Asia				
GDP	6.8	6.2	5.6	5.3
Contribution of: Labor	0.6	0.5	0.2	0.1
Capital	2.9	3.2	3.2	3.2
TFP	3.2	2.7	2.4	2.2

Note: TFP means total factor productivity.
Source: Authors' calculations.

While GDP trends over the baseline are calibrated from independent forecasting, structural adjustments within the regional economies are projected endogenously. One important example of this is trade patterns, which respond to aggregate individual growth in the SAGE model with complex shifts based on price-directed resource allocation. Table 2 describes how these patterns would change by 2025 under the baseline scenario, in terms of percentage changes in real trade flows and percentage change in shares of total Asian trade. For convenience, the same results are presented schematically in Figure 6, which indicates that Asian trade increases in every direction over the period 2005–2025 by at least 110 percent and as much as 300 percent. While aggregate trade is generally growing, however, its composition shifts. In particular, there is generally an increase in the share of intra-Asian trade and a decline in the percent of Asia's trade with ROW. By comparison, there is moderate improvement in the weak bilateral linkages earlier described in Figure 3.

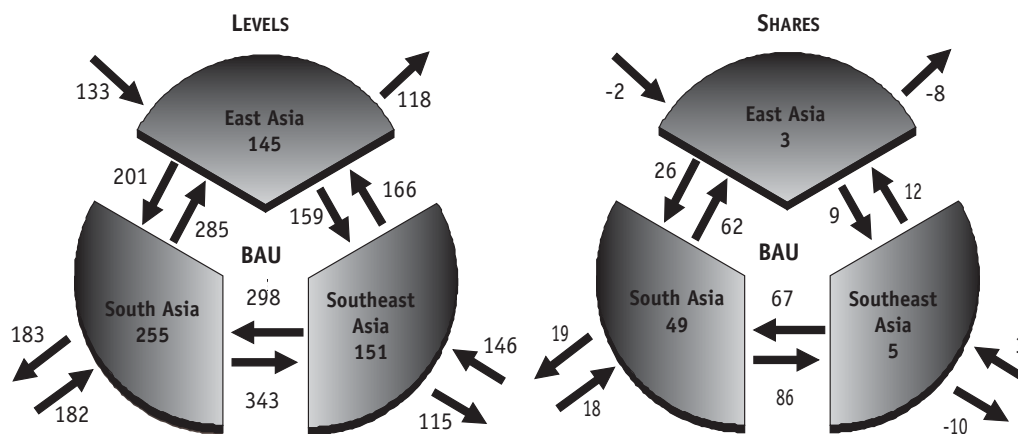
The baseline is of course a status quo or "Business as Usual (BaU)" scenario where the policy regime is unchanged and no external shocks occur. Under these conditions, smooth aggregate growth and moderate structural change are to be expected, yet modern history of the Asian region has been much more dynamic. The difference has been due to a combination of public and private agency, with the former providing reformist guidance and the latter responding quickly to changing opportunities and challenges. To capture these events in a forecasting framework, we must specify the policy or other exogenous changes we are interested in analyzing and simulating how private actors will respond according to the economic theory embodied in the SAGE model.

TABLE 2
BASELINE TRADE COMPOSITION
(PERCENT CHANGE FROM 2005-2025)

Regional Trade Flows (percent change from 2005 in 2025)				
BAU	East Asia	SE Asia	South Asia	ROW
East Asia	145	159	201	118
SE Asia	166	151	298	115
South Asia	285	343	255	183
ROW	133	146	182	74
Regional Trade Shares (percent change from 2005 in 2025)				
BAU	East Asia	SE Asia	South Asia	ROW
East Asia	3	9	26	-8
SE Asia	12	5	67	-10
South Asia	62	86	49	19
ROW	-2	3	18	

Source: Simulation results.

FIGURE 6
BASELINE CHANGES IN REGIONAL TRADE FLOWS
(PERCENTAGE CHANGE FROM 2005 TO 2025)



Source: Simulation results.

B. Alternative Integration Scenarios

To appraise Asia's prospects for improved growth through regional integration, we have implemented the model with respect to a series of alternative trade scenarios, including global trade liberalization and Asian regional liberalization, and contrasted these under varying regional conditions of further economic integration. In this section we present the results of these preliminary scenarios, intended to bracket the aggregate growth possibilities for the region to give an indication of the potential for deeper regional integration to accelerate growth and promote convergence toward higher living standards across Asia.

Table 3 summarizes the scenarios, where trade liberalization refers to removal of all tariff and tariff-equivalent import and export barriers in the GTAP VI database. In addition to reforming trade-distorting policies, we also examine the implications of increased trade efficiency, as this might arise from institutional reforms and/or public and private investments in distribution and communication infrastructure. To capture this in a general way, we make use of the so-called "iceberg" specification of trade to represent trade efficiency. This acts as a proxy for measures that would facilitate regional integration. Formally, trade, transport, and transit costs are interpreted in commodity content terms, discounting deliverable quantity in terms of real or virtual perishability during transit. In other words, there is a scalar relationship between the world price of an export and its corresponding import price that takes the form

$$\lambda_{ijk}^W = \frac{p_{ijk}^{WM}}{p_{ijk}^{WE}} \geq 1$$

where W denotes the world price system, i and j are trading partners, and k is the tradeable commodity or service in question.

When seen from this very general perspective, it is convenient to think of the iceberg parameter λ as a transactions cost without offsetting income to any service provider. From the exporter perspective, this corresponds to a discount $1/\lambda$ and from the importer a premium $(\lambda-1)$, respectively. These distortions are the ultimate targets of investments designed to improve trade efficiency, and we examine the effects of reducing them in a series of dynamic simulations.

It is worth emphasizing that trade costs over and above any administrative agency are generally very large in the global economy. These costs mainly arise from transportation, distribution, and border-related barriers such as information, language, currency conversion, etc. Some empirical studies based on gravity models have concluded that the tax equivalent of international trade barriers are in the range of 40–80%, substantially larger than global average tariff levels (Anderson and van Wincoop 2004).

TABLE 3
INITIAL SIMULATION EXPERIMENTS

0.	Baseline scenario (BaU)
a.	including the admission of the PRC in the WTO
b.	removal of textile quotas to the EU and the US
1.	Global Trade Liberalization (GBL)
a.	removal of all import tariffs and tariff-equivalent nontariff barriers within Asia
b.	removal of all export subsidies within Asia
2.	Asia Trade Liberalization (ATL)
a.	removal of all import tariffs and tariff-equivalent nontariff barriers within Asia
b.	removal of all export subsidies within Asia
3.	Broad Reform - Asia Trade Liberalization with Trade Facilitation (ATL2)
a.	AFT1 with trade-facilitating policies simulated by 3 percent annual reduction in intra-Asian trade costs

Tables 4–6 and Figures 7–9 present the major aggregate simulation results at the national level. Two salient features are worth emphasizing here. First, when trading efficiency can be improved in the Asian region, internal trade emerges to play a dominant role in long-term GDP growth. By comparison to universal tariff abolition, either regionally or globally (ATL and GBL), an Asian free trade agreement with moderate trade facilitation (ATL2) would achieve much greater gains for most of its members. Moreover, every country would be better off pursuing Asian free trade and trade facilitation than waiting for a global regime of free trade, even if this were to occur over the same time horizon.

The key to real income gains from this approach is a combination of export expansion and improving terms of trade (Figure 9) that are facilitated by lower regional distribution margins. Terms of trade improve because of the classical double-edged benefit of reducing distribution margins: higher producer prices and lower purchaser prices. These results clearly suggest the effectiveness of Asian regional trade intensification as a hedging strategy against lack of WTO progress.

Second, it is apparent from these results that the ASEAN economies have the most to gain from Asian economic integration, provided that regional liberalization proceeds in a relatively uniform way. Comparing the ATL scenario to GBL, it appears that most ASEAN economies would be worse off under global free trade than under Asian free trade, reflecting possible trade diversion toward ASEAN following the formation of an Asian free trade bloc. This highlights the importance of intra-Asia trade to Southeast Asian countries. For the PRC, Republic of Korea (henceforth Korea), and South Asia, globalism would be significantly better than Asian trade liberalization alone because these are economies with above-average, prior levels of extraregional trade dependence. Among all Asian countries, ASEAN and Hong Kong, China have the most to gain from an ATL arrangement, especially Malaysia, Singapore, Thailand, and Viet Nam.

TABLE 4
REAL AGGREGATE INCOME
(PERCENTAGE CHANGE FROM BASELINE IN 2025)

REGION	ECONOMY	SCENARIO		
		1 GBL	2 ATL	3 ATL2
East Asia	Japan	0.9	0.9	8.1
	PRC	4.1	1.2	19.8
	Korea	5.3	1.8	24.6
	Hong Kong, China	4.4	2.9	53.8
	Taipei,China	1.4	1.9	25.9
Southeast Asia	Indonesia	1.6	2.1	35.5
	Malaysia	5.0	6.6	116.6
	Philippines	1.8	1.9	33.4
	Singapore	3.9	4.6	81.1
	Thailand	5.0	5.3	61.6
	Viet Nam	7.2	6.5	59.1
South Asia	Bangladesh	1.0	0.6	11.5
	India	2.1	0.3	10.4
	Sri Lanka	2.4	0.6	22.4

Source: Simulation results.

TABLE 5
REAL EXPORTS
(PERCENTAGE CHANGE FROM BASELINE IN 2025)

REGION	ECONOMY	SCENARIO		
		1 GBL	2 ATL	3 ATL2
East Asia	Japan	13.2	9.0	72.8
	PRC	44.7	18.6	107.8
	Korea	23.2	15.5	75.1
	Hong Kong, China	2.5	3.7	31.2
	Taipei,China	9.3	7.6	55.2
Southeast Asia	Indonesia	13.8	9.3	69.1
	Malaysia	9.4	8.6	71.0
	Philippines	6.0	0.9	72.6
	Singapore	0.8	4.3	109.3
	Thailand	24.4	18.2	104.8
	Viet Nam	56.8	46.1	136.5
South Asia	Bangladesh	50.7	39.7	101.8
	India	67.2	30.0	105.4
	Sri Lanka	14.0	7.9	40.5

Source: Simulation results.

TABLE 6
AGGREGATE TERMS OF TRADE
(PERCENTAGE CHANGE FROM BASELINE IN 2025)

REGION	ECONOMY	SCENARIO		
		1 GBL	2 ATL	3 ATL2
East Asia	Japan	1.3	2.7	52.9
	PRC	-5.4	0.7	33.7
	Korea	-0.3	-0.3	43.4
	Hong Kong, China	3.9	1.8	48.8
	Taipei, China	1.6	2.5	45.8
Southeast Asia	Indonesia	2.6	3.7	52.2
	Malaysia	0.6	1.5	44.7
	Philippines	2.8	6.2	54.8
	Singapore	2.5	1.9	29.6
	Thailand	1.9	3.9	43.2
	Viet Nam	-3.8	-1.5	31.3
Asia	Bangladesh	-2.8	-2.4	30.0
	India	-5.2	0.4	43.9
	Sri Lanka	4.5	0.9	38.8

Source: Simulation results.

FIGURE 7
REAL AGGREGATE INCOME
(PERCENTAGE CHANGE FROM BASELINE IN 2025)

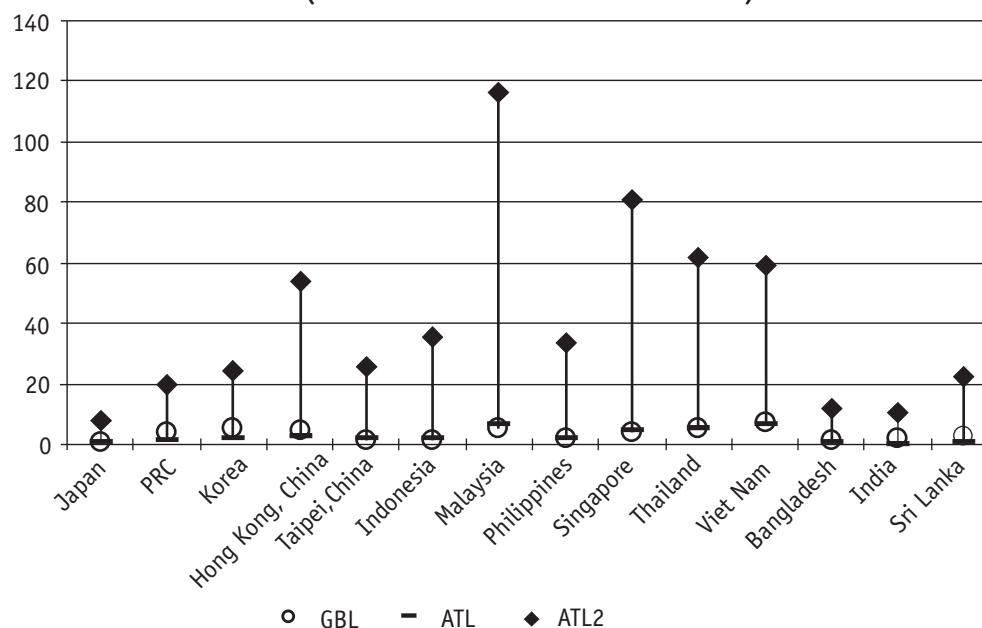


FIGURE 8
TOTAL EXPORTS
(PERCENTAGE CHANGE FROM BASELINE IN 2025)

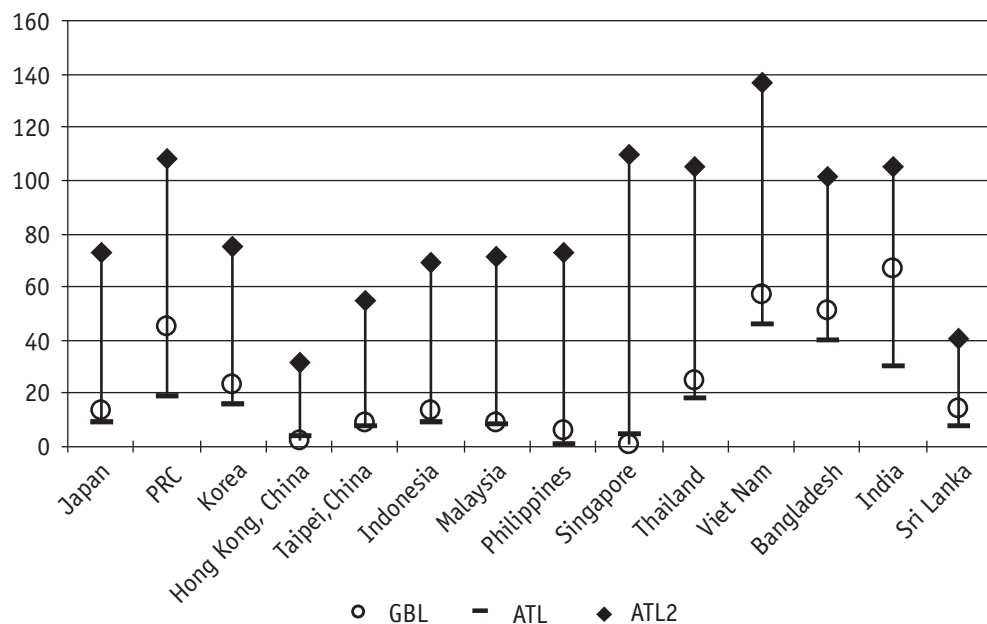
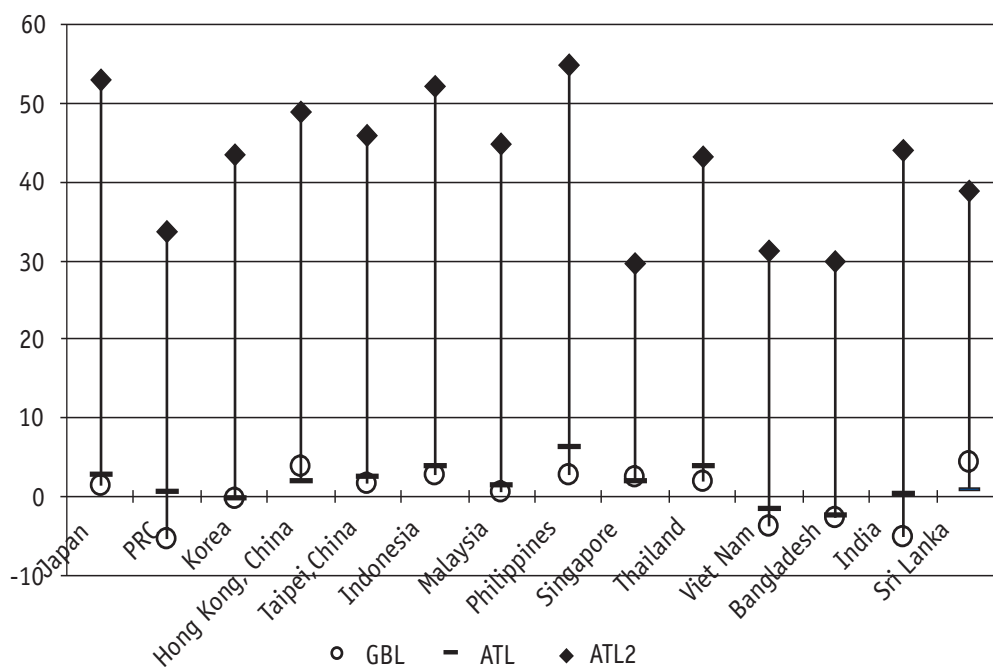


FIGURE 9
TERMS OF TRADE
(PERCENTAGE CHANGE FROM BASELINE IN 2025)



To get a better sense of the relative contributions of different policy regimes to national income, consider the real income effects by regional grouping, beginning with East Asia. Here there are two distinct types of economies, the first being those with large stakes in markets outside Asia that face and/or present high protection levels. These three namely, PRC, Japan, and Korea, would gain relatively less, but still significantly from ATL arrangements, particularly with trade facilitation. The second group consists of economies more dependent on intra-Asian trade, with low initial trade shares, facing and/or presenting low prior protection levels. These two economies namely Hong Kong, China and Taipei, China both have much more to gain from trade facilitation than from regional tariff reductions, so they have a greater stake in reducing structural trade barriers in their own region.

The case of Southeast Asia is more like the second category of East Asian economies, but the growth effects can be much more dramatic. In all the ASEAN cases considered, much greater income gains are obtained by regional trade facilitation than by tariff removal, whether trade liberalization is regional or global. Incidentally, this fact should not be interpreted as a license to promote margin reduction instead of tariff reform. For the region, the gains of removing structural barriers to trade can only be fully realized in a liberal trade environment. In any case, ASEAN achieves very substantial growth dividends from trade from both types of trade facilitation (tariff removal and increased trade efficiency), with 2025 real income increases of between 33 and 116 percent. Removal of structural barriers by achieving greater trade efficiency appears to offer the vast majority of this growth potential, again pointing to the importance of regional trade facilitation and integration as a means to accelerate, broaden, and sustain Asia's growth. This consideration will become particularly significant as other OECD economies continue to mature and their growth trajectories flatten.

Note also the indirect growth dividends that arise from regional linkages, particularly to the more dynamic Asian economies. Such linkages are only discernible with detailed bilateral and sectoral analysis, but intuition makes it plain that, with ATL, the higher-growth regions will confer more demand stimulus on their neighbors. Most advantaged in this context are the geocentric regional economies namely, Malaysia, Singapore, Thailand, and Viet Nam. For all these countries, the combination of regional trade facilitation by tariff removal and improved efficiency far outweighs the gains from global free trade.

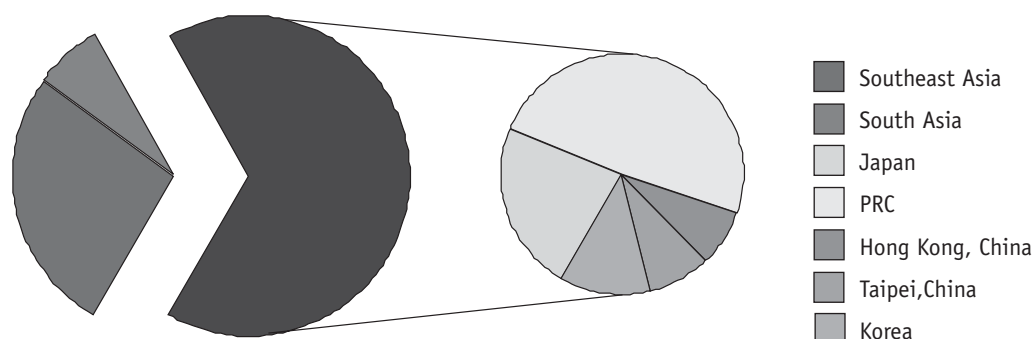
The case of South Asia is more mixed, mainly because of higher prior protection levels (presented and faced) and greater economic isolation from East and Southeast Asia. The degree of economic isolation is measured in the model by trade shares. Since South Asia has much greater dependence on extra-Asian markets, global tariff reductions will confer a larger benefit on them in relative terms. Despite these facts, ATL tariff reform and a 3 percent annual reduction in average regional trade costs provide much larger real income benefits to all the three South Asian economies considered. Percentage real income gains are generally smaller than for Southeast or East Asia, but this again is consistent with the low Asian trade shares for South Asian economies. As we shall see next, however, trade shares increase dramatically within the region under these scenarios, particularly ATL2. The role of ASEAN here is central, and greater policy attention to its bridging role from East to South Asia is needed if regional benefits are to spread more effectively.

C. Regional and Subregional Growth Poles

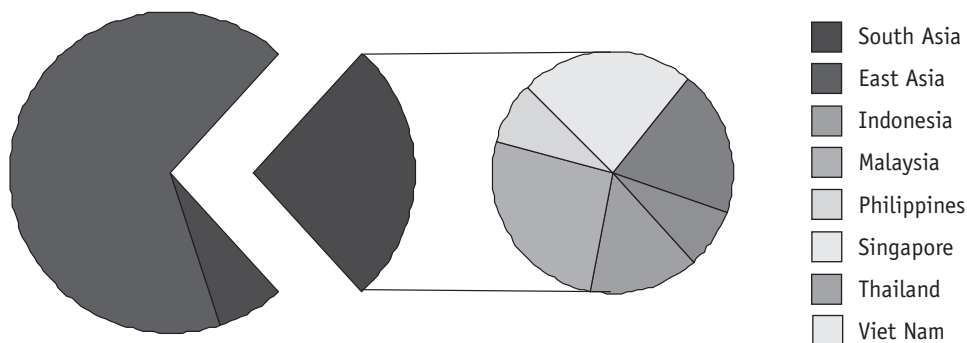
Which economies will provide the most internal dynamism as the Asian region integrates? The PRC is unusual in being a large and very fast-growing economy, yet growth rates are projected to be relatively high in many other regional economies. Ultimately, growth linkage will depend on detailed expenditure and supply chains within sectors and across webs of multinational commercial networks. Still, it is useful to examine the main sources of regional and subregional growth from the demand side. In terms of import absorption, Figure 10 describes regional and national import

FIGURE 10
ASIAN IMPORT DEMAND COMPOSITION

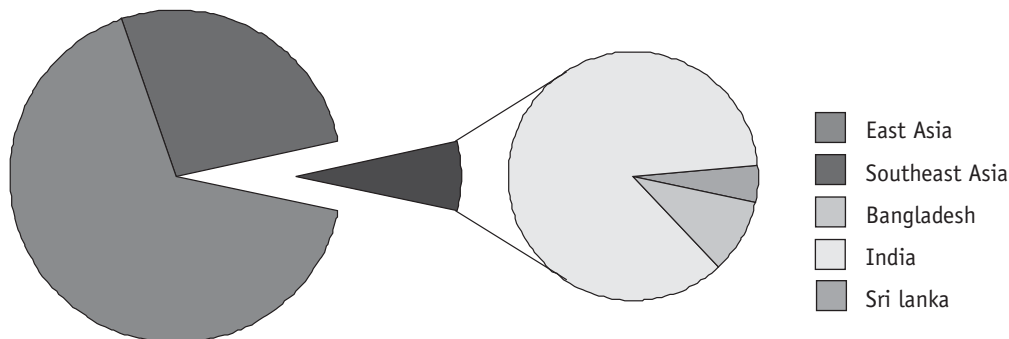
EAST ASIA DISAGGREGATION (2025, ATL2)



SOUTHEAST ASIA DISAGGREGATION (2025, ATL2)



SOUTH ASIA DISAGGREGATION (2025, ATL2)



demand composition, all in shares of total Asian imports. It is clear from this evidence that the PRC's absorption will be a primary regional growth driver. Subregionally, Malaysia, Singapore, and Thailand will share leadership as growth poles, while India will be the dominant source of import demand in the South Asian subregion.

To summarize the results thus far, a few observations are in order:

- (i) Long-run growth prospects for the Asian region remain quite positive and trade can play a central role.
- (ii) Combining an Asian free trade agreement with modest but sustained improvements in regional trade efficiency realizes substantial positive real income growth for every Asian economy.
- (iii) As a corollary, it needs to be more generally recognized around the region that structural and institutional commitments to regional trade efficiency are much more important than simple tariff reductions.
- (iv) Southeast Asia is the biggest percentage winner from the ATL2 scenario, which combines regional liberalization with trade facilitation.
- (v) Between the large dynamic economies of the PRC and India, the role of ASEAN is central for two reasons:
 - (a) Because of geographic factors, it can act as a "growth bridge" between South and East Asia, increasing regional trade and value-added capture.
 - (b) ASEAN includes some of the lowest-income economies, and these are among the best situated for infrastructure to promote regional integration. Cambodia, Laos, Myanmar, and Viet Nam could all be "pillars" of the Asian growth bridge.

IV. AN AGENDA FOR ASIAN REGIONAL INTEGRATION

We have already seen that regional integration can be a potent aggregate growth stimulus for Asia. Although country-specific outcomes vary, combined regional tariff reductions and extensive improvements in trade efficiency can achieve substantial improvements in real incomes. Moreover, this trade and income growth represents diversification and new market development that can promote wider regional benefits and greater sustainability. Despite these obvious advantages, however, the classical theory of customs unions tells us that the expansionary benefits of regionalism can be at least partially offset by diversion of trade from existing partners and markets. For example, we have seen (Figure 7) that the baseline scenario calls for increased trade between all regions. Now we need to examine Asian regionalism more closely to see how it might shift trade patterns away from established markets/relationships and possibly limit the potential gains from institutional and real investments in trade facilitation.

Before proceeding with detailed inspection of Asian regional trade patterns, we want to review conceptual principles of international trade and regionalism. Until relatively recently, dynamic Asian development has been driven mainly by demand outside the region. This orientation was a product of colonial history and traditional thinking about comparative advantage, where international trade is supposed to be driven primarily by structural differences between countries, leading to patterns of specialization that even reinforced these differences. According to these received ideas, north–

south trade was driven by, and indeed could be expected to reinforce, northern comparative advantage in capital and skill-intensive products while the south specialized in primary resource and unskilled labor-intensive exports. This trend had obvious implications for global income distribution, since value-added was much higher in the former activities than in the latter, and world trade was long dominated by these two directions of trade (as opposed to south-south or north-north), which further reinforced global economic divergence.

The advent of increased north-north trade in the post-War era began to change economists' understanding about the underlying drivers of trade, however. Increasingly, world trade began to be dominated by exchange among modern, high-income economies with more national commonality than differentiation. As an obvious symptom of this, two-way trade (imports and exports in the same product categories) became the fastest-growing category of trade. With increased European integration in particular, it became apparent that, as economies advance and diversify internally, trade is increasingly driven by shared characteristics. Table 7 makes this trend clear, indicating that since 1948, a majority of world trade has been between similar country categories rather than along more traditional Ricardian lines of comparative advantage based on large-scale national differentiation.

TABLE 7
TRADE BY DEVELOPMENT STATUS

	1948	1998	2001
Developed to Developed	46	53	40
Developed to Emerging	22	18	22
Emerging to Developed	22	18	26
Emerging to Emerging	10	11	12
	100	100	100

Source: *Direction of Trade Statistics* (IMF 2005).

Three of the similarity-based drivers of international trade are of special significance: (i) economies of scale, (ii) multinational marketing, and (iii) supply chains and production networks. In today's global economy, the main impetus for modern integration is to expand commercial networks and capture value-added through domestic and international diversification. This is well-established in western markets, between Japan and its advanced trading partners, and is now becoming a robust and pervasive feature of Asian trade. Moreover, Asia presents a special attraction for these strategies because of its superior domestic growth rates and low initial trade shares. Taken together, these two characteristics promise the kind of superior returns already identified in emerging market investment patterns. For the same reason, private stakeholders have already recognized this shift in Asian trade fundamentals. To serve both public and private long-term interests in this context then, a new generation of policies is needed to facilitate growth-oriented Asian economic integration.

Before discussing policy fundamentals, however, we want to review evidence from the SAGE model about how trade reform and structural trade facilitation can contribute to more extensive and intensive regional trade ties. We do this by decomposing the bilateral subregional trade links under our three counterfactual scenarios.

Because of its country disaggregation, SAGE allows use to examine the evolution of regional trade patterns in considerable detail. Table 8 presents the bilateral trade results for the baseline (restated from Table 2 above) and our three core scenarios, with schematic presentations in the companion Figures 11 and 12. These results, representing percentage changes in bilateral flows as well as bilateral shares of total Asian trade, bear out two essential features of Asian progress toward regionalism. Firstly, trade growth and diversification are compatible for Asia. In all three scenarios, Asian bilateral trade expands in all directions with few exceptions. Apart from South Asia, most Asian increases trade in both directions with every other region, including ROW, in every scenario.³ This means that Asian regionalism need not be seen as incompatible with globalization generally or with established extraregional trade ties in particular.

Secondly, even more arresting than the monotonicity of bilateral trade growth are the magnitudes, particularly in the regional scenario. Recalling the original discussion in Section II about regional trade potential, it is encouraging to see modest but sustained gains in trade efficiency translated into three- to 10-fold increases in bilateral flows. Global trade reform will also contribute to Asian trade intensification, less within the region but more growth with respect to ROW (as would be expected). The main difference here is the institutional requirements to achieve conclusive progress of the WTO agenda. The uncertainties in this area are very widely perceived, and a plethora of bilateral and regional agreements have already advanced in part to hedge against these risks. Regardless of WTO uncertainties, however, the logic is clear for Asia to establish its own agenda for trade and economic growth. If greater trade can be facilitated by tariff reform and structural measures, the gains would be very substantial. Moreover, there is no evidence that these would impede the progress of WTO, and might in many ways provide a competitive discipline to expedite it.

Seen from the perspective of trade shares, the integration scenario begins to look more like the classical theory of customs unions. Clearly, preferential trade liberalization will shift the growth of trade into the Asian region, but this is of course a direct objective of trade diversification. For this reason, trade shares rise for all intra-Asian bilateral links, and very significantly, while shares for trade with ROW fall. It must be emphasized that this is not classical trade diversion, however, but growth diversion. Recall that Asian trade with ROW increases in all scenarios, so trade will continue to support growth in all directions emanating from the Asian economies, including their traditional non-Asian trade partners. The ATL2 arrangement merely accelerates growth and confers an increasing share of the benefits of this on those who created it, the Asian economies.

Clearly the potential of regional trade can be realized if sustained growth guarantees the growth of Asian demand. What is needed is an enabling environment for Asian trade to be diversified away from traditional north-south patterns of comparative advantage and specialization. A new generation of integration policies and perhaps even new institutions can accomplish this, but our results indicate that the economic potential is considerable.

³ The South Asian trade diversion results from relatively high prior protection against other Asian goods.

TABLE 8
ASIAN REGIONAL TRADE LINKAGES

Regional Trade Flows (percent change from 2005 in 2025)				
BAU	East Asia	SE Asia	South Asia	ROW
East Asia	145	159	201	118
Southeast Asia	166	151	298	115
South Asia	285	343	255	183
ROW	133	146	182	74
GBL	East Asia	SE Asia	South Asia	ROW
East Asia	206	228	404	172
SE Asia	212	167	496	140
South Asia	433	596	451	331
ROW	201	164	306	75
ATL	East Asia	SE Asia	South Asia	ROW
East Asia	228	236	634	110
Southeast Asia	261	189	750	93
South Asia	452	571	479	230
ROW	125	150	97	74
ATL2	East Asia	SE Asia	South Asia	ROW
East Asia	632	659	1621	91
Southeast Asia	752	539	1353	52
South Asia	1595	1887	1113	208
ROW	80	139	40	72
Regional Trade Shares (percent change from 2005 in 2025)				
BAU	East Asia	SE Asia	South Asia	ROW
East Asia	3	9	26	-8
Southeast Asia	12	5	67	-10
South Asia	62	86	49	19
ROW	-2	3	18	
GBL	East Asia	SE Asia	South Asia	ROW
East Asia	3	11	70	-8
Southeast Asia	5	-10	101	-19
South Asia	80	135	86	45
ROW	1	-11	37	
ATL	East Asia	SE Asia	South Asia	ROW
East Asia	27	30	184	-19
Southeast Asia	40	12	229	-25
South Asia	114	159	124	28
ROW	-13	-3	-24	
ATL2	East Asia	SE Asia	South Asia	ROW
East Asia	101	108	371	-48
Southeast Asia	133	75	298	-58
South Asia	364	444	232	-16
ROW	-51	-34	-62	

Source: Simulation results.

FIGURE 11
REGIONAL TRADE FLOW LEVELS
(PERCENTAGE CHANGE FROM BASELINE 2005)

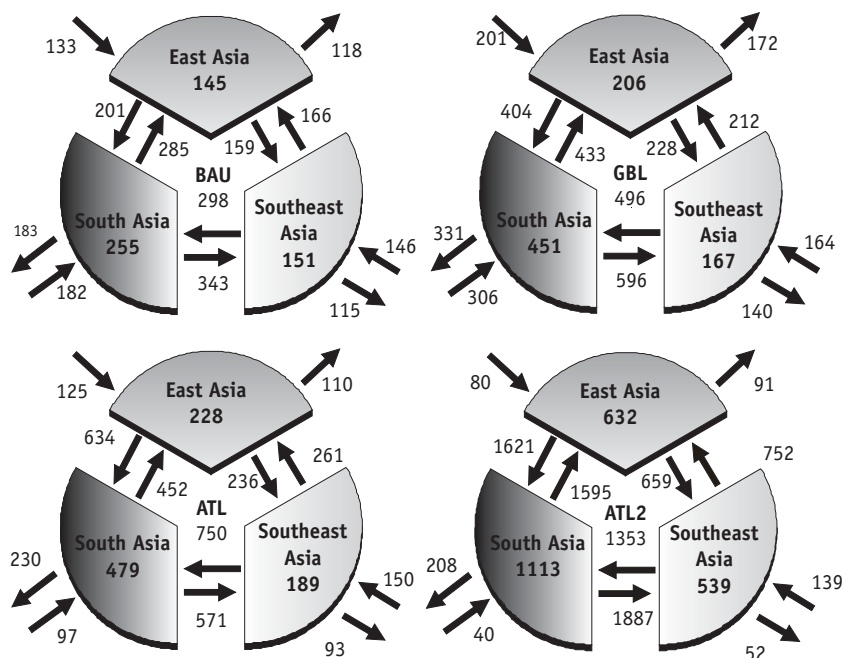
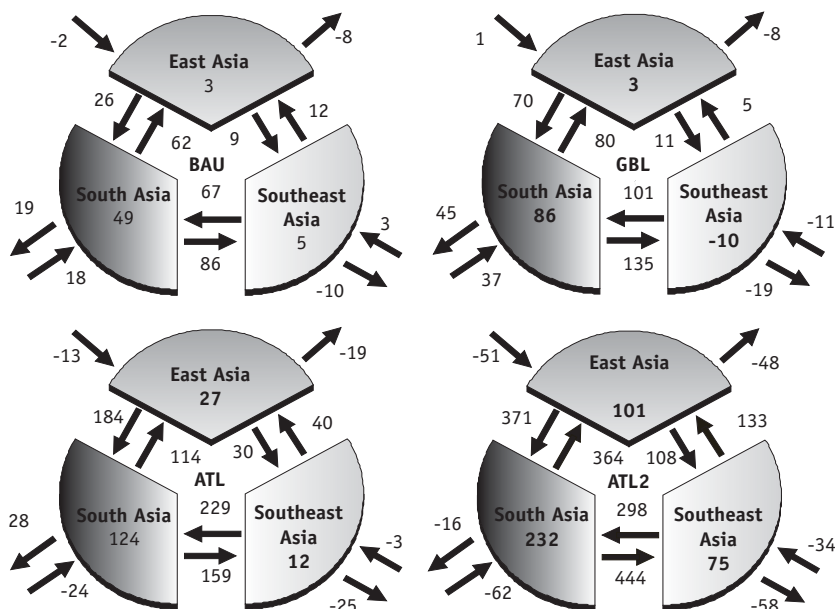


FIGURE 12
REGIONAL TRADE FLOW SHARES
(PERCENTAGE CHANGE FROM BASELINE 2005)



V. POLICIES THAT FACILITATE INTEGRATION

Given the apparent benefits of Asian economic integration, it is reasonable to ask what kinds of policies are most likely to support this process. From an overall perspective, the institutional environment is the first consideration. In this context, we want to distinguish between two categories of institutional arrangements for economic integration. The first of these we call the policy coherence approach to economic integration, as exemplified by OECD-style institutions and initiatives. The second category is the more rigorous (monetary, fiscal, etc.) policy harmonization approach to integration, represented by EU-type arrangements. Structural coherence and harmonization are not incompatible, but the former is much less binding on domestic policy institutions and constituencies. The kind of scenarios we have been evaluating, and their benefits, can be achieved mainly by policy coherence.

In particular, to lay the groundwork for propagating commercial linkages around the region, transferring momentum from Asia's rapid growth economies to its neighbors and coherent administrative, regulatory, and technical standards will be essential. To the extent that an "Asian OECD" could originate and sustain this kind of "soft infrastructure", it would be very desirable. In addition to traditional forms of public sector leadership, a more explicit regional commitment to increased trading efficiency would help recruit private agency to the regional integration agenda.

Apart from institutional development, there are four main areas where policy initiative can make a difference in facilitating Asian regional integration:

- (i) cooperative infrastructure development
- (ii) regional capital market coherence
- (iii) trade negotiation and facilitation
- (iv) labor productivity growth

We review each of these in turn, with emphasis on how they can support the kind of outcomes analyzed in the regional scenario above.

A. Infrastructure Investment

Public and private commitments to infrastructure have been an essential guarantor of national development in the dynamic Asian economies, and they will likewise be essential to extending this dynamism across the region. The long-term returns to this kind of investment are well understood. Infrastructure lowers distribution margins, simultaneously raising producer prices and lowering purchaser prices. This virtuous combination extends the profitability horizon of economic participation wherever infrastructure reaches (and often well beyond), generating multiplier effects too complex and extensive for even the most determined project accountant to measure.

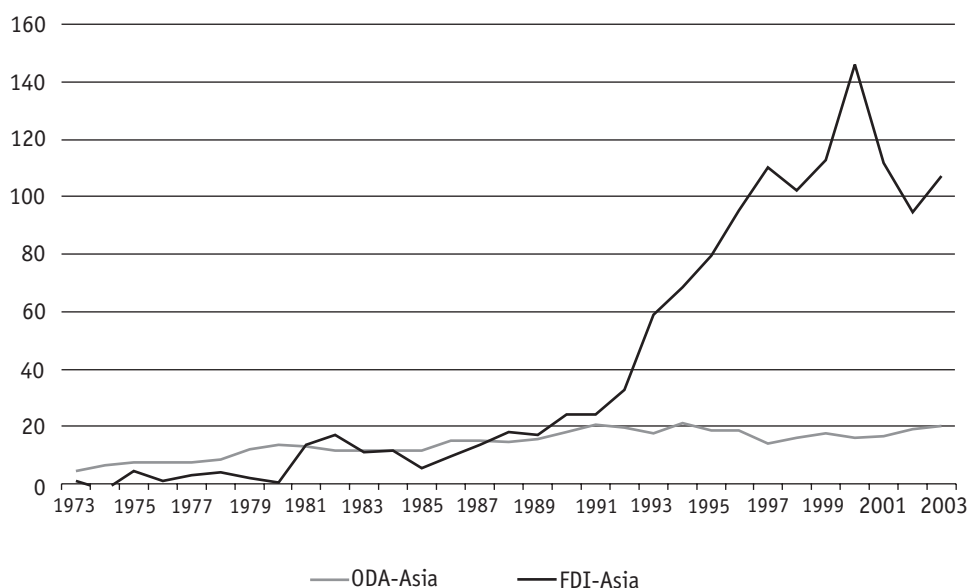
The challenge for infrastructure is not arguing its long-term virtues, but facilitating the capital market's abilities to capture and price the real returns on this kind of investment. Heterogeneous regulatory systems, often lacking transparency or adequate legal support, make it nearly impossible to compute such rates of return, let alone their risk-adjusted counterparts. If Asian governments want to enlist private agency in a regional agenda for this kind of investment so essential to effective integration, more determined efforts at policy coherence will certainly be needed.

Is it worth the effort? There are two arguments in favor of this, the first being the regional rewards to integration estimated in this study. The second argument is one of fiscal effectiveness. All but the highest-income Asian economies have important constraints on their public spending, and for this reason projects with a positive social return must often be deferred. This is particularly unfortunate, since private capital can now be seen as the largest source of regional development finance.

It is well known that Asian economic growth has benefited greatly from external savings, in the form of both public and private foreign capital inflows. In some Asian countries, aid has played a major role historically, but today private foreign direct investment (FDI) is a dramatically emergent phenomenon. While FDI is a private sector activity, and thus is animated by very different primary objectives than aid flows, it has been known to confer many benefits on developing economies that are consistent with aid objectives, including human resource development, technology diffusion, and, ultimately, rising living standards and more sustainable growth. In this sense, it has long been recognized that there may be essential complementarities between private and public foreign investment in developing countries, where the latter means aid.

The extent to which the complementarities matter is not intellectual, but dependent upon their real and potential economic significance (see Figure 13). These depict, for Asian countries, levels of overseas development assistance and inbound FDI for 1973–2003, normalized from constant US dollars to unity in 1973. The most striking feature of this data is of course the meteoric rise in inbound FDI, which has increased almost a hundredfold over the last three decades. This trend must inspire reflection on the appropriate strategy to promote private investment across the region. Clearly, public and private investment commitments must be complementary, particularly if the former is to be effective.

FIGURE 13
ASIAN REGIONAL PUBLIC AND PRIVATE INVESTMENT:
AN AGE OF COMPLEMENTARITY
(ASIAN INBOUND AID AND FDI, US\$ BILLIONS)



Sources: OECD (2005) and UNCTAD (2005).

B. Regional Capital Markets

In addition to the specific category of infrastructure, productive investments of all kinds need to be facilitated as part of a regional integration agenda. Along with export demand, private capital formation has been an essential growth agent in Asia. As was already emphasized, modern regionalism is based on market scope and supply chain linkages that imply very different investment patterns from trade based on national specialization. To facilitate movement of firms and commercial networks around the region, their enterprise capital account transactions must also be facilitated. Again this requires coherence in terms of standards, from accounting to securities regulation, so that both sourcing and placement of capital can happen more extensively and intensively across the region.

Foreign direct investment is now an essential feature of regionalism and a forceful integration mechanism. Moreover, international investment flows have helped many emerging economies overcome savings constraints to stimulate and sustain development. For this reason, FDI can make important contributions to convergence if local market conditions can be made more hospitable. The essential requirements are again transparency and coherence, including any policy that limits distortions to real rates of return on local investment.

C. Trade Policy and Regional Integration

Bilateral and multilateral trade facilitation are of course essential to achieve regional integration and realize its growth potential. Geographically, Asia has an advantage in terms of continuous proximity, but administrative barriers to trade can often be more significant than geography. The vast international rent-seeking network that evolved in response to Multi-fiber Arrangement import quotas stands as a dramatic historical example of how trade policies can defy geographic or Ricardian logic. For this reason, capacity and commitment to more liberal trade relations is a necessary (if not sufficient) condition to realize the gains from Asian regional integration that we have estimated.

Besides the ongoing efforts on multilateral trade negotiations under the WTO Doha agenda, Asian countries have pursued bilateral or regional FTAs to best secure the benefits of economic integration. A number of FTAs have been signed or are under negotiation in East and South Asia, such as the ASEAN FTA, the ASEAN and PRC FTA, and the South Asia Free Trade Area. Each of these will have its particular challenges and opportunities, and some represent steps toward others. For the present, however, we confined ourselves to a more inclusive reference case for Asian integration because we believe it makes the strongest case for further commitments in this direction.

D. Policies to Promote Labor Productivity Growth

In a world of capital mobility, the only long-term justification for higher real wages is higher labor productivity. Judging from their modern policies, it is clear that many Asian countries are well aware of this fact. Initial conditions now vary widely across the region, however, and regional integration will only propagate its gains equitably if it is accompanied by rising labor productivity. The alternative will be something like a regional version of the traditional north-south patterns alluded to earlier, with excessive specialization and divergence in average living standards.

To more fully realize the vast human potential of this region, for domestic income growth arising from both wages and investments at home and elsewhere, a more coherent approach to fostering labor productivity growth would be valuable. For all countries in the region, this is the most important long-term commitment to sustained and equitable growth, but it remains beyond the fiscal reach of many. To advance this regional agenda, private capital can do more of the work in an enabling investment climate. Employment-based education and skills development could be a direct result of greater inbound FDI, in turn a result of expanded trade, if commitments to integration are determined enough.

VI. CONCLUSIONS

Economic dynamism is well established in Asia and continues to spread, yet regional growth rates and living standards remain uneven and many areas have yet to enjoy significant benefits. Historically, this process has relied heavily on demand outside the region, from the early days of global exploration down to the modern north-south orientation of trade with western OECD economies. The research reported here looks to the future of the region, projecting long-term trade and growth scenarios for Asia over the next decade using a global forecasting model. Our results clearly indicate that regional integration is the way forward for rapid and sustainable growth in Asia. By diversifying its traditional trade patterns toward emergent demand within the region, the Asian economies can leverage superior domestic growth rates, accelerate economic diversification, and broaden the basis for regional development. Integration will not only secure a more reliable basis for established growth patterns, it will also confer substantial growth leverage on many of the region's poorest economies. In this way, historic growth can be sustained while greater convergence is achieved in the region.

More specifically, our work compares the potential regional growth effects of alternative regional trade scenarios. Contrasting progress toward WTO-style global trade liberalization with more focused Asian regionalism, we find that most of the gains from the former can be achieved for Asia by a regional FTA arrangement. Moreover, we find that modest progress toward improving regional trade efficiency would have a much greater impact on Asian growth than either global or regional tariff removal alone. Indeed, one important conclusion of this work is that structural barriers to trade are a much greater constraint on growth than residual protection alone. This finding reaffirms the importance of policies to reduce regional trade margins, including administrative reforms, standards promotion, and public and private infrastructure commitments.

The same family of policies is of course central to any agenda for regional economic integration. It should be emphasized, however, that our results show the benefits of structural policies, those governing hard infrastructure (trade, transport, transit, and telecommunications) as well as soft infrastructure (standards, administrative efficiency and transparency, etc.). These characteristics represent a policy coherence approach to economic integration, broadly similar to OECD initiatives. This can be contrasted with the more rigorous (monetary, fiscal, etc.) policy harmonization approach to integration represented by EU-type arrangements. Structural coherence and harmonization are not incompatible, but the former is much less binding on domestic policy institutions and constituencies. The right model of Asia will evolve over time, but our results indicate that the gains from the structural coherence approach to integration could be very substantial.

In this paper, we sketched out some of the overall characteristics of more integrated regional growth, including general indications about policy initiatives that will be needed to facilitate this. Building the institutional basis for regional integration is the work of governments, however, not economists. An Asian OECD would provide a convenient venue for this work, but the initiative must be animated by a clear understanding of the potential benefits. Our results indicate that regional integration has more to offer Asia than the WTO itself, although the two should not be seen as substitutes.

Whichever path Asia chooses, rich opportunities are there for stimulating growth through trade diversification. Our results indicate that the volume of trade with traditional partners can continue to grow, but that superior growth in Asia can sustain and indeed be sustained by policies that promote faster trade growth within the region. As the region transits from historical patterns of north-south specialization to a family of more modern, diversified, and integrated consumer societies, the vestiges of head-to-head export competition will give way to a more collaborative basis for growth. This approach represents the best strategy to fulfil the immense economic promise of Asia for all of its people, over half of humanity.

APPENDIX OVERVIEW OF THE SAGE MODEL AND DATA

The complexities of today's global economy make it very unlikely that policymakers relying on intuition or rule-of-thumb will achieve anything approaching optimality in either the domestic or international arenas. Market interactions are so pervasive in determining economic outcomes that more sophisticated empirical research tools are needed to improve visibility for both public and private sector decisionmakers. The preferred tool for detailed empirical analysis of economic policy is now the calibrated general equilibrium (CGE) model.⁴ It is well suited to trade analysis because it can detail structural adjustments within national economies and elucidate their interactions in international markets. The model is more extensively discussed below and the underlying methodology is fully documented elsewhere, but a few general comments will facilitate discussion and interpretation of the scenario results that follow.

Technically, a CGE model is a system of simultaneous equations that simulate price-directed interactions between firms and households in commodity and factor markets. The role of government, capital markets, and other trading partners are also specified, with varying degrees of detail and passivity, to close the model and account for economywide resource allocation, production, and income determination.

The role of markets is to mediate exchange, usually with a flexible system of prices, the most important endogenous variables in a typical CGE model. As in a real market economy, commodity and factor price changes induce changes in the level and composition of supply and demand, production and income, and the remaining endogenous variables in the system. In CGE models, an equation system is solved for prices that correspond to equilibrium in markets and satisfy the accounting identities governing economic behavior. If such a system is precisely specified, equilibrium always exists and such a consistent model can be calibrated to a base period data set. The resulting calibrated general equilibrium model is then used to simulate the economywide (and regional) effects of alternative policies or external events.

The distinguishing feature of a general equilibrium model, applied or theoretical, is its closed form specification of all activities in the economic system under study. This can be contrasted with more traditional partial equilibrium analysis, where linkages to other domestic markets and agents are deliberately excluded from consideration. A large and growing body of evidence suggests that indirect effects (e.g., upstream and downstream production linkages) arising from policy changes are not only substantial, but may in some cases even outweigh direct effects. Only a model that consistently specifies economywide interactions can fully assess the implications of economic policies or business strategies. In a multi-country model like the one used in this study, indirect effects include the trade linkages between countries and regions which themselves can have policy implications. The Structural ADB General Equilibrium (SAGE) model is a version of the LINKAGE 5 model developed at the World Bank by van der Mensbrugghe (2005), implemented in the GAMS programming language, and calibrated to the GTAP (version 6) global database.⁵ The result is a 16-country/region, 12-sector global CGE model, calibrated over a 24-year time path from 2001 to 2025. Apart from its traditional neoclassical roots, an important feature of this model is product differentiation, where we specify that imports is differentiated by country of origin and exports are differentiated by country of destination (Armington 1969, de Melo and Robinson 1989). This feature allows the model to capture the pervasive phenomenon of intra-industry trade, where a country is both an importer and exporter of similar commodities, and avoids tendencies toward extreme specialization.

⁴ See for example, Dervis, de Melo, and Robinson (1982); Francois and Reinert (1997).

⁵ The original model is fully documented in van der Mensbrugghe (2005).

REFERENCES

- Anderson, J. E., and E. van Wincoop. 2004. "Trade Costs." *Journal of Economic Literature* 42(3):691-751.
- Armington, P. 1969. A Theory of Demand for Products Distinguished by Place of Production. IMF Staff Papers No. 16, International Monetary Fund, Washington, DC.
- de Melo, J., and S. Robinson. 1989. "Product Differentiation and the Treatment of Foreign Trade in Computable General Equilibrium Models of Small Economies." *Journal of International Economics* 27:47-67.
- Dervis, K., J. de Melo, and S. Robinson. 1982. *General Equilibrium Models for Development Policy*. New York: Cambridge University Press for the World Bank.
- Francois, J., and K. Reinert. 1997. *Applied Methods for Trade Policy Analysis: A Handbook*. New York: Cambridge University Press.
- Hertel, T. W., ed. 1997. *Global Trade Analysis: Modeling and Applications*. New York: Cambridge University Press.
- International Monetary Fund. 2005. *Direction of Trade Statistics* (CD-ROM). Washington, DC.
- OECD. 2005. *International Development Statistics (IDS) Online Databases*. Organisation for Economic Co-operation and Development, Paris, France. Available: <http://www.oecd.org/dac/stats/idsonline>.
- UNCTAD. 2005. *Foreign Direct Investment Online Database*. United Nations Conference on Trade and Development, Geneva, Switzerland. Available: http://stats.unctad.org/fdi/eng/ReportFolders/Rfview/explorerp.asp?IF_Mode=0&IF_ViewShared=1.
- United Nations. 2005. "World Population Prospects: The 2004 Revision." Available: <http://esa.un.org/unpp/>
- van der Mensbrugghe, D. 2005. "LINKAGE Technical Reference Document." Economic Policy and Prospects Group, The World Bank. Processed.

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
—Barry Eichengreen, <i>January 2002</i></p> <p>No. 2 Policy-based Lending and Poverty Reduction: An Overview of Processes, Assessment and Options
—Richard Bolt and Manabu Fujimura, <i>January 2002</i></p> <p>No. 3 The Automotive Supply Chain: Global Trends and Asian Perspectives
—Francisco Veloso and Rajiv Kumar, <i>January 2002</i></p> <p>No. 4 International Competitiveness of Asian Firms: An Analytical Framework
—Rajiv Kumar and Doren Chadee, <i>February 2002</i></p> <p>No. 5 The International Competitiveness of Asian Economies in the Apparel Commodity Chain
—Gary Gereffi, <i>February 2002</i></p> <p>No. 6 Monetary and Financial Cooperation in East Asia—The Chiang Mai Initiative and Beyond
—Pradumna B. Rana, <i>February 2002</i></p> <p>No. 7 Probing Beneath Cross-national Averages: Poverty, Inequality, and Growth in the Philippines
—Arsenio M. Balisacan and Ernesto M. Pernia, <i>March 2002</i></p> <p>No. 8 Poverty, Growth, and Inequality in Thailand
—Anil B. Deolalikar, <i>April 2002</i></p> <p>No. 9 Microfinance in Northeast Thailand: Who Benefits and How Much?
—Brett E. Coleman, <i>April 2002</i></p> <p>No. 10 Poverty Reduction and the Role of Institutions in Developing Asia
—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, <i>May 2002</i></p> <p>No. 11 The European Social Model: Lessons for Developing Countries
—Assar Lindbeck, <i>May 2002</i></p> <p>No. 12 Costs and Benefits of a Common Currency for ASEAN
—Srinivasa Madhur, <i>May 2002</i></p> <p>No. 13 Monetary Cooperation in East Asia: A Survey
—Raul Fabella, <i>May 2002</i></p> <p>No. 14 Toward A Political Economy Approach to Policy-based Lending
—George Abonyi, <i>May 2002</i></p> <p>No. 15 A Framework for Establishing Priorities in a Country Poverty Reduction Strategy
—Ron Duncan and Steve Pollard, <i>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
—Christopher Edmonds, <i>July 2002</i></p> <p>No. 17 Effect of Decentralization Strategy on Macroeconomic Stability in Thailand
—Kanokpan Lao-Araya, <i>August 2002</i></p> <p>No. 18 Poverty and Patterns of Growth
—Rana Hasan and M. G. Quibria, <i>August 2002</i></p> <p>No. 19 Why are Some Countries Richer than Others? A Reassessment of Mankiw-Romer-Weil's Test of the Neoclassical Growth Model
—Jesus Felipe and John McCombie, <i>August 2002</i></p> | <p>No. 20 Modernization and Son Preference in People's Republic of China
—Robin Burgess and Juzhong Zhuang, <i>September 2002</i></p> <p>No. 21 The Doha Agenda and Development: A View from the Uruguay Round
—J. Michael Finger, <i>September 2002</i></p> <p>No. 22 Conceptual Issues in the Role of Education Decentralization in Promoting Effective Schooling in Asian Developing Countries
—Jere R. Behrman, Anil B. Deolalikar, and Lee-Ying Son, <i>September 2002</i></p> <p>No. 23 Promoting Effective Schooling through Education Decentralization in Bangladesh, Indonesia, and Philippines
—Jere R. Behrman, Anil B. Deolalikar, and Lee-Ying Son, <i>September 2002</i></p> <p>No. 24 Financial Opening under the WTO Agreement in Selected Asian Countries: Progress and Issues
—Yun-Hwan Kim, <i>September 2002</i></p> <p>No. 25 Revisiting Growth and Poverty Reduction in Indonesia: What Do Subnational Data Show?
—Arsenio M. Balisacan, Ernesto M. Pernia, and Abuzar Asra, <i>October 2002</i></p> <p>No. 26 Causes of the 1997 Asian Financial Crisis: What Can an Early Warning System Model Tell Us?
—Juzhong Zhuang and J. Malcolm Dowling, <i>October 2002</i></p> <p>No. 27 Digital Divide: Determinants and Policies with Special Reference to Asia
—M. G. Quibria, Shamsun N. Ahmed, Ted Tschang, and Mari-Len Reyes-Macasaquit, <i>October 2002</i></p> <p>No. 28 Regional Cooperation in Asia: Long-term Progress, Recent Retrogression, and the Way Forward
—Ramgopal Agarwala and Brahm Prakash, <i>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?
—Kanokpan Lao-Araya, <i>November 2002</i></p> <p>No. 30 Asian Regionalism and Its Effects on Trade in the 1980s and 1990s
—Ramon Clarete, Christopher Edmonds, and Jessica Seddon Wallack, <i>November 2002</i></p> <p>No. 31 New Economy and the Effects of Industrial Structures on International Equity Market Correlations
—Cyn-Young Park and Jaejoon Woo, <i>December 2002</i></p> <p>No. 32 Leading Indicators of Business Cycles in Malaysia and the Philippines
—Wenda Zhang and Juzhong Zhuang, <i>December 2002</i></p> <p>No. 33 Technological Spillovers from Foreign Direct Investment—A Survey
—Emma Xiaolin Fan, <i>December 2002</i></p> <p>No. 34 Economic Openness and Regional Development in the Philippines
—Ernesto M. Pernia and Pilipinas F. Quising, <i>January 2003</i></p> <p>No. 35 Bond Market Development in East Asia:</p> |
|--|--|

- 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*

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. 9 | Setting User Charges for Public Services: Policies and Practice at the Asian Development Bank
—David Dole, December 2003 |
| No. 2 | Integrating Risk into ADB's Economic Analysis of Projects
—Nigel Rayner, Anneli Lagman-Martin, and Keith Ward, June 2002 | No. 10 | Beyond Cost Recovery: Setting User Charges for Financial, Economic, and Social Goals
—David Dole and Ian Bartlett, January 2004 |
| No. 3 | Measuring Willingness to Pay for Electricity
—Peter Choynowski, July 2002 | No. 11 | Shadow Exchange Rates for Project Economic Analysis: Toward Improving Practice at the Asian Development Bank
—Anneli Lagman-Martin, February 2004 |
| No. 4 | Economic Issues in the Design and Analysis of a Wastewater Treatment Project
—David Dole, July 2002 | No. 12 | Improving the Relevance and Feasibility of Agriculture and Rural Development Operational Designs: How Economic Analyses Can Help
—Richard Bolt, September 2005 |
| 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. 13 | Assessing the Use of Project Distribution and Poverty Impact Analyses at the Asian Development Bank
—Franklin D. De Guzman, October 2005 |
| No. 6 | Economic Analysis of Health Projects: A Case Study in Cambodia
—Erik Bloom and Peter Choynowski, May 2003 | No. 14 | Assessing Aid for a Sector Development Plan: Economic Analysis of a Sector Loan
—David Dole, November 2005 |
| 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 | | |

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. 11 | Implications of a US Dollar Depreciation for Asian Developing Countries
—Emma Fan, July 2002 |
| No. 2 | India's Economic Reforms
What Has Been Accomplished?
What Remains to Be Done?
—Arvind Panagariya, November 2001 | No. 12 | Dangers of Deflation
—D. Brooks and Pilipinas Quising, December 2002 |
| No. 3 | Unequal Benefits of Growth in Viet Nam
—Indu Bhushan, Erik Bloom, and Nguyen Minh Thang, January 2002 | No. 13 | Infrastructure and Poverty Reduction—
What is the Connection?
—Ifzal Ali and Ernesto Pernia, January 2003 |
| No. 4 | Is Volatility Built into Today's World Economy?
—J. Malcolm Dowling and J.P. Verbiest, February 2002 | No. 14 | Infrastructure and Poverty Reduction—
Making Markets Work for the Poor
—Xianbin Yao, May 2003 |
| No. 5 | What Else Besides Growth Matters to Poverty Reduction? Philippines
—Arsenio M. Balisacan and Ernesto M. Pernia, February 2002 | No. 15 | SARS: Economic Impacts and Implications
—Emma Xiaolin Fan, May 2003 |
| 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. 16 | Emerging Tax Issues: Implications of Globalization and Technology
—Kanokpan Lao Araya, May 2003 |
| 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. 17 | Pro-Poor Growth: What is It and Why is It Important?
—Ernesto M. Pernia, May 2003 |
| No. 8 | The Role of Preferential Trading Arrangements in Asia
—Christopher Edmonds and Jean-Pierre Verbiest, July 2002 | No. 18 | Public-Private Partnership for Competitiveness
—Jesus Felipe, June 2003 |
| No. 9 | The Doha Round: A Development Perspective
—Jean-Pierre Verbiest, Jeffrey Liang, and Lea Sumulong, July 2002 | No. 19 | Reviving Asian Economic Growth Requires Further Reforms
—Ifzal Ali, June 2003 |
| No. 10 | Is Economic Openness Good for Regional Development and Poverty Reduction? The Philippines
—Nava Ashraf, Dean S. Karlan, and Wesley Yin, November 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, March 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*

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

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
— <i>Seiji Naya, April 1982</i> | No. 22 | Effects of External Shocks on the Balance of Payments, Policy Responses, and Debt Problems of Asian Developing Countries
— <i>Seiji Naya, December 1983</i> |
| No. 2 | Development Issues for the Developing East and Southeast Asian Countries and International Cooperation
— <i>Seiji Naya and Graham Abbott, April 1982</i> | No. 23 | Changing Trade Patterns and Policy Issues: The Prospects for East and Southeast Asian Developing Countries
— <i>Seiji Naya and Ulrich Hiemenz, February 1984</i> |
| No. 3 | Aid, Savings, and Growth in the Asian Region
— <i>J. Malcolm Dowling and Ulrich Hiemenz, April 1982</i> | No. 24 | Small-Scale Industries in Asian Economic Development: Problems and Prospects
— <i>Seiji Naya, February 1984</i> |
| No. 4 | Development-oriented Foreign Investment and the Role of ADB
— <i>Kiyoshi Kojima, April 1982</i> | No. 25 | A Study on the External Debt Indicators Applying Logit Analysis
— <i>Jungsoo Lee and Clarita Barretto, February 1984</i> |
| No. 5 | The Multilateral Development Banks and the International Economy's Missing Public Sector
— <i>John Lewis, June 1982</i> | No. 26 | Alternatives to Institutional Credit Programs in the Agricultural Sector of Low-Income Countries
— <i>Jennifer Sour, March 1984</i> |
| No. 6 | Notes on External Debt of DMCs
— <i>Evelyn Go, July 1982</i> | No. 27 | Economic Scene in Asia and Its Special Features
— <i>Kedar N. Kohli, November 1984</i> |
| No. 7 | Grant Element in Bank Loans
— <i>Dal Hyun Kim, July 1982</i> | No. 28 | The Effect of Terms of Trade Changes on the Balance of Payments and Real National Income of Asian Developing Countries
— <i>Jungsoo Lee and Lutgarda Labios, January 1985</i> |
| No. 8 | Shadow Exchange Rates and Standard Conversion Factors in Project Evaluation
— <i>Peter Warr, September 1982</i> | No. 29 | Cause and Effect in the World Sugar Market: Some Empirical Findings 1951-1982
— <i>Yoshihiro Iwasaki, February 1985</i> |
| No. 9 | Small and Medium-Scale Manufacturing Establishments in ASEAN Countries: Perspectives and Policy Issues
— <i>Mathias Bruch and Ulrich Hiemenz, January 1983</i> | No. 30 | Sources of Balance of Payments Problem in the 1970s: The Asian Experience
— <i>Pradumna Rana, February 1985</i> |
| No. 10 | A Note on the Third Ministerial Meeting of GATT
— <i>Jungsoo Lee, January 1983</i> | No. 31 | India's Manufactured Exports: An Analysis of Supply Sectors
— <i>Ifzal Ali, February 1985</i> |
| No. 11 | Macroeconomic Forecasts for the Republic of China, Hong Kong, and Republic of Korea
— <i>J.M. Dowling, January 1983</i> | No. 32 | Meeting Basic Human Needs in Asian Developing Countries
— <i>Jungsoo Lee and Emma Banaria, March 1985</i> |
| No. 12 | ASEAN: Economic Situation and Prospects
— <i>Seiji Naya, March 1983</i> | No. 33 | The Impact of Foreign Capital Inflow on Investment and Economic Growth in Developing Asia
— <i>Evelyn Go, May 1985</i> |
| No. 13 | The Future Prospects for the Developing Countries of Asia
— <i>Seiji Naya, March 1983</i> | No. 34 | The Climate for Energy Development in the Pacific and Asian Region: Priorities and Perspectives
— <i>V.V. Desai, April 1986</i> |
| No. 14 | Energy and Structural Change in the Asia-Pacific Region, Summary of the Thirteenth Pacific Trade and Development Conference
— <i>Seiji Naya, March 1983</i> | No. 35 | Impact of Appreciation of the Yen on Developing Member Countries of the Bank
— <i>Jungsoo Lee, Pradumna Rana, and Ifzal Ali, May 1986</i> |
| No. 15 | A Survey of Empirical Studies on Demand for Electricity with Special Emphasis on Price Elasticity of Demand
— <i>Wisarn Pupphavesa, June 1983</i> | No. 36 | Smuggling and Domestic Economic Policies in Developing Countries
— <i>A.H.M.N. Chowdhury, October 1986</i> |
| No. 16 | Determinants of Paddy Production in Indonesia: 1972-1981—A Simultaneous Equation Model Approach
— <i>T.K. Jayaraman, June 1983</i> | No. 37 | Public Investment Criteria: Economic Internal Rate of Return and Equalizing Discount Rate
— <i>Ifzal Ali, November 1986</i> |
| No. 17 | The Philippine Economy: Economic Forecasts for 1983 and 1984
— <i>J.M. Dowling, E. Go, and C.N. Castillo, June 1983</i> | No. 38 | Review of the Theory of Neoclassical Political Economy: An Application to Trade Policies
— <i>M.G. Quibria, December 1986</i> |
| No. 18 | Economic Forecast for Indonesia
— <i>J.M. Dowling, H.Y. Kim, Y.K. Wang, and C.N. Castillo, June 1983</i> | No. 39 | Factors Influencing the Choice of Location: Local and Foreign Firms in the Philippines
— <i>E.M. Pernia and A.N. Herrin, February 1987</i> |
| No. 19 | Relative External Debt Situation of Asian Developing Countries: An Application of Ranking Method
— <i>Jungsoo Lee, June 1983</i> | No. 40 | A Demographic Perspective on Developing Asia and Its Relevance to the Bank
— <i>E.M. Pernia, May 1987</i> |
| No. 20 | New Evidence on Yields, Fertilizer Application, and Prices in Asian Rice Production
— <i>William James and Teresita Ramirez, July 1983</i> | No. 41 | Emerging Issues in Asia and Social Cost Benefit Analysis
— <i>I. Ali, September 1988</i> |
| No. 21 | Inflationary Effects of Exchange Rate Changes in Nine Asian LDCs
— <i>Pradumna B. Rana and J. Malcolm Dowling, Jr., December 1983</i> | 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. Tadler, 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 1: 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. Ghate, 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
—<i>K.H. Moinuddin, November 1992</i></p> <p>No. 2 The Eastern Islands of Indonesia: An Overview of Development Needs and Potential
—<i>Brien K. Parkinson, January 1993</i></p> <p>No. 3 Rural Institutional Finance in Bangladesh and Nepal: Review and Agenda for Reforms
—<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
—<i>T.K. Jayaraman, December 1993</i></p> <p>No. 5 Reforms in the Transitional Economies of Asia
—<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
—<i>Elisabetta Capannelli and Omkar L. Shrestha, December 1993</i></p> <p>No. 7 Sustainable Development Environment and Poverty Nexus
—<i>K.F. Jalal, December 1993</i></p> <p>No. 8 Intermediate Services and Economic Development: The Malaysian Example
—<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
—<i>Carlos J. Glower, July 1994</i></p> <p>No. 10 Some Aspects of Land Administration in Indonesia: Implications for Bank Operations
—<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
—<i>T.K. Jayaraman, February 1995</i></p> | <p>No. 12 Managing Development through Institution Building
— <i>Hilton L. Root, October 1995</i></p> <p>No. 13 Growth, Structural Change, and Optimal Poverty Interventions
—<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
—<i>T.K. Jayaraman, October 1996</i></p> <p>No. 15 The Rural-Urban Transition in Viet Nam: Some Selected Issues
—<i>Sudipto Mundle and Brian Van Arkadie, October 1997</i></p> <p>No. 16 A New Approach to Setting the Future Transport Agenda
—<i>Roger Allport, Geoff Key, and Charles Melhuish, June 1998</i></p> <p>No. 17 Adjustment and Distribution: The Indian Experience
—<i>Sudipto Mundle and V.B. Tulasidhar, June 1998</i></p> <p>No. 18 Tax Reforms in Viet Nam: A Selective Analysis
—<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
—<i>Pradumna B. Rana, December 1998</i></p> <p>No. 20 The Millennium Round and the Asian Economies: An Introduction
—<i>Dilip K. Das, October 1999</i></p> <p>No. 21 Occupational Segregation and the Gender Earnings Gap
—<i>Joseph E. Zveglic, Jr. and Yana van der Meulen Rodgers, December 1999</i></p> <p>No. 22 Information Technology: Next Locomotive of Growth?
—<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
—<i>I.P. David, September 1984</i></p> <p>No. 2 Multivariate Statistical and Graphical Classification Techniques Applied to the Problem of Grouping Countries
—<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
—<i>S.G. Tiwari, September 1985</i></p> <p>No. 4 Estimates of Comparable Savings in Selected DMCs
—<i>Hananto Sigit, December 1985</i></p> <p>No. 5 Keeping Sample Survey Design and Analysis Simple
—<i>I.P. David, December 1985</i></p> <p>No. 6 External Debt Situation in Asian Developing Countries
—<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
—<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
—<i>P. Hodgkinson, October 1986</i></p> <p>No. 9 Survey of the External Debt Situation</p> | <p>in Asian Developing Countries, 1985
—<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
—<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
—<i>Jungsoo Lee and I.P. David, March 1989</i></p> <p>No. 12 The State of Agricultural Statistics in Southeast Asia
—<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
—<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
—<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
—<i>Min Tang, June 1991</i></p> <p>No. 16 Recent Trends and Prospects of External Debt Situation and Financial Flows to Asian and Pacific Developing Countries
—<i>Min Tang and Aludia Pardo, June 1992</i></p> <p>No. 17 Purchasing Power Parity in Asian Developing Countries: A Co-Integration Test
—<i>Min Tang and Ronald Q. Butiong, April 1994</i></p> <p>No. 18 Capital Flows to Asian and Pacific Developing Countries: Recent Trends and Future Prospects
—<i>Min Tang and James Villafuerte, October 1995</i></p> |
|---|---|

SERIALS

(Available commercially through ADB Office of External Relations)

1. Asian Development Outlook (ADO; annual)
\$36.00 (paperback)
2. Key Indicators of Developing Asian and Pacific Countries (KI; annual)
\$35.00 (paperback)
3. Asian Development Review (ADR; semiannual)
\$5.00 per issue; \$8.00 per year (2 issues)

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
Web: 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
Web: 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
Web: www.palgrave.com/home/

1. Managing FDI in a Globalizing Economy
Asian Experiences
Edited by Douglas H. Brooks and Hal Hill, 2004
2. 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)