

Qin, Duo et al.

Working Paper

Income Disparity and Economic Growth: Evidence from People's Republic of China

ERD Working Paper Series, No. 84

Provided in Cooperation with:

Asian Development Bank (ADB), Manila

Suggested Citation: Qin, Duo et al. (2006) : Income Disparity and Economic Growth: Evidence from People's Republic of China, ERD Working Paper Series, No. 84, Asian Development Bank (ADB), Manila,
<https://hdl.handle.net/11540/1883>

This Version is available at:

<https://hdl.handle.net/10419/109290>

Standard-Nutzungsbedingungen:

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

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

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

Terms of use:

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

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

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



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

ERD Working Paper

ECONOMICS AND RESEARCH DEPARTMENT

SERIES

No. 84

Income Disparity and Economic
Growth: Evidence from
People's Republic of China

Duo Qin, Marie Anne Cagas,
Geoffrey Ducanes, Xinhua He,
Rui Liu, and Shiguo Liu

October 2006

Asian Development Bank

ERD Working Paper No. 84

INCOME DISPARITY AND ECONOMIC GROWTH: EVIDENCE FROM PEOPLE'S REPUBLIC OF CHINA

**DUO QIN, MARIE ANNE CAGAS, GEOFFREY DUCANES,
XINHUA HE, RUI LIU, AND SHIGUO LIU**

OCTOBER 2006

Duo Qin is a professor at St. Mary's College, London; Marie Anne Cagas and Geoffrey Ducanes are consultants at the Economics and Research Department, Asian Development Bank; and Xinhua He, Riu Liu, and Shiguo Liu are academic staff at the Department of World Economic Statistics, Institute of World Economics and Politics, Chinese Academy of Social Sciences.

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

©2006 by Asian Development Bank
October 2006
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 on Income Inequality in the PRC	1
III. Theories on Income Inequality → Growth Nexus	3
IV. Method of Investigation and Inequality Measures	4
V. Econometric Model Results	8
VI. Model Simulations	11
VII. Conclusion	17
Appendix: Main Data Sources and Variable Definition	18
References	19

ABSTRACT

This pilot empirical study seeks to ascertain how income inequality affects growth by incorporating panel data information into a macroeconometric model. People's Republic of China is used as the pilot field. Provincial urban and rural household data are used to construct income inequality measures, which are then used to augment household consumption equations in a quarterly macroeconometric model. Model simulations are performed to study the inequality effect on gross domestic product growth and its sectoral components. Results show that income inequality forms robust explanatory variables of consumption and that the way inequality develops carries certain negative consequences on gross domestic product and sectoral growth.

I. INTRODUCTION

Since undertaking market reforms in 1978, the economy of People's Republic of China (PRC) has achieved sustained high growth and rapid progress in poverty reduction. The World Bank estimates that in the more than two decades since reforms started, average income per capita in the country has quadrupled, while more than 270 million people have been lifted out of poverty (Chen and Wang 2001). From 1978 to 2004, gross domestic product (GDP) growth in the PRC averaged nearly 10% annually, the highest growth rate of any country in the world for the same period, and, at least in the near term, it has not yet shown signs of slowing down.

If there seems to be a dark lining to these extraordinary achievements, it is that income inequality in the country—seen as a whole, within/between urban and rural areas, and across provinces—has also risen quite rapidly in the period (see for example World Bank 1997, Chen and Wang 2001, Kanbur and Zhang 2005). For any given level of natural or human capital, the greater the inequality, the higher the poverty one could expect. Income inequality is also seen to affect long-term economic growth, although there is no consensus on the direction of the effect.

If income inequality affects growth positively, it is possible that the poverty-reducing impact of this growth offsets the direct adverse effect of inequality on welfare, thus tolerating relatively high inequality. On the other hand, if inequality affects growth negatively, then addressing it immediately should be an important concern.

This paper investigates empirically how much and in what ways income inequality affects the PRC's economic growth by means of incorporating income disparity measures derived from provincial panel data of urban and rural household income into a macroeconometric model, and simulating the effects of changes in income inequality on growth. The rest of the paper is structured as follows. Section II gives a summary of the inequality situation in the PRC. Section III briefly surveys the literature on the transmission mechanism between income inequality and economic growth. Section IV describes our modeling approach and discusses available inequality measures that might be pertinent to our investigation. Section V describes the estimation results of incorporating income inequality into the macroeconometric model. Section VI presents the results of model simulations showing the effects of inequality changes on other economic variables. The last section concludes.

II. BACKGROUND ON INCOME INEQUALITY IN THE PRC

Income inequality had remained fairly mild and stable under an egalitarian regime prior to economic reforms that started in 1978. According to Li et al. (2000, 3–4), the Gini ratio of urban workers was 0.16; the Gini ratio for rural households was 0.21 in 1978;¹ and the Gini ratio among provinces was 0.14 in 1979. The situation has changed considerably since the reforms. Following the government's introduction of individual incentives (also known as the household responsibility

¹ Li et al. (2000, 3) list several estimates for rural households' Gini ratio in 1978: 0.21 estimated by the National Statistics Bureau of China, 0.22 estimated by Adelman and Sunding in 1987, and 0.31 estimated by the World Bank in 1983.

system) and market forces in 1978, as these immediately began to increase returns to capital and land, diversify employment, and increase factor mobility (World Bank 1997), income inequality rose significantly for the country as a whole, within/between urban and rural areas, and across provinces. This is particularly interesting in view of the fact that inequality is found to remain fairly constant over time in many economies (e.g., see Besley and Burgess 2003).

Krongkaew (2003) reports the per capita income Gini ratio in the whole of the PRC to be at 0.29 in 1981, and to have risen progressively to 0.30 in 1984, 0.35 in 1989, 0.39 in 1995, and 0.46 in 2000. Li et al. (2000, 8) estimate that *within rural areas* the Gini ratio of household income rose from 0.21 to 0.34 from 1979 to 1995, and that *within urban areas* the Gini ratio went up from 0.16 to 0.28 in the same period. Li et al. (2000) and Zhang (2003), meanwhile, report the interprovincial per capita income Gini ratio to have been rising almost consistently from 0.32 in 1978, to 0.28 in 1983, 0.38 in 1988, 0.39 in 1995, 0.40 in 1999, and 0.42 in 2000.

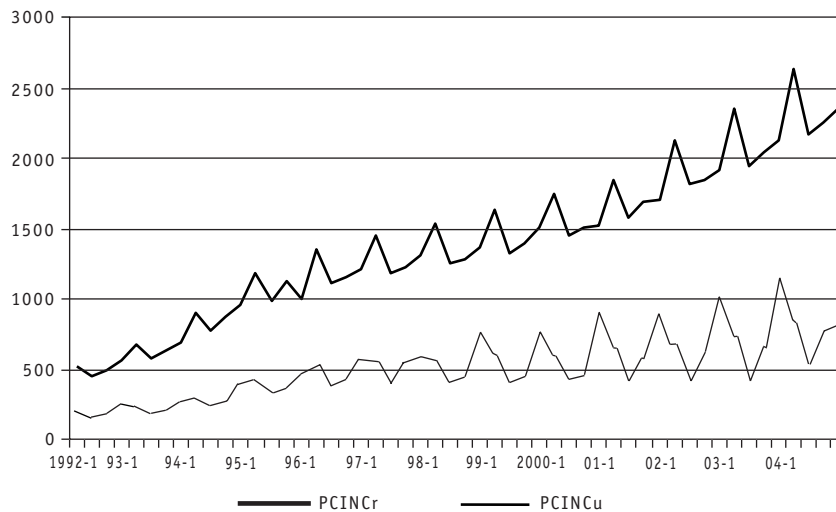
The household responsibility system initially resulted in rural income growth surpassing urban income growth as farms achieved greater productivity, but this trend was soon reversed as agricultural productivity hit the ceiling and rural income fell further behind urban income. In fact, one may divide the period 1981 up to the present for the PRC into three different subperiods differentiated by the growth–equity characteristic of the economy, as was done by the World Bank (1997). The period 1981–1984 could be classified as a period of *growth with equity* as real mean income increased by 12.6% a year during this period while the Gini ratio rose only marginally. The period 1984–1989 could be classified as a period of *income inequality with little growth* as overall real mean income increased by less than 1% a year for this period, and this was very unevenly distributed as income of the richest decile increased while the income of the poorest decile fell (World Bank 1997).² Finally, the period 1990 up to the present is a period of *growth with income inequality* as both overall real mean income and the Gini ratio grew rapidly.

Some researchers have claimed that the PRC possibly has the largest income gap between the rural and urban sectors in the world (e.g., see Lin 2003). Inequality decompositions done by the government show that the rural–urban income gap explained one third of total inequality in 1995 and one half the increase in inequality since 1985. Rural per capita income was 38.9% of urban per capita income in 1978, 53.8% in 1985, and was down to 35.9% in 2000 (Lin 2003). Li et al. (2000) note the same diverging path of rural and urban incomes. This does not even take into account the set of publicly provided services (housing, pensions, health, education, and other entitlements) that augment urban incomes by an average of 80 percent. When these are considered, rural–urban disparities accounted for an even greater share of total inequality (World Bank 1997). Figure 1 shows for the period 1992–2003 the widening gap between urban and rural per capita incomes.

Across provinces, the biggest source of increasing income inequality appears to be between coastal and interior provinces. Coastal provinces benefited from their proximity to world markets, better infrastructure, and educated labor force as the PRC opened up to the outside world (World Bank 1997). Interprovincial inequality accounted for a quarter of total inequality in 1995 and explained a third of the increase since 1985. In 1985 residents in the interior of the PRC earned 75% as much as their coastal counterparts; by 1995 this had dropped to 50% (World Bank 1997).

² However, this description may not be so accurate if we look at the official statistics on per capita GDP.

Figure 1
Per Capita Household Income (RMB per quarter)



Note: Figures are in nominal terms. See Appendix for the data source.

III. THEORIES ON INCOME INEQUALITY → GROWTH NEXUS

One of the most famous postulates concerning income inequality and growth was put forward by Kuznets (1955). In what has come to be known as Kuznets's hypothesis, it is postulated that in the course of the development of a country, inequality first rises before eventually declining—the inverted-U hypothesis. However, Kuznets's hypothesis implies a causal relationship of growth → inequality at a macro level, i.e., relating inequality to the stages of economic development.

Theories concerning how income inequality affects economic growth are more micro oriented, i.e., relating heterogeneous consumers' behavior and investment indivisibility to aggregate demand (e.g., see Bagliano and Bertola 2004). Specifically, the theories demonstrate that unequal income distribution among households—at a point in time but more especially as it changes over time³—affects aggregate consumption and demand structure through heterogeneous propensities to consume and to save, and these effects are then transmitted to investment allocations, especially investment in human capital (see for example Benabou 1996, Galor and Zeira 1993, Galor and Tsiddon 1997). Consequent theories augment the transmission process by studying the effect of inequality on redistributive policies and the possible inefficiencies those may bring.⁴ Broader sociological studies also pinpoint inequality as a possible cause for socio-political instability or violence (see for example Knack and Keefer 2000), and even for the differences in fertility rate (see Perotti 1996).

³ An early pioneer of this issue is Staehle (1937 and 1938), who demonstrated how visible income distribution changed in Germany using quarterly data and how such changes affected aggregate market demand. In this context, he pointed out the weakness of Keynes's aggregate propensity to consume for overlooking the implication of income distribution and endorsed Robinson's (1933) proposal to bring income distribution between classes into discussions of aggregate output growth. Noticeably, Robinson's idea is precursory to the later development of growth models with two classes (see Kaldor 1956 and 1957, Bourguignon 1981). An example of recent theories is Zweimüller (2000), which shows how inequality can affect long-run growth negatively by depressing aggregate demand for innovative products.

⁴ For evidence or lack of this, see Alesina and Rodrik (1994), Persson and Tabellini (1994), Perotti (1996), and Deininger and Squire (1998).

Many empirical studies have produced positive evidence about the link between growth and income inequality (e.g., Aghion et al. 1999). These studies can roughly be divided into two strands: cross-country analyses and micro-based (usually household survey based) studies. Cross-country analyses are frequently carried out by running regressions of growth rates on various proxies for income inequality and redistribution effects together with relevant control variables. These are often criticized, however, for lack of structural models and thus methodological crudity (e.g., see Figini 1999). Micro applied studies, on the other hand, while methodologically tighter, often lack a systematic and direct link to the macro economy.⁵

One increasingly popular approach is to study the subject by means of computable general equilibrium (CGE) models. The CGE approach has the attraction of providing a logically consistent way of analyzing the link between aggregate economic growth and disaggregated income changes. A good example of this is the model developed recently by the Poverty and Social Impact Analysis Group at the World Bank (see Bourguignon et al. 2003). However, as CGE models are heavily calibrated, it is difficult to assess the model conclusions empirically. Moreover, CGE models tend to lack realistic dynamic adjustment mechanisms and might not be able to account for the heterogeneous effects of a given policy within assumed homogenous agent groups, thus making them miss important sources of changes in income inequality.

IV. METHOD OF INVESTIGATION AND INEQUALITY MEASURES

In this study, we explore a novel route of augmenting a macroeconometric model of the PRC with income inequality measures built upon panel data such that the impact of income inequality on growth and the macro economy can be studied via model simulations.⁶

The macroeconometric model of the PRC was developed at the Asian Development Bank (ADB) jointly with the Institute of World Economics and Politics (IWEP) of the Chinese Academy of Social Sciences (CASS), following He et al. (2005). The model, hereafter referred to as the ADB PRC model, uses quarterly data and contains over 70 endogenous variables and less than 20 nonmodeled variables. It is structured into six blocks: investment, foreign trade, government, banking, prices, and private income and consumption. The last block is built upon aggregate time series of urban and rural household per capita income. A detailed description of the model plus a full equation list is given in Qin et al. (2006).⁷ To augment the model, panel data of urban and rural household per capita incomes of 30 provinces and autonomous municipalities at annual frequency are collected.⁸

Two types of income inequality measures can be derived from the available data. One is income inequality between urban and rural areas measured by the ratio of their per capita incomes using solely the aggregate time-series data (see Figure 1). The other is income inequality within urban and within rural areas, obtained by exploiting provincial panel data on per capita income. There are several possible measures to characterize income inequality of panel data according to

⁵ A good example of micro empirical studies relating to the PRC is carried out by Benjamin et al. (2004). Based on household survey data, they find unambiguous deterioration of income distribution in rural PRC, but they acknowledge the difficulty of drawing inferences from their micro findings to macro conditions.

⁶ Due to panel data shortage, it is impossible to endogenise the inequality measures to study the effects of growth or government fiscal policy on these inequality measures.

⁷ Some of the model properties are exhibited in two applied studies: Qin et al. (2005); and Qin, Cagas, He, and Quising (2006).

⁸ Beijing, Shanghai, and Tianjin are counted as independent entries, but Chongqing, a relatively new autonomous municipality, is still regarded as part of Sichuan in our sample.

the literature. Table 1 gives the formula for some of the more prevalently used ones, which are the Gini coefficient (G), variance (V), coefficient of variation (c), log of variance ($v1$), variance of logarithms ($v2$), Atkinson's Index (A), Dalton's Index (D), Theil's Index (T), and Herfindahl's Index (H). In Figure 2, time-series graphs of each of these measures are plotted using panel data set for the period 1992–2003.

TABLE 1
INCOME INEQUALITY MEASURES AND THEIR PROPERTIES

MEASURE	FORMULA	PROPERTIES
Gini coefficient	$G = \frac{2 \operatorname{covar}(y, r_y)}{n\bar{y}}$	a,b,c
Variance	$V = \frac{1}{n} \sum_{i=1}^n [y_i - \bar{y}]^2$	a,c,d
Coefficient of variation	$c = \frac{\sqrt{V}}{\bar{y}}$	a,b,c,d
Log of variance	$v1 = \frac{1}{n} \sum_{i=1}^n \left[\log\left(\frac{y_i}{\bar{y}}\right) \right]^2$	c,d
Variance of logarithms	$v2 = \frac{1}{n} \sum_{i=1}^n \left[\log(y_i) - \frac{1}{n} \sum_{i=1}^n \log(y_i) \right]^2$	c,d
Atkinson's Index	$A = 1 - \frac{1}{y} U^{-1} \left(\frac{1}{n} \sum_{i=1}^n U(y_i) \right)$	a,b,c,d
Dalton's Index	$D = 1 - \frac{\frac{1}{n} \sum_{i=1}^n U(y_i)}{U(\bar{y})}$	a,d
Theil's Index	$T = \frac{1}{n} \sum_{i=1}^n \frac{y_i}{\bar{y}} \log\left(\frac{y_i}{\bar{y}}\right)$	a,b,c,d
Herfindahl's Index	$H = \left(\frac{y_i}{n\bar{y}} \right)^2$	a,b,d

a means weak principle of transfers.

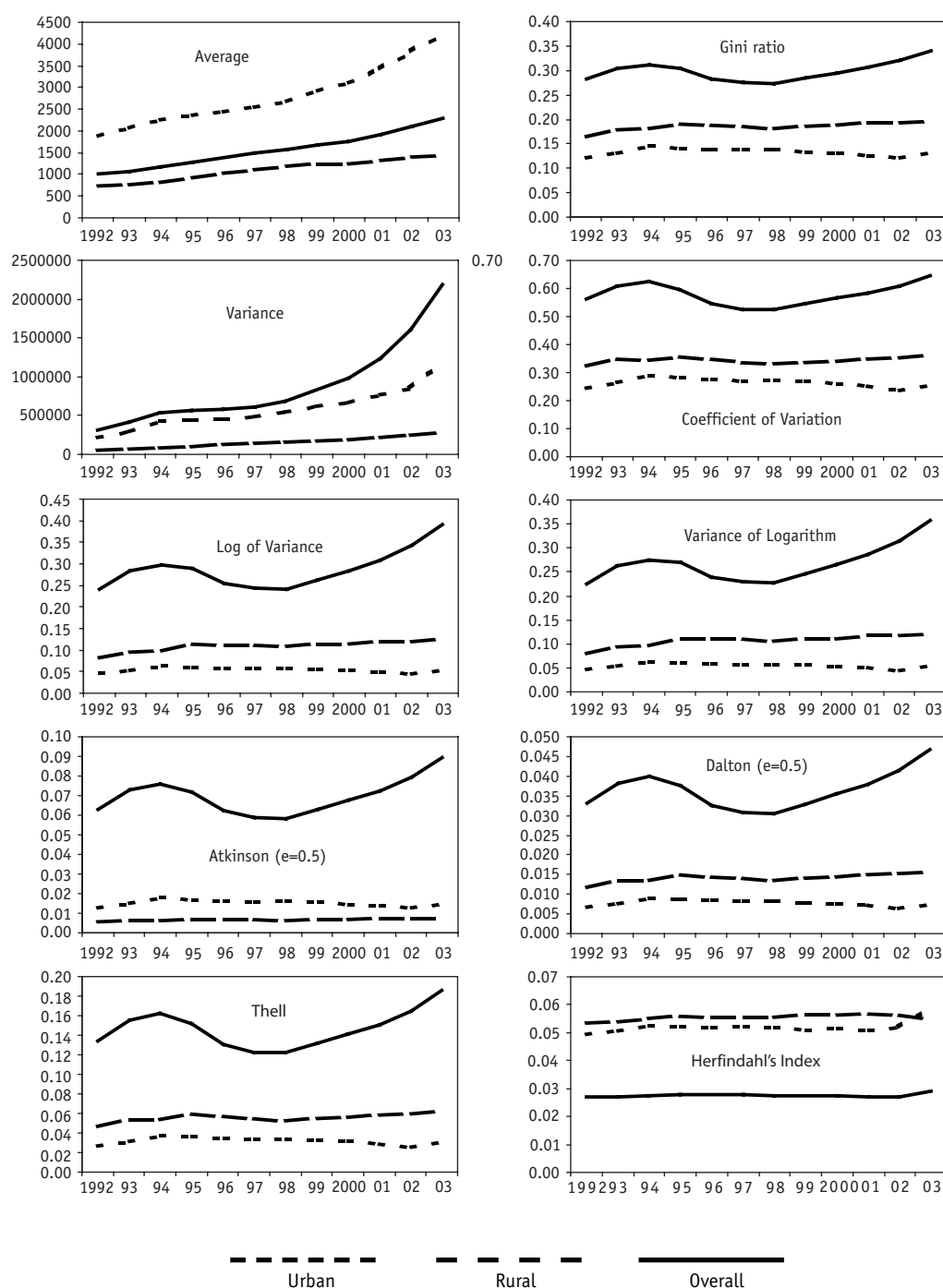
b means scale independence.

c means principle of population.

d means decomposability.

Note: For all measures y denotes income. 1. r_y is the correlation coefficient between income and the ranks of all individuals according to their income from poorest to richest, n is the population size; 2. $\bar{y}$ is mean income; 3. $U(\cdot)$ denotes a social utility function, which in this paper we assumed to take the form of a constant relative inequality aversion utility function.

FIGURE 2
URBAN, RURAL AND OVERALL INTERPROVINCIAL PER CAPITA INCOME INEQUALITY



Source: Authors' computations. Gini ratios were computed using the Distribution Alalysis Software (DAD).

Four basic properties are commonly used to evaluate the goodness of various income inequality measures (e.g., see Cowell 1995, Deininger and Squire 1998, Chakravarty 1999, and Fields 2001). These properties are most widely known as “anonymity”; “population homogeneity” or “population independence”; “transfer principle” or “the Pigou-Dalton condition”; and “income homogeneity” or “scale independence” or “normalization.” “Anonymity” means that the names of the individuals are irrelevant to the question of inequality. “Population homogeneity” refers to the situation where one income distribution is an n -fold replication of another, and the two distributions are regarded as equal. “Transfer principle” is an income transfer from a rich person to a poor person that does not make the poor the richer of the two, and which reduces inequality. “Income homogeneity” is a relative inequality measure that is scale-invariant or homogeneous of degree zero in incomes.⁹ Alternatively, these properties are referred to, respectively, as “weak principle of transfers”, “principle of population”, “decomposability”, and “income scale independence”.¹⁰

Of the above income inequality measures, the weak principle of transfers is satisfied by G , V , c , T , H , A , and D and failed by $v1$ and $v2$. The property of income scale independence is satisfied by all aforementioned inequality measures except V and D . All measures except D and H satisfy the principle of population. Decomposability is satisfied by all except $v1$, $v2$, and G . Although the Gini coefficient is the most popular income inequality measure, we consider only the three measures that satisfy all four properties, c , T , and A .

Once the income inequality measures are selected, we incorporate them into the model through the private consumption equations, similar to what Qin (2003) has done. The consumption equations are of the form:

$$PCON_{it} = f(PCINC_{it}, IR\%_t, P\#C_t, \frac{PCINC_{ut}}{PCINC_{rt}}, INEQ_{rt}, INEQ_{ut}) \quad i = r, u \quad (1)$$

where $PCON$ denotes per capita consumption, $PCINC$ denotes per capita income, $P\#C$ denotes the consumer price index, $INEQ$ denotes income inequality measures, $IR\%$ denotes the interest rate on demand deposits, the subscript i denotes subgroup of rural and urban households, and t denotes time. To get rid of the scale factors, we assume there are log-linear relationships between the variables, except for the interest rate and income inequality variables.

The effect of income inequality on consumption (and therefore savings) is of uncertain sign a priori; see for example, Ray (1998). If marginal savings increase with income, then an increase in income inequality, insofar as it is equivalent to a transfer of income to the relatively rich, will mean an increase in aggregate savings *ceteris paribus*. On the other hand, if marginal savings decrease with income, an increase in income inequality could lower savings.

In practice, regressions directly based on the log-linear form of equation (1) risks nonsense results due to the nonstationarity of most economic time series. Hence, we adopt the general $\rightarrow$ specific dynamic modeling approach of Hendry (1995). Specifically, we start with an autoregressive distributed-lag model based on equation (1), gradually reduce and re-parameterize it into a

⁹ Absolute inequality and relative inequality are not alternative measures of the same underlying concepts; they measure fundamentally different concepts. Absolute inequality relies on dollar differences in real incomes, whereas relative inequality is measured in terms of income ratios.

¹⁰ Cowell (1995) identifies an additional property: strong principle of transfers. An inequality measure satisfies this property if any transfer of income from a “rich” household to a “poor” one generates a reduction in inequality that increases as the distance between the two households’ incomes increases.

parsimonious, data-congruent, and economically interpretable ECM. Statistical diagnostic tests, parameter constancy tests, and economic interpretability of individual coefficients are used extensively as the main criteria in the model reduction.¹¹ We pay particular attention to individual parameter constancy, as this is vital in ensuring relatively high confidence in model forecasts and simulations.

V. ECONOMETRIC MODEL RESULTS

As mentioned in Section 4, three types of income inequality measures that satisfy all the four properties are chosen to be included in the PRC model, and these are the coefficient of variation, Theil's index, and Atkinson's index. Through modeling experiments, we find that the results are consistent for all three measures but that using Theil's index generally produces a more parsimonious model. For this reason, we decide to use Theil's index as the inequality measure in the model. The sample size is 1992Q1–2003Q4. A simple smoothing method is used to interpolate annual income inequality measures into quarterly series.

Tables 2 and 3 present the final model reduction and estimation results of the two consumption equations based on equation (1) together with the original equations and the relevant diagnostic test statistics.¹² The original equations are simply formulated without the inequality measures, i.e.:

$$PCON_{it} = f(PCINC_{it}, IR\%_t, P\#C_t) \quad i = r, u \quad (2)$$

A number of interesting observations are discernible from the tables. First, the encompassing test statistics show that the inclusion of income inequality measures improves the equations significantly. Second, changes in Theil's inequality measures are found to exert only short-run impact. These two results corroborate the classical finding of Staehle (1937 and 1938) that income inequality cannot be ignored in determining aggregate consumption, especially when income inequality is changing over time. Noticeably, urban and rural households react to the changing gap between urban and rural income inequality measures and, in addition, urban households also react to changes in urban income inequality. The short-run, positive reaction of rural households toward consumption with respect to increasing income inequality may be explained by the fact that the rural households became more dependent on cash consumption rather than self-sustained consumption during the sample period. Finally, an increase in average income level of the urban/rural households relative to the rural/urban households is found to exert significantly negative long-run impact on the urban/rural consumption. This suggests that urban/rural households exhibit a greater savings motive when they perceive their income growing steadily faster than their rural/urban counterparts. This result partly conforms to the theory that income inequality affects aggregate demand negatively in the long run (see Zweimüller 2000).

¹¹ The softwares PcGive 10.0 and PcGETS 1.0 are used in the model reduction and estimation (see Doornik and Hendry 2001).

¹² The original equations are from the 2004 version of the PRC model, which is also used for the later simulations. The model presented in Qin et al. (2006) contains some modifications of that version.

TABLE 2
PER CAPITA CONSUMPTION OF URBAN HOUSEHOLDS

Without income inequality measure (Model 1)	$\begin{aligned} \Delta_2 \ln(PCONu)_t = & -\frac{0.0305}{(0.0107)} - \frac{0.3854}{(0.0751)} \Delta_2 \ln(PCONu)_{t-2} - \frac{0.0341}{(0.0139)} SQ_2 - \frac{0.06}{(0.01)} \\ & + \frac{0.3742}{(0.0523)} \Delta_2 \ln(PCINCu)_t + \frac{0.2628}{(0.0608)} \Delta_4 \ln(PCINCu)_{t-1} \\ & + \frac{0.5805}{(0.1109)} \Delta_2 \Delta_4 \ln(P\#C)_t + \frac{18.5771}{(6.306)} \Delta \Delta (INEQu - INEQR)_{t-1} \\ & - \frac{43.72}{(11.10)} \Delta \Delta INEQu_{t-1} - \frac{0.7333}{(0.0752)} \\ & \left[\ln \frac{PCONu}{PCINCu} + 0.005 * (IR\% - 100 * \Delta_4 \ln(P\#C))_{-1} + 0.13 * \ln \left(\frac{PCIN}{PCIN} \right) \right] \end{aligned}$		
Residual diagnostics	(standard error)	0.0245413	
	No autocorrelation	F(3,32) = 1.5187 [0.2285]	
	Normality	$\chi^2(2) = 3.2946$ [0.1926]	
	Homoscedasticity	F(9,25) = 1.7550 [0.1285]	
	RESET	F(1,34) = 1.5233 [0.2256]	
With income inequality measure (Model 2)	$\begin{aligned} \Delta_3 \ln(PCONr)_t = & -\frac{1.0056}{(0.0629)} + \frac{0.2338}{(0.0329)} SQ_1 - \frac{0.0095}{(0.0017)} \Delta_3 (IR\% - 100 * \Delta_4 \ln(P\#C))_t \\ & + \frac{0.0058}{(0.0016)} \Delta_3 (IR\% - 100 * \Delta_4 \ln(P\#C))_{t-3} + \frac{0.3755}{(0.0257)} \Delta \Delta_3 \ln(PCINCr)_t \\ & + \frac{0.3537}{(0.0592)} \Delta_3 \left(\ln \frac{PCINCr}{PCINCu} \right)_{t-1} + \frac{0.1525}{(0.0258)} \Delta \left(\ln \frac{PCINCr}{PCINCu} \right)_{t-2} \\ & + \frac{16.939}{(6.059)} \Delta (INEQR - INEQu)_t - \frac{0.9921}{(0.0615)} \\ & \left(\ln \frac{PCONr}{PCINCr} + 0.008 * (IR\% - 100 * \Delta_4 \ln(P\#C)) + 0.4 * \left(\ln \frac{PCINCr}{PCINCu} \right) \right)_{t-3} \end{aligned}$		
Residual Diagnostics	σ (standard error)	0.01798	
	No autocorrelation	F(3,28) = 1.6566 [0.1989]	
	Normality	$2(2) = 0.4401$ [0.8025]	
	Homoscedasticity	F(16,14) = 1.3718 [0.2790]	
	RESET	F(1,30) = 0.9166 [0.3460]	
Encompassing test	Cox	Model 1 versus Model 2	Model 2 versus Model 1
	Ericsson IV	N(0,1) = -8.620 [0.0000]**	N(0,1) = -0.4500 [0.6527]
	Sargan	N(0,1) = 5.032 [0.0000]**	N(0,1) = 0.1229 [0.7023]
	Joint Model	$\chi^2(7) = 18.859$ [0.0086]**	$\chi^2(3) = 0.92356$ [0.8197]
		F(7,28) = 4.6736 [0.0014]**	F(3,28) = 0.2866 [0.8347]

Note: The variable notations are given in the appendix. As Δ_2 denotes second-order difference, i.e., $x_t - x_{t-2}$. SQ denotes quarterly seasonal dummy. The statistics in the brackets below coefficient estimates are standard errors. The statistics in the squared brackets following test statistics are the associated probabilities; the ** mark indicates that the probability is smaller than 1%, i.e., strongly rejecting the null hypothesis.

TABLE 3
PER CAPITA CONSUMPTION OF RURAL HOUSEHOLDS

Without income inequality measure (Model 1)	$\Delta_3 \ln(PCONr)_t = -1.0056 + \frac{0.2338}{(0.0629)} SQ1 - \frac{0.0095}{(0.0017)} \Delta_3 (IR\% - 100 * \Delta_4 \ln(P\#C))_t$ $+ \frac{0.0058}{(0.0016)} \Delta_3 (IR\% - 100 * \Delta_4 \ln(P\#C))_{t-3} + \frac{0.3755}{(0.0257)} \Delta \Delta_3 \ln(PCINCr)_t$ $+ \frac{0.3537}{(0.0592)} \Delta_3 \left(\ln \frac{PCINCr}{PCINCu} \right)_{t-1} + \frac{0.1525}{(0.0258)} \Delta \left(\ln \frac{PCINCr}{PCINCu} \right)_{t-2}$ $+ \frac{16.939}{(6.059)} \Delta (INEQr - INEQu)_t - \frac{0.9921}{(0.0615)}$		
Residual diagnostics	(standard error)	0.03896	
	No autocorrelation	F(3,30) = 1.7641 [0.1753]	
	Normality	2(2) = 0.2127 [0.8991]	
	Homoscedasticity	F(11,21)= 0.9133 [0.5451]	
	RESET	F(1,32) = 0.1853 [0.6697]	
With income inequality measure (Model 2)	$\Delta_3 \ln(PCONr)_t = -1.0056 + \frac{0.2338}{(0.0629)} SQ1 - \frac{0.0095}{(0.0017)} \Delta_3 (IR\% - 100 * \Delta_4 \ln(P\#C))_t$ $+ \frac{0.0058}{(0.0016)} \Delta_3 (IR\% - 100 * \Delta_4 \ln(P\#C))_{t-3} + \frac{0.3755}{(0.0257)} \Delta \Delta_3 \ln(PCINCr)_t$ $+ \frac{0.3537}{(0.0592)} \Delta_3 \left(\ln \frac{PCINCr}{PCINCu} \right)_{t-1} + \frac{0.1525}{(0.0258)} \Delta \left(\ln \frac{PCINCr}{PCINCu} \right)_{t-2}$ $+ \frac{16.939}{(6.059)} \Delta (INEQr - INEQu)_t - \frac{0.9921}{(0.0615)}$ $\left(\ln \frac{PCONr}{PCINCr} + 0.008 * (IR\% - 100 * \Delta_4 \ln(P\#C)) + 0.4 * \left(\ln \frac{PCINCr}{PCINCu} \right) \right)_{t-3}$		
Residual diagnostics	(standard error)	0.03023	
	No autocorrelation	F(3,26) = 0.8101 [0.4998]	
	Normality	2(2) = 1.3326 [0.5136]	
	Homoscedasticity	F(15,13) = 0.6528 [0.7869]	
	RESET	F(1,28) = 0.2033 [0.6556]	
Encompassing test	Cox	Model 1 versus Model 2	Model 2 versus Model 1
	Ericsson IV	N(0,1) = -6.590 [0.0000]**	N(0,1) = -0.5074 [0.6119]
	Sargan	N(0,1) = 3.871 [0.0001]**	N(0,1) = 0.4279 [0.6687]
	Joint Model	2 (6) = 15.470 [0.0169]*	2 (4) = 2.5040 [0.6439]
		F(6,25) = 4.1504 [0.0050]**	F(4,25) = 0.5907 [0.6725]

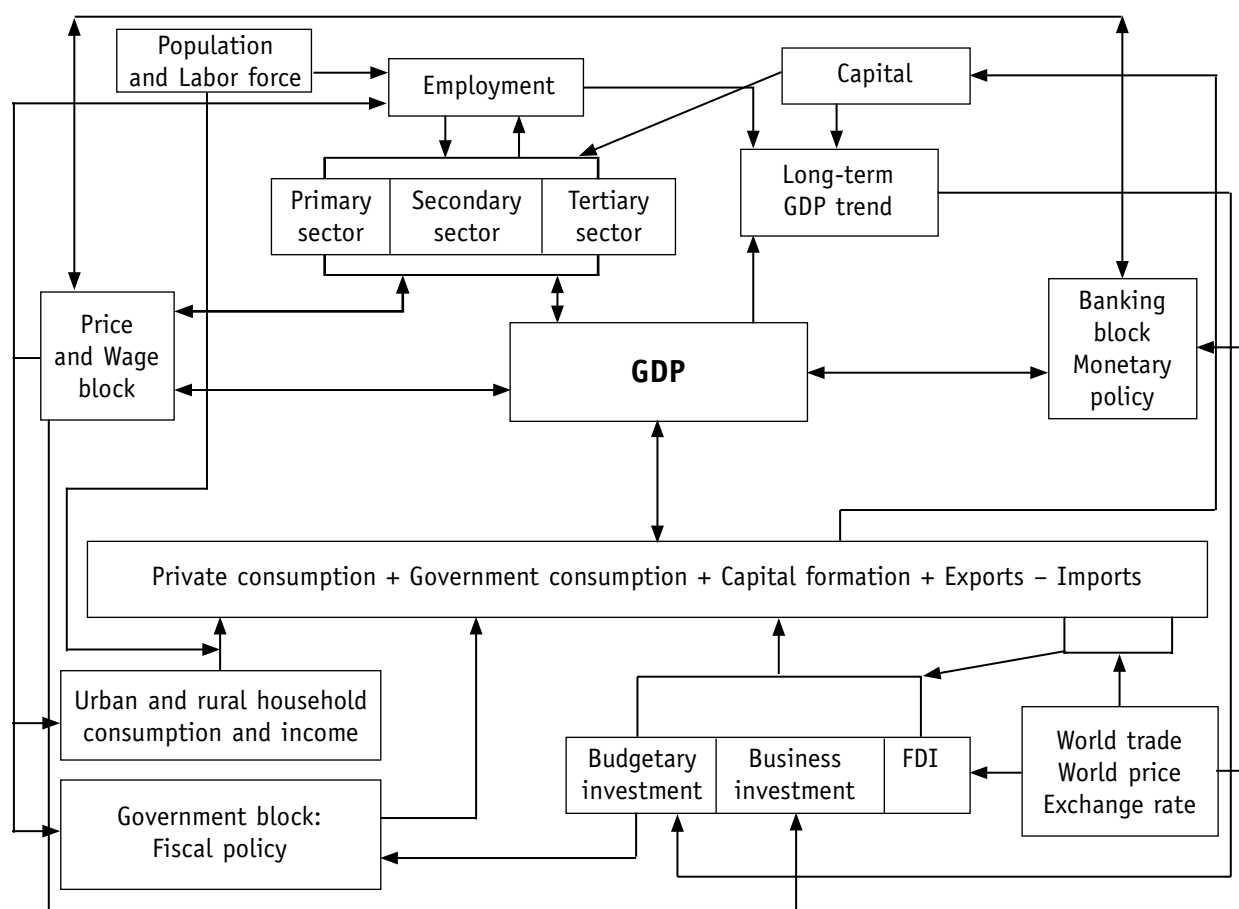
Note: See the note in Table 2.

Of course, it is inconclusive to infer that income inequality is definitely harmful for long-run aggregate demand by looking at the consumption effects alone. One also needs to take into account the effect of income inequality—even indirect ones—on the other variables. For instance, suppressed consumption will raise savings and hence may encourage investment, and eventually enhance future consumption. To investigate the overall macro impact of income inequality, we carry out a number of model simulations, which are presented in the next section.

VI. MODEL SIMULATIONS

In order to study how income inequality affects growth and the macro economy, we substitute, in the ADB PRC model, the two consumption equations without inequality measures (Model 1 in Tables 2 and 3) by the two equations with the measures (Model 2 in Tables 2 and 3), and carry out two sets of model simulations.¹³ The base run assumes that income inequality is constant at the 2003Q4 level from the beginning of 2004 up to the end of the simulation period, which covers 2005Q1–2010Q4.¹⁴

FIGURE 3
A FLOW CHART OF THE ADB PRC MODEL



¹³ The simulations are carried out using WinSolve. See Pierse (2001) for a detailed description of the software.

¹⁴ The simulations start from 2005Q1 to avoid the periods where there are already actual values for the variables of interest, even though the data series of the inequality measures end at 2003Q4.

The first set of simulations is the conventional impulse, step, and trend shocks on each of the urban and rural inequality measures. These shocks are defined below.

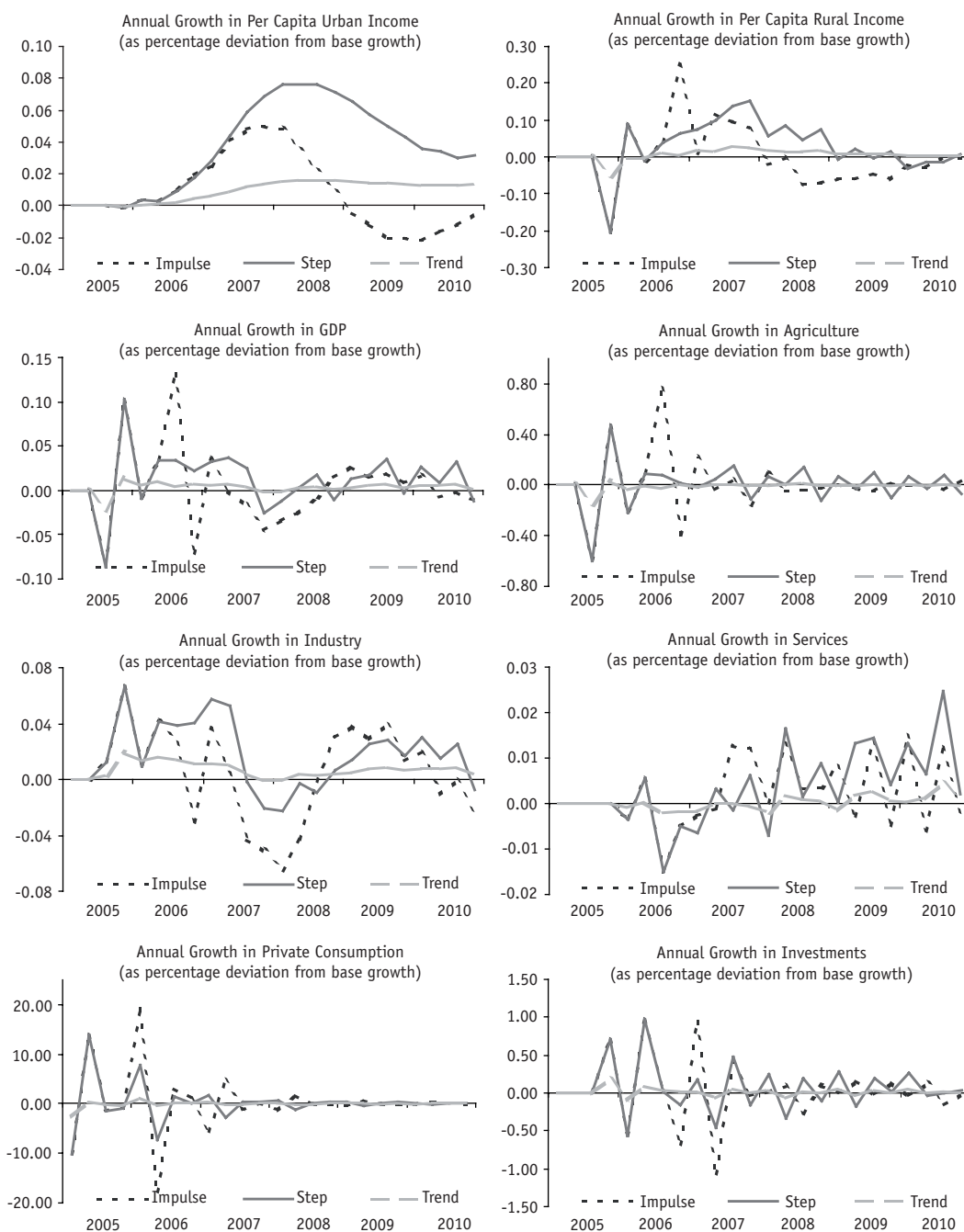
- (i) Impulse shock is the increase in inequality for one year (2005Q1–2005Q4) by 10% from its 2003Q4 level; upon which it returns to the 2003Q4 level at 2006Q1 and remains so to the end of the simulation period.
- (ii) Step shock is the increase in inequality by 10% from its 2003Q4 level at 2005Q1, and remains so to the end of the simulation period.
- (iii) Trend shock is the linear increase in inequality at 10% per annum starting from 2005Q1. The growth rate is chosen with reference to the increase in overall Theil index during recent years, e.g., 9% in 2002 and 13% in 2003 (see also the bottom left panel of Figure 2).

Notice that *INEQu* and *INEQr*, the inequality measures, are calculated from panel data whereas *PCINCu* and *PCINC**r*, the household per capita income series, are taken from *China Monthly Economic Indicators* (NBS 2005). Therefore, the shocks defined above implicitly assume that changes in *INEQu* and *INEQr* do not affect *PCINCu* and *PCINC**r* directly. However, as the income variables are endogenous in the model, they will be affected indirectly by changes in the inequality measures. Hence, the only assumption we need to make is that the shocks do not affect the income levels at the initial point when they first occur. In Figures 4 and 5, the indirect effect of the shocks on *PCINCu* and *PCINC**r* are plotted (top panels). It is interesting to see that increasing urban income inequality would, to a large extent, stimulate the growth of both urban and rural average income level whereas both urban and rural average incomes would decline from increasing rural income inequality. More interestingly, the rural household income growth would not be significantly affected downward if the inequality situation keeps evolving at the present pace (the trend shock case), unless there is an abrupt deterioration in income inequality (the impulse and step shock cases). Nevertheless, this result highlights the need, at the macro level, to address rural income inequality, especially considering that much of the poverty is concentrated in the rural areas in the PRC.

Figures 4 and 5 also demonstrate, for the urban and rural sectors respectively, the effects of the inequality shocks on GDP, its supply-side components of the three sector output, and its demand-side components of private consumption and capital formation, all measured in constant price. In the urban scenario (Figure 4), rural inequality is assumed to remain at its 2003Q4 level throughout the simulation period. The same applies to the rural scenario (Figure 5). It can be seen that the overall effects of rising inequality on GDP growth are almost negligibly small. In the urban scenario, rising inequality appears to stimulate slightly the production of the industry and services sectors if viewed from the supply side of GDP. Agriculture seems to be the only sector that would get virtually no long-run benefit. In comparison, agriculture is slightly worse off and the other two sectors are significantly worse off in the rural scenario.

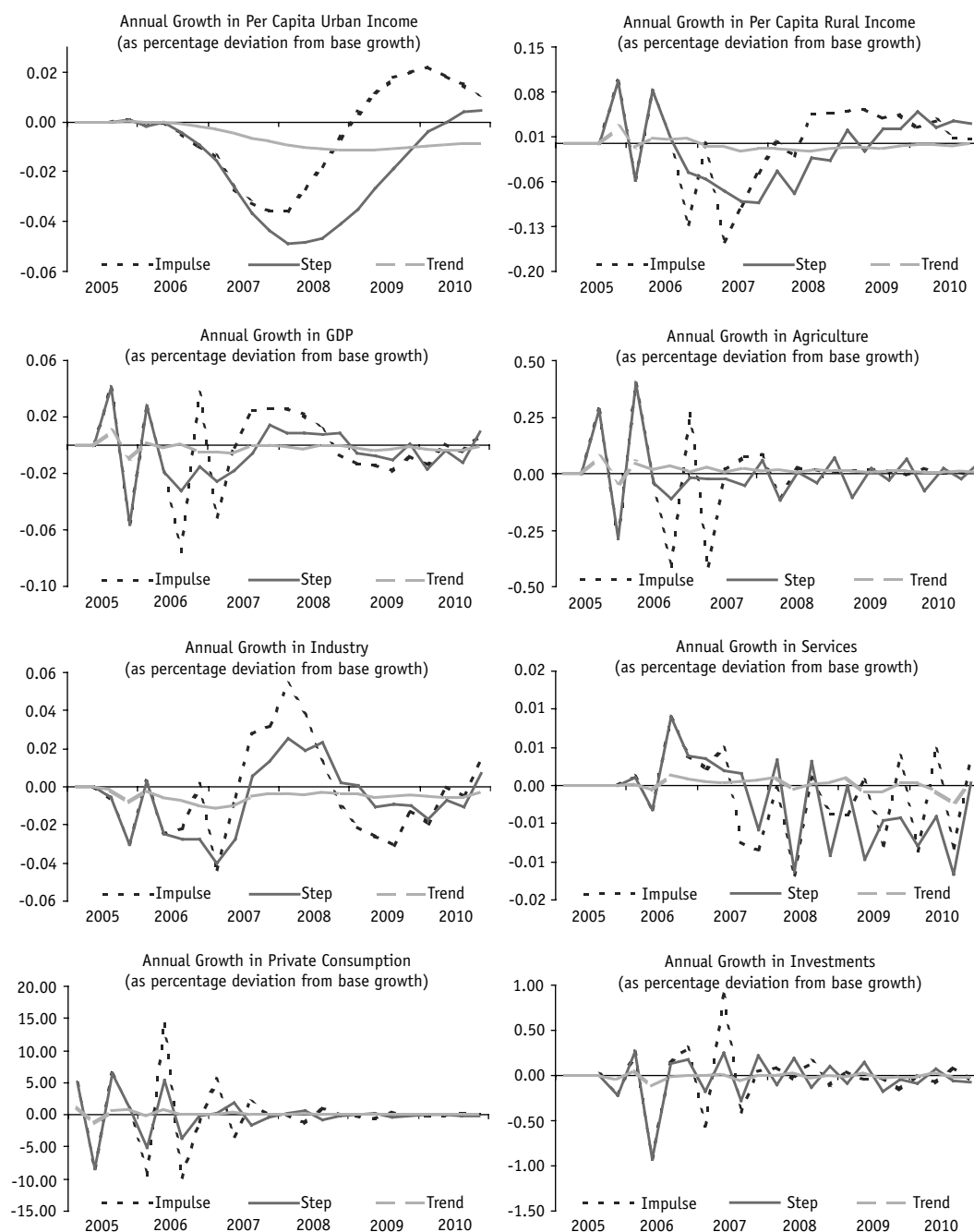
From the demand side of GDP, private consumption is the most responsive to income inequality shocks in terms of both velocity and volatility, with the response rapidly tapering off to virtually zero. This is not surprising given the household consumption equations reported in Tables 2 and 3. The volatility in aggregate consumption undulates on to aggregate investment, whose responses oscillate more persistently and more strongly than those of the three sectors. In a recent study by Qin, Cagas, He, and Quising (2006), impulse shocks in investment are found to affect the

FIGURE 4
URBAN INCOME INEQUALITY SHOCKS



Note: The scale of each vertical axis is quite different from each other.

FIGURE 5
RURAL INCOME INEQUALITY SHOCKS



output growth in the industry and services sectors far more than that of the agricultural sector. This helps to explain why the output growth of the three sectors responds so differently to the inequality shocks. If judged by economic stability, the simulation results show that changing inequality adversely affects the stability by encouraging more volatility in the growth of aggregate consumption, investment, and GDP.

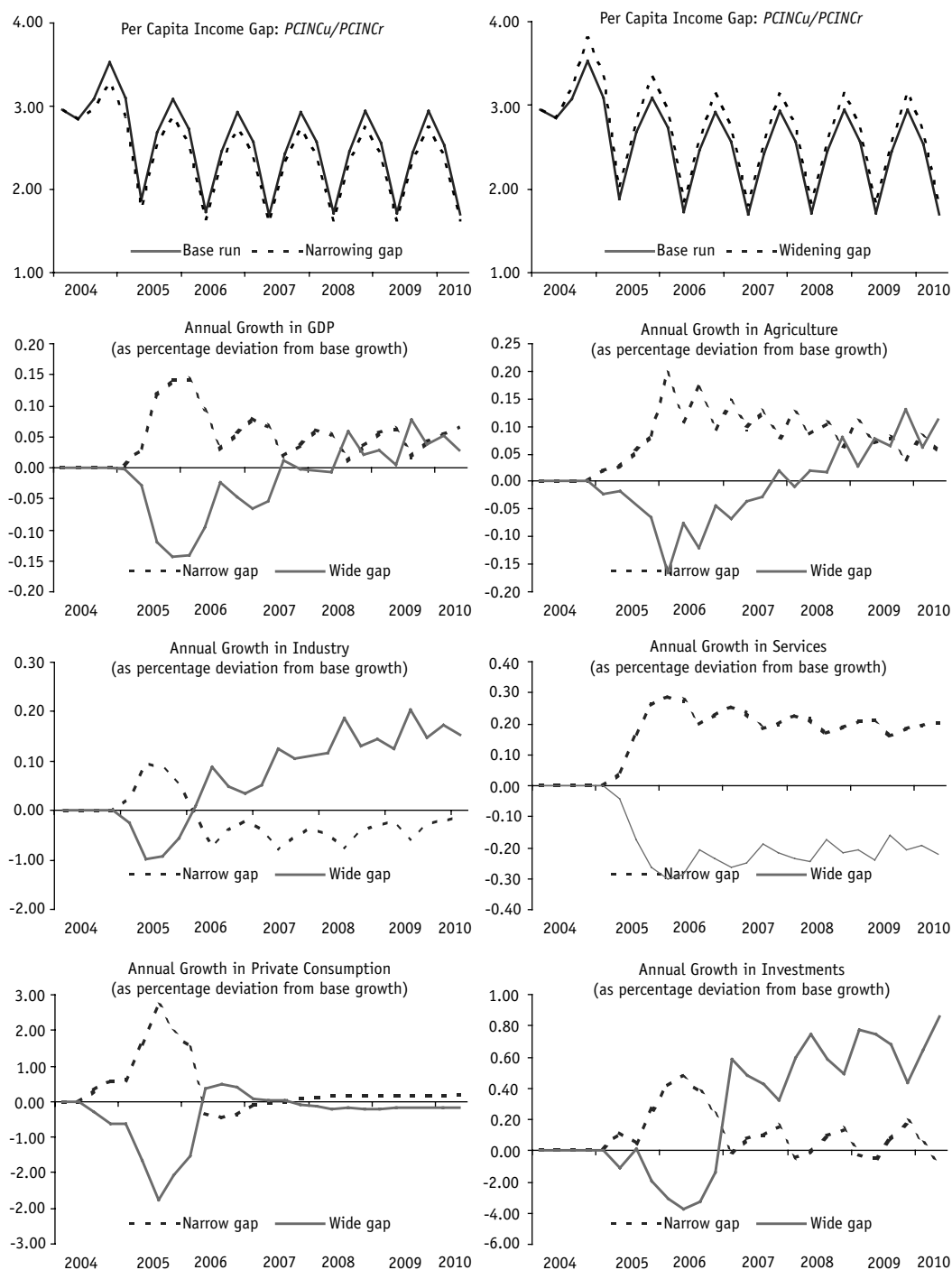
The second set of simulations tests the effects of income inequality as measured by the urban and rural income gap, $PCINCu/PCINCr$. Default forecasting shows that this gap remains at about 2.5 (i.e., urban per capita income is two and half times of rural per capita income on average) for the foreseeable future. Here the interest is to see what happens to the economy when the current gap narrows versus the situation when it widens. The simulations are designed as follows: the *narrowing gap scenario* assumes that beginning 2005Q1, the government gives a lump-sum transfer to the rural households equivalent to 1% of the previous year's GDP; the *widening gap scenario*, on the other hand, assumes that the government taxes the rural household income an amount equivalent to 1% of the previous year's GDP.¹⁵ The two scenarios amount to shifting the existing income gap by 0.15 roughly during the simulation period, as shown in Figure 6. It is clear from the figure that, for the most part, the two scenarios result in opposite effects. Narrowing the income gap has an immediate and sustained positive impact on GDP growth over the simulation period, whereas widening the gap has a negative immediate effect that eventually tapers off and becomes positive toward the end of the simulation period. On the whole, the narrowing-gap scenario results in weaker macroeconomic responses in terms of magnitude as rural households account for a smaller share of aggregate private consumption than urban households.

In terms of dynamics, the step shocks of changing urban and rural income gaps affect private consumption almost immediately and very significantly, and in turn its responses are transmitted to investment, agricultural production, industrial production, and services supply. The narrowing-gap scenario initially boosts aggregate private consumption by up to around 2.7% in the short run, whereas the widening-gap scenario depresses it, and both effects recede quickly to about 0.15~0.19% in absolute value in the long run. Consumption responses in turn are transmitted to demand for sectoral output, especially for agricultural produce and services, and these undulate on to investment demand as well. Notice that the responses of the secondary sector follow closely those of investment, only on a smaller scale, as this is the sector that is most dependent on investment. In comparison, the primary and tertiary sectors are more demand-driven. Hence their growths are buoyed by the increase in disposable income in the narrowing-gap scenario, and vice versa in the widening-gap scenario.

Compared to the results from the first set of simulations, the results of the second set show evidently that further widening of rural-urban income inequality would hinder economic growth, while narrowing the inequality would actually boost long-run growth. Overall, the simulations suggest that further disparate income distribution is unlikely to contribute favorably to sustaining steady economic growth in the long run, even though the likely adverse impact may not yet be very significant at the macro level.

¹⁵ The simulations implicitly assume that the taxes and transfers are proportional to household incomes so that within-urban and within-rural inequalities are unaffected.

FIGURE 6
RURAL-URBAN INCOME GAP SHOCKS



VII. CONCLUSION

Macroeconometric models are incapable of tackling the issue of how income inequality affects growth empirically for lack of explicit channels relating aggregate income and consumption to income distribution. The present study runs a pilot experiment to incorporate panel data information into a macro econometric model so that the issue of how income inequality affects growth can be studied through model simulations. The PRC is used as the pilot field. A panel of provincial urban and rural household income data is used to construct income inequality measures, which are used to augment the urban and rural consumption equations of the ADB PRC model. Simulations are then carried out on the modified model to show how future changes in income inequality would affect the macro economy.

Through model augmentation, the rapidly changing income inequality is found to exert significant impact on consumption of both urban and rural households. While rising urban income inequality holds back urban consumption in the short run, increase in the relative income level between rural and urban areas is found to stimulate household savings in the long run.

Through model simulations, we observe several interesting results. We find that significant changes in income inequality—whether within-urban, within-rural, or urban-rural—carry negative effects on macroeconomic stability as they cause consumption and then investment to undulate. Comparing the effects of shocking each of the urban and rural inequality measures, we find that increases in urban inequality carry more favorable (or less negative) effects to the macro economy than increases in rural inequality. In simulating the impact of changing urban-rural average income disparity, we see that GDP growth is highest in the long run when urban-rural income gap is narrowed (i.e., rural-favorable growth), as compared with the scenario where it is widened; and that the urban-favorable growth scenario (widening urban-rural gap) would only benefit the industrial sector in the long run.

Several extensions of the present study are desirable. First, it is desirable to extend the consumption block to base it on panel data entirely so as to achieve data consistency between aggregate income levels and income inequality measures. Secondly, it is desirable to explore explicit links between income inequality and employment distribution among the three sectors of GDP. More data would be needed for this extension. Thirdly, it is desirable to extend the fiscal block of the model to establish explicit links between income inequality and income redistribution policies. The last aspect is especially important since significant alleviation of income inequality entails powerful fiscal policy measures (see Besley and Burgess 2003). Whichever direction of extension, a wider mix of time-series and panel data in macroeconometric modeling seems the desirable way forward.

APPENDIX MAIN DATA SOURCES AND VARIABLE DEFINITION

VARIABLES	DEFINITION	SOURCE
GDP_C	Gross domestic product, quarterly frequency (million yuan, in 1992Q1 price)	CMEI
$INEQ_U, INEQ_r$	Income inequality measures, quarterly frequency interpolated from annual data (Theil's index is the final choice)	Authors' calculations
$IR\%$	Interest rate on demand deposits, quarterly frequency	CMEI
$P\#C$	Consumer price index, quarterly frequency 1992Q1=100	CMEI
$PCINC_{r_i}$	Provincial per capita net income of rural households of the PRC, annual frequency (yuan)	CSDM
$PCINC_r$	Per capita net income of rural households of the PRC, quarterly frequency (yuan)	CMEI
$PCINC_{u_i}$	Provincial per capita disposable income of urban households of the PRC, annual frequency (yuan)	CSDM
$PCINC_u$	Per capita disposable income of urban households of the PRC (yuan)	CMEI
$PCON_r$	Per capita living consumption of rural households of the PRC, quarterly frequency (yuan)	CSDM & CMEI
$PCON_u$	Per capita living consumption of urban households of the PRC, quarterly frequency (yuan)	CSDM & CMEI
POP_r	Population of rural PRC, annual frequency (1000 persons)	SYC
POP_{r_i}	Provincial population of rural PRC, annual frequency (1000 persons)	CSDM
POP_u	Population of urban PRC, annual frequency (1000 persons)	SYC
POP_{u_i}	Provincial population of urban PRC, annual frequency (1000 persons)	CSDM

Sources: National Bureau of Statistics: *China Statistical Yearbook* (SYC), *China Monthly Economic Indicators* (CMEI), *Comprehensive Statistical Data and Materials on 50 Years of New China* (CSDM 1999). Some of the historical data are directly from National Bureau of Statistics.

REFERENCES

- Aghion, P., E. Caroli, and C. Garcia-Peñalosa. 1999. "Inequality and Economic Growth: the Perspective of the New Growth Theories." *Journal of Economic Literature* 37:1615–60.
- Alesina, A., and D. Rodrik. 1994. "Distributive Politics and Economic Growth." *The Quarterly Journal of Economics* 109:465–89.
- Bagliano, F.-C., and G. Bertola. 2004. *Models for Dynamic Macroeconomics*. Oxford: Oxford University Press.
- Benabou, R. 1996. "Inequality and Growth." In B. Bernanke and J. Rotemberg eds., *NBER Macro Annual 1996*. Cambridge: MIT Press.
- Benjamin, D., L. Brandt, and J. Giles. 2004. The Evolution of Income Inequality in China. William Davidson Institute Working Papers Series No. 654, University of Michigan, Ann Arbor.
- Besley, T., and R. Burgess. 2003. "Halving Global Poverty." *Journal of Economic Perspective* 17:3–22.
- Bourguignon, F. 1981. "Pareto-Superiority of Unegalitarian Equilibria in Stiglitz' Model of Wealth Distribution with Convex Savings Function." *Econometrica* 49:1469–75.
- Bourguignon, F., L. A. Pereira, and D. Silva. 2003. *The Impact of Economic Policies on Poverty and Income Distribution: Evaluation Techniques and Tools*. Oxford: Oxford University Press.
- Chakravarty, S. R. 1999. "Measuring Inequality: The Axiomatic Approach." In J. Silber, ed., *Handbook of Income Inequality Measurement*. Boston/Dordrecht/London: Kluwer Academic Publishers.
- Chen, S., and Y. Wang. 2001. China's Growth and Poverty Reduction: Recent Trends Between 1990 and 1999. World Bank Policy Research Working Paper No. 2651, Washington, DC.
- Cowell, F. A. 1995. *Measuring Inequality*. London: Prentice Hall-Harvester Wheatsheaf.
- Deininger, K., and L. Squire. 1998. "New Ways of Looking at Old Issues." *Journal of Development Economics* 57:259–87.
- Doornik, J. A., and D. F. Hendry. 2001. *Empirical Econometric Modeling Using PcGive*. Timberlake Consultants Ltd., London.
- Fields, G. S. 2001. *Distribution and Development: A New Look at the Developing World*. Cambridge: Russell Sage Foundation and MIT Press.
- Figini, P. 1999. Inequality and Growth Revisited. Economics Department Economic Papers No. 99/2, Trinity College, The University of Dublin.
- Galor, O., and D. Tsiddon. 1997. "Technological Progress, Mobility, and Economic Growth." *American Economic Review* 87:363–82.
- Galor, O., and J. Zeira. 1993. "Income Distribution and Macroeconomics." *Review of Economic Studies* 60:35–52.
- He, X.-H., H.-Y. Wu, Y.-F. Cao, and R. Liu. 2005. *China_QEM: A Quarterly Macroeconometric Model of China*. Social Sciences Academic Press (in Chinese), Beijing.
- Hendry, D. F. 1995. *Dynamic Economics*. Oxford: Oxford University Press.
- Kaldor, N. 1956. "Alternative Theories of Distribution." *Review of Economic Studies* 23:83–100.
- . 1957. "A Model of Economic Growth." *Economic Journal* 57:591–624.
- Knack, S., and P. Keefer. 2000. Polarization, Politics, and Property Rights: Links between Inequality and Growth. World Bank Policy Research Working Paper No. 2418, Washington, DC.
- Krongkaew, M. 2003. "Income Distribution and Sustainable Economic Development in East Asia: A Comparative Analysis." Paper presented at the Annual Meeting of the East Asian Development Network, 10–11 October, Singapore.
- Kuznets, S. 1955. "Economic Growth and Income Inequality." *American Economic Review* 45:1–28.
- Li, S., P. Zhang, Z. Wei, and J. Zhong. 2000. *Positive Analysis on Distribution of Income on China* (in Chinese). Beijing: Social Science Documentation Press.

- Lin, B. 2003. "Economic Growth, Income Inequality, and Poverty Reduction in People's Republic of China." *Asian Development Review* 20:105–24.
- Liu, S. 2004. Income Disparity and Macroeconomic Growth in PRC. ADM/03-508 Project Report. Asian Development Bank, Manila.
- National Bureau of Statistics. 1999. *Comprehensive Statistical Data and Materials on 50 Years of New China*. People's Republic of China.
- . 2004. *China Statistical Yearbook*. People's Republic of China.
- . Various years. *China Monthly Economic Indicators*. People's Republic of China.
- Perotti, J. 1996. "Growth, Income Distribution and Democracy: What the Data Say." *Journal of Economic Growth* 1:149–87.
- Persson, T., and G. Tabellini. 1994. "Is Inequality Harmful for Growth: Theory and Evidence." *American Economic Review* 84:600–21.
- Pierse, R. 2001. *Winsolve Manual*. Department of Economics, University of Surrey.
- Qin, D. 2003. "Determinants of Household Savings in China and Their Role in Quasi-money Supply." *Economics of Transition* 11:513–37.
- Qin, D., M. A. Cagas, X.-H. He, and P. Quising. 2006. "How Much Does Investment Drive Economic Growth in China." *Journal of Policy Modeling* 28. Forthcoming.
- Qin, D., X.-H. He, S.-G. Liu, and P. Quising. 2005. "Modeling Monetary Transmission and Policy in People's Republic of China." *Journal of Policy Modeling* 27:157–75.
- Qin, D., X. He, R. Liu, M. A. Cagas, G. Ducanes, P. Quising, and N. Magtibay-Ramos. 2006. A Small Macroeconometric Model of the PRC. ERD Working Paper No. 81, Economics and Research Department, Asian Development Bank, Manila. Available: http://www.adb.org/Documents/ERD/Working_Papers/WP081.pdf.
- Ray, D. 1998. *Development Economics*. Princeton: Princeton University Press.
- Robinson, J. 1933. *The Economics of Imperfect Competition*. London: Macmillan.
- Staehle, H. 1937. Short-period Variations in the Distribution of Income. *Review of Economic Statistics* 19:133–43.
- . 1938. New Considerations on the Distribution of Incomes and the Propensity to Consume. *Review of Economic Statistics* 20:134–41.
- World Bank. 1997. *Sharing Rising Incomes*. Washington, DC.
- Zhang, P. 2003. *Growing and Sharing Income Distribution Theory, Events and Policy*. Beijing: Social Science Documentation Press.
- Zhang, X., and R. Kanbur. 2005. "Spatial Inequality in Education and Health Care in China." *China Economic Review* 16:189–204.
- Zweimüller, J. 2000. Inequality, Redistribution and Economic Growth. Institute for Empirical Research in Economics Working Paper No. 31, University of Zurich.

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
—<i>Barry Eichengreen, January 2002</i></p> <p>No. 2 Policy-based Lending and Poverty Reduction: An Overview of Processes, Assessment and Options
—<i>Richard Bolt and Manabu Fujimura, January 2002</i></p> <p>No. 3 The Automotive Supply Chain: Global Trends and Asian Perspectives
—<i>Francisco Veloso and Rajiv Kumar, January 2002</i></p> <p>No. 4 International Competitiveness of Asian Firms: An Analytical Framework
—<i>Rajiv Kumar and Doren Chadee, February 2002</i></p> <p>No. 5 The International Competitiveness of Asian Economies in the Apparel Commodity Chain
—<i>Gary Gereffi, February 2002</i></p> <p>No. 6 Monetary and Financial Cooperation in East Asia—The Chiang Mai Initiative and Beyond
—<i>Pradumna B. Rana, February 2002</i></p> <p>No. 7 Probing Beneath Cross-national Averages: Poverty, Inequality, and Growth in the Philippines
—<i>Arsenio M. Balisacan and Ernesto M. Pernia, March 2002</i></p> <p>No. 8 Poverty, Growth, and Inequality in Thailand
—<i>Anil B. Deolalikar, April 2002</i></p> <p>No. 9 Microfinance in Northeast Thailand: Who Benefits and How Much?
—<i>Brett E. Coleman, April 2002</i></p> <p>No. 10 Poverty Reduction and the Role of Institutions in Developing Asia
—<i>Anil B. Deolalikar, Alex B. Brillantes, Jr., Raghav Gaiha, Ernesto M. Pernia, Mary Racelis with the assistance of Marita Concepcion Castro-Guevara, Liza L. Lim, Pilipinas F. Quising, May 2002</i></p> <p>No. 11 The European Social Model: Lessons for Developing Countries
—<i>Assar Lindbeck, May 2002</i></p> <p>No. 12 Costs and Benefits of a Common Currency for ASEAN
—<i>Srinivasa Madhur, May 2002</i></p> <p>No. 13 Monetary Cooperation in East Asia: A Survey
—<i>Raul Fabella, May 2002</i></p> <p>No. 14 Toward A Political Economy Approach to Policy-based Lending
—<i>George Abonyi, May 2002</i></p> <p>No. 15 A Framework for Establishing Priorities in a Country Poverty Reduction Strategy
—<i>Ron Duncan and Steve Pollard, June 2002</i></p> <p>No. 16 The Role of Infrastructure in Land-use Dynamics and Rice Production in Viet Nam's Mekong River Delta
—<i>Christopher Edmonds, July 2002</i></p> <p>No. 17 Effect of Decentralization Strategy on Macroeconomic Stability in Thailand
—<i>Kanokpan Lao-Araya, August 2002</i></p> <p>No. 18 Poverty and Patterns of Growth
—<i>Rana Hasan and M. G. Quibria, August 2002</i></p> <p>No. 19 Why are Some Countries Richer than Others? A Reassessment of Mankiw-Romer-Weil's Test of the Neoclassical Growth Model
—<i>Jesus Felipe and John McCombie, August 2002</i></p> <p>No. 20 Modernization and Son Preference in People's Republic of China
—<i>Robin Burgess and Juzhong Zhuang, September 2002</i></p> <p>No. 21 The Doha Agenda and Development: A View from the Uruguay Round
—<i>J. Michael Finger, September 2002</i></p> <p>No. 22 Conceptual Issues in the Role of Education Decentralization in Promoting Effective Schooling in Asian Developing Countries
—<i>Jere R. Behrman, Anil B. Deolalikar, and Lee-Ying Son, September 2002</i></p> <p>No. 23 Promoting Effective Schooling through Education Decentralization in Bangladesh, Indonesia, and</p> | <p>Philippines
—<i>Jere R. Behrman, Anil B. Deolalikar, and Lee-Ying Son, September 2002</i></p> <p>No. 24 Financial Opening under the WTO Agreement in Selected Asian Countries: Progress and Issues
—<i>Yun-Hwan Kim, September 2002</i></p> <p>No. 25 Revisiting Growth and Poverty Reduction in Indonesia: What Do Subnational Data Show?
—<i>Arsenio M. Balisacan, Ernesto M. Pernia, and Abuzar Asra, October 2002</i></p> <p>No. 26 Causes of the 1997 Asian Financial Crisis: What Can an Early Warning System Model Tell Us?
—<i>Juzhong Zhuang and J. Malcolm Dowling, October 2002</i></p> <p>No. 27 Digital Divide: Determinants and Policies with Special Reference to Asia
—<i>M. G. Quibria, Shamsun N. Ahmed, Ted Tschang, and Mari-Len Reyes-Macasaquit, October 2002</i></p> <p>No. 28 Regional Cooperation in Asia: Long-term Progress, Recent Retrogression, and the Way Forward
—<i>Ramgopal Agarwala and Brahm Prakash, October 2002</i></p> <p>No. 29 How can Cambodia, Lao PDR, Myanmar, and Viet Nam Cope with Revenue Lost Due to AFTA Tariff Reductions?
—<i>Kanokpan Lao-Araya, November 2002</i></p> <p>No. 30 Asian Regionalism and Its Effects on Trade in the 1980s and 1990s
—<i>Ramon Clarete, Christopher Edmonds, and Jessica Seddon Wallack, November 2002</i></p> <p>No. 31 New Economy and the Effects of Industrial Structures on International Equity Market Correlations
—<i>Cyn-Young Park and Jaejoon Woo, December 2002</i></p> <p>No. 32 Leading Indicators of Business Cycles in Malaysia and the Philippines
—<i>Wenda Zhang and Juzhong Zhuang, December 2002</i></p> <p>No. 33 Technological Spillovers from Foreign Direct Investment—A Survey
—<i>Emma Xiaoqin Fan, December 2002</i></p> <p>No. 34 Economic Openness and Regional Development in the Philippines
—<i>Ernesto M. Pernia and Pilipinas F. Quising, January 2003</i></p> <p>No. 35 Bond Market Development in East Asia: Issues and Challenges
—<i>Raul Fabella and Srinivasa Madhur, January 2003</i></p> <p>No. 36 Environment Statistics in Central Asia: Progress and Prospects
—<i>Robert Ballance and Bishnu D. Pant, March 2003</i></p> <p>No. 37 Electricity Demand in the People's Republic of China: Investment Requirement and Environmental Impact
—<i>Bo Q. Lin, March 2003</i></p> <p>No. 38 Foreign Direct Investment in Developing Asia: Trends, Effects, and Likely Issues for the Forthcoming WTO Negotiations
—<i>Douglas H. Brooks, Emma Xiaoqin Fan, and Lea R. Sumulong, April 2003</i></p> <p>No. 39 The Political Economy of Good Governance for Poverty Alleviation Policies
—<i>Narayan Lakshman, April 2003</i></p> <p>No. 40 The Puzzle of Social Capital A Critical Review
—<i>M. G. Quibria, May 2003</i></p> <p>No. 41 Industrial Structure, Technical Change, and the Role of Government in Development of the Electronics and Information Industry in Taipei, China
—<i>Yeo Lin, May 2003</i></p> <p>No. 42 Economic Growth and Poverty Reduction in Viet Nam
—<i>Arsenio M. Balisacan, Ernesto M. Pernia, and Gemma Esther B. Estrada, June 2003</i></p> <p>No. 43 Why Has Income Inequality in Thailand Increased? An Analysis Using 1975-1998 Surveys
—<i>Taizo Motonishi, June 2003</i></p> |
|---|--|

- 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 Choyowski, 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 SSMCEI
—*Ganeshan Wignaraja and David Joiner, November 2004*
- No. 61 Foreign Exchange Reserves, Exchange Rate Regimes, and Monetary Policy: Issues in Asia
—*Akiko Terada-Hagiwara, January 2005*
- No. 62 A Small Macroeconometric Model of the Philippine Economy
—*Geoffrey Ducanes, Marie Anne Cagas, Duo Qin, Pilipinas Quising, and Nedelyn Magtibay-Ramos, January 2005*
- No. 63 Developing the Market for Local Currency Bonds by Foreign Issuers: Lessons from Asia
—*Tobias Hoschka, February 2005*
- No. 64 Empirical Assessment of Sustainability and Feasibility of Government Debt: The Philippines Case
—*Duo Qin, Marie Anne Cagas, Geoffrey Ducanes, Nedelyn Magtibay-Ramos, and Pilipinas Quising, February 2005*
- No. 65 Poverty and Foreign Aid Evidence from Cross-Country Data
—*Abuzar Asra, Gemma Estrada, Yangseom Kim, and M. G. Quibria, March 2005*
- No. 66 Measuring Efficiency of Macro Systems: An Application to Millennium Development Goal Attainment
—*Ajay Tandon, March 2005*
- No. 67 Banks and Corporate Debt Market Development
—*Paul Dickie and Emma Xiaoqin Fan, April 2005*
- No. 68 Local Currency Financing—The Next Frontier for MDBs?
—*Tobias C. Hoschka, April 2005*
- No. 69 Export or Domestic-Led Growth in Asia?
—*Jesus Felipe and Joseph Lim, May 2005*
- No. 70 Policy Reform in Viet Nam and the Asian Development Bank's State-owned Enterprise Reform and Corporate Governance Program Loan
—*George Abonyi, August 2005*
- No. 71 Policy Reform in Thailand and the Asian Development Bank's Agricultural Sector Program Loan
—*George Abonyi, September 2005*
- No. 72 Can the Poor Benefit from the Doha Agenda? The Case of Indonesia
—*Douglas H. Brooks and Guntur Sugiyarto, October 2005*
- No. 73 Impacts of the Doha Development Agenda on People's Republic of China: The Role of Complementary Education Reforms
—*Fan Zhai and Thomas Hertel, October 2005*
- No. 74 Growth and Trade Horizons for Asia: Long-term Forecasts for Regional Integration
—*David Roland-Holst, Jean-Pierre Verbiest, and Fan Zhai, November 2005*
- No. 75 Macroeconomic Impact of HIV/AIDS in the Asian and Pacific Region
—*Ajay Tandon, November 2005*
- No. 76 Policy Reform in Indonesia and the Asian Development Bank's Financial Sector Governance Reforms Program Loan
—*George Abonyi, December 2005*
- No. 77 Dynamics of Manufacturing Competitiveness in South Asia: Analysis through Export Data
—*Hans-Peter Brunner and Massimiliano Calì, December 2005*
- No. 78 Trade Facilitation
—*Teruo Ujiie, January 2006*
- No. 79 An Assessment of Cross-country Fiscal Consolidation
—*Bruno Carrasco and Seung Mo Choi, February 2006*
- No. 80 Central Asia: Mapping Future Prospects to 2015
—*Malcolm Dowling and Ganeshan Wignaraja, April 2006*
- No. 81 A Small Macroeconometric Model of the People's Republic of China
—*Duo Qin, Marie Anne Cagas, Geoffrey Ducanes, Nedelyn Magtibay-Ramos, Pilipinas Quising, Xin-Hua He, Rui Liu, and Shi-Guo Liu, June 2006*
- No. 82 Institutions and Policies for Growth and Poverty Reduction: The Role of Private Sector Development
—*Rana Hasan, Devashish Mitra, and Mehmet Ulubasoglu, July 2006*
- No. 83 Preferential Trade Agreements in Asia: Alternative Scenarios of "Hub and Spoke"
—*Fan Zhai, October 2006*
- No. 84 Income Disparity and Economic Growth: Evidence from People's Republic of China
—*Duo Qin, Marie Anne Cagas, Geoffrey Ducanes, Xinhua He, Rui Liu, and Shiguo Liu, October 2006*

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 | | Development
—Ifzal Ali and Xianbin Yao, May 2004 |
| No. 2 | India's Economic Reforms What Has Been Accomplished? What Remains to Be Done?
—Arvind Panagariya, November 2001 | No. 28 | Higher Oil Prices: Asian Perspectives and Implications for 2004-2005
—Cyn-Young Park, June 2004 |
| No. 3 | Unequal Benefits of Growth in Viet Nam
—Indu Bhushan, Erik Bloom, and Nguyen Minh Thang, January 2002 | No. 29 | Accelerating Agriculture and Rural Development for Inclusive Growth: Policy Implications for Developing Asia
—Richard Bolt, July 2004 |
| No. 4 | Is Volatility Built into Today's World Economy?
—J. Malcolm Dowling and J.P. Verbiest, February 2002 | No. 30 | Living with Higher Interest Rates: Is Asia Ready?
—Cyn-Young Park, August 2004 |
| No. 5 | What Else Besides Growth Matters to Poverty Reduction? Philippines
—Arsenio M. Balisacan and Ernesto M. Pernia, February 2002 | No. 31 | Reserve Accumulation, Sterilization, and Policy Dilemma
—Akiko Terada-Hagiwara, October 2004 |
| 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. 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. 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. 33 | Population Health and Foreign Direct Investment: Does Poor Health Signal Poor Government Effectiveness?
—Ajay Tandon, January 2005 |
| No. 8 | The Role of Preferential Trading Arrangements in Asia
—Christopher Edmonds and Jean-Pierre Verbiest, July 2002 | No. 34 | Financing Infrastructure Development: Asian Developing Countries Need to Tap Bond Markets More Rigorously
—Yun-Hwan Kim, February 2005 |
| No. 9 | The Doha Round: A Development Perspective
—Jean-Pierre Verbiest, Jeffrey Liang, and Lea Sumulong, July 2002 | No. 35 | Attaining Millennium Development Goals in Health: Isn't Economic Growth Enough?
—Ajay Tandon, March 2005 |
| No. 10 | Is Economic Openness Good for Regional Development and Poverty Reduction? The Philippines
—E. M. Pernia and Pilipinas Quising, October 2002 | No. 36 | Instilling Credit Culture in State-owned Banks—Experience from Lao PDR
—Robert Boumphrey, Paul Dickie, and Samuela Tukuafu, April 2005 |
| No. 11 | Implications of a US Dollar Depreciation for Asian Developing Countries
—Emma Fan, July 2002 | No. 37 | Coping with Global Imbalances and Asian Currencies
—Cyn-Young Park, May 2005 |
| No. 12 | Dangers of Deflation
—D. Brooks and Pilipinas Quising, December 2002 | 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. 13 | Infrastructure and Poverty Reduction—What is the Connection?
—Ifzal Ali and Ernesto Pernia, January 2003 | No. 39 | Competition Policy and Development
—Douglas H. Brooks, October 2005 |
| No. 14 | Infrastructure and Poverty Reduction—Making Markets Work for the Poor
—Xianbin Yao, May 2003 | No. 40 | Highlighting Poverty as Vulnerability: The 2005 Earthquake in Pakistan
—Rana Hasan and Ajay Tandon, October 2005 |
| No. 15 | SARS: Economic Impacts and Implications
—Emma Xiaoqin Fan, May 2003 | No. 41 | Conceptualizing and Measuring Poverty as Vulnerability: Does It Make a Difference?
—Ajay Tandon and Rana Hasan, October 2005 |
| No. 16 | Emerging Tax Issues: Implications of Globalization and Technology
—Kanokpan Lao Araya, May 2003 | No. 42 | Potential Economic Impact of an Avian Flu Pandemic on Asia
—Erik Bloom, Vincent de Wit, and Mary Jane Carangal-San Jose, November 2005 |
| No. 17 | Pro-Poor Growth: What is It and Why is It Important?
—Ernesto M. Pernia, May 2003 | No. 43 | Creating Better and More Jobs in Indonesia: A Blueprint for Policy Action
—Guntur Sugiyarto, December 2005 |
| No. 18 | Public-Private Partnership for Competitiveness
—Jesus Felipe, June 2003 | No. 44 | The Challenge of Job Creation in Asia
—Jesus Felipe and Rana Hasan, April 2006 |
| No. 19 | Reviving Asian Economic Growth Requires Further Reforms
—Ifzal Ali, June 2003 | No. 45 | International Payments Imbalances
—Jesus Felipe, Frank Harrigan, and Aashish Mehta, April 2006 |
| No. 20 | The Millennium Development Goals and Poverty: Are We Counting the World's Poor Right?
—M. G. Quibria, July 2003 | No. 46 | Improving Primary Enrollment Rates among the Poor
—Ajay Tandon, August 2006 |
| 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 | | |

ERD TECHNICAL NOTE SERIES (TNS)

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

- | | |
|--|--|
| <p>No. 1 Contingency Calculations for Environmental Impacts with Unknown Monetary Values
—David Dole, February 2002</p> <p>No. 2 Integrating Risk into ADB's Economic Analysis of Projects
—Nigel Rayner, Anneli Lagman-Martin, and Keith Ward, June 2002</p> <p>No. 3 Measuring Willingness to Pay for Electricity
—Peter Choynowski, July 2002</p> <p>No. 4 Economic Issues in the Design and Analysis of a Wastewater Treatment Project
—David Dole, July 2002</p> <p>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</p> <p>No. 6 Economic Analysis of Health Projects: A Case Study in Cambodia
—Erik Bloom and Peter Choynowski, May 2003</p> <p>No. 7 Strengthening the Economic Analysis of Natural Resource Management Projects
—Keith Ward, September 2003</p> <p>No. 8 Testing Savings Product Innovations Using an Experimental Methodology
—Nava Ashraf, Dean S. Karlan, and Wesley Yin, November 2003</p> <p>No. 9 Setting User Charges for Public Services: Policies and Practice at the Asian Development Bank
—David Dole, December 2003</p> | <p>No. 10 Beyond Cost Recovery: Setting User Charges for Financial, Economic, and Social Goals
—David Dole and Ian Bartlett, January 2004</p> <p>No. 11 Shadow Exchange Rates for Project Economic Analysis: Toward Improving Practice at the Asian Development Bank
—Anneli Lagman-Martin, February 2004</p> <p>No. 12 Improving the Relevance and Feasibility of Agriculture and Rural Development Operational Designs: How Economic Analyses Can Help
—Richard Bolt, September 2005</p> <p>No. 13 Assessing the Use of Project Distribution and Poverty Impact Analyses at the Asian Development Bank
—Franklin D. De Guzman, October 2005</p> <p>No. 14 Assessing Aid for a Sector Development Plan: Economic Analysis of a Sector Loan
—David Dole, November 2005</p> <p>No. 15 Debt Management Analysis of Nepal's Public Debt
—Sungsup Ra, Changyong Rhee, and Joon-Ho Hahm, December 2005</p> <p>No. 16 Evaluating Microfinance Program Innovation with Randomized Control Trials: An Example from Group Versus Individual Lending
—Xavier Giné, Tomoko Harigaya, Dean Karlan, and Binh T. Nguyen, March 2006</p> <p>No. 17 Setting User Charges for Urban Water Supply: A Case Study of the Metropolitan Cebu Water District in the Philippines
—David Dole and Edna Balucan, June 2006</p> |
|--|--|

SPECIAL STUDIES, COMPLIMENTARY

(Available through ADB Office of External Relations)

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

OLD MONOGRAPH SERIES

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

EDRC REPORT SERIES (ER)

- | | |
|---|--|
| <p>No. 1 ASEAN and the Asian Development Bank
—<i>Seiji Naya, April 1982</i></p> <p>No. 2 Development Issues for the Developing East and Southeast Asian Countries and International Cooperation
—<i>Seiji Naya and Graham Abbott, April 1982</i></p> <p>No. 3 Aid, Savings, and Growth in the Asian Region
—<i>J. Malcolm Dowling and Ulrich Hiemenz, April 1982</i></p> <p>No. 4 Development-oriented Foreign Investment and the Role of ADB
—<i>Kiyoshi Kojima, April 1982</i></p> <p>No. 5 The Multilateral Development Banks and the International Economy's Missing Public Sector
—<i>John Lewis, June 1982</i></p> <p>No. 6 Notes on External Debt of DMCs
—<i>Evelyn Go, July 1982</i></p> <p>No. 7 Grant Element in Bank Loans
—<i>Dal Hyun Kim, July 1982</i></p> <p>No. 8 Shadow Exchange Rates and Standard Conversion Factors in Project Evaluation
—<i>Peter Warr, September 1982</i></p> <p>No. 9 Small and Medium-Scale Manufacturing Establishments in ASEAN Countries: Perspectives and Policy Issues
—<i>Mathias Bruch and Ulrich Hiemenz, January 1983</i></p> <p>No. 10 A Note on the Third Ministerial Meeting of GATT
—<i>Jungsoo Lee, January 1983</i></p> <p>No. 11 Macroeconomic Forecasts for the Republic of China, Hong Kong, and Republic of Korea
—<i>J.M. Dowling, January 1983</i></p> <p>No. 12 ASEAN: Economic Situation and Prospects
—<i>Seiji Naya, March 1983</i></p> <p>No. 13 The Future Prospects for the Developing Countries of Asia
—<i>Seiji Naya, March 1983</i></p> <p>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></p> <p>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></p> <p>No. 16 Determinants of Paddy Production in Indonesia: 1972-1981—A Simultaneous Equation Model Approach
—<i>T.K. Jayaraman, June 1983</i></p> <p>No. 17 The Philippine Economy: Economic Forecasts for 1983 and 1984
—<i>J.M. Dowling, E. Go, and C.N. Castillo, June 1983</i></p> <p>No. 18 Economic Forecast for Indonesia
—<i>J.M. Dowling, H.Y. Kim, Y.K. Wang, and C.N. Castillo, June 1983</i></p> <p>No. 19 Relative External Debt Situation of Asian Developing Countries: An Application of Ranking Method
—<i>Jungsoo Lee, June 1983</i></p> <p>No. 20 New Evidence on Yields, Fertilizer Application, and Prices in Asian Rice Production
—<i>William James and Teresita Ramirez, July 1983</i></p> <p>No. 21 Inflationary Effects of Exchange Rate Changes in Nine Asian LDCs
—<i>Pradumna B. Rana and J. Malcolm Dowling, Jr., December 1983</i></p> <p>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></p> <p>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></p> <p>No. 24 Small-Scale Industries in Asian Economic Development: Problems and Prospects
—<i>Seiji Naya, February 1984</i></p> | <p>No. 25 A Study on the External Debt Indicators Applying Logit Analysis
—<i>Jungsoo Lee and Clarita Barretto, February 1984</i></p> <p>No. 26 Alternatives to Institutional Credit Programs in the Agricultural Sector of Low-Income Countries
—<i>Jennifer Sour, March 1984</i></p> <p>No. 27 Economic Scene in Asia and Its Special Features
—<i>Kedar N. Kohli, November 1984</i></p> <p>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></p> <p>No. 29 Cause and Effect in the World Sugar Market: Some Empirical Findings 1951-1982
—<i>Yoshihiro Iwasaki, February 1985</i></p> <p>No. 30 Sources of Balance of Payments Problem in the 1970s: The Asian Experience
—<i>Pradumna Rana, February 1985</i></p> <p>No. 31 India's Manufactured Exports: An Analysis of Supply Sectors
—<i>Ifzal Ali, February 1985</i></p> <p>No. 32 Meeting Basic Human Needs in Asian Developing Countries
—<i>Jungsoo Lee and Emma Banaria, March 1985</i></p> <p>No. 33 The Impact of Foreign Capital Inflow on Investment and Economic Growth in Developing Asia
—<i>Evelyn Go, May 1985</i></p> <p>No. 34 The Climate for Energy Development in the Pacific and Asian Region: Priorities and Perspectives
—<i>V.V. Desai, April 1986</i></p> <p>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></p> <p>No. 36 Smuggling and Domestic Economic Policies in Developing Countries
—<i>A.H.M.N. Chowdhury, October 1986</i></p> <p>No. 37 Public Investment Criteria: Economic Internal Rate of Return and Equalizing Discount Rate
—<i>Ifzal Ali, November 1986</i></p> <p>No. 38 Review of the Theory of Neoclassical Political Economy: An Application to Trade Policies
—<i>M.G. Quibria, December 1986</i></p> <p>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></p> <p>No. 40 A Demographic Perspective on Developing Asia and Its Relevance to the Bank
—<i>E.M. Pernia, May 1987</i></p> <p>No. 41 Emerging Issues in Asia and Social Cost Benefit Analysis
—<i>I. Ali, September 1988</i></p> <p>No. 42 Shifting Revealed Comparative Advantage: Experiences of Asian and Pacific Developing Countries
—<i>P.B. Rana, November 1988</i></p> <p>No. 43 Agricultural Price Policy in Asia: Issues and Areas of Reforms
—<i>I. Ali, November 1988</i></p> <p>No. 44 Service Trade and Asian Developing Economies
—<i>M.G. Quibria, October 1989</i></p> <p>No. 45 A Review of the Economic Analysis of Power Projects in Asia and Identification of Areas of Improvement
—<i>I. Ali, November 1989</i></p> <p>No. 46 Growth Perspective and Challenges for Asia: Areas for Policy Review and Research
—<i>I. Ali, November 1989</i></p> <p>No. 47 An Approach to Estimating the Poverty Alleviation Impact of an Agricultural Project
—<i>I. Ali, January 1990</i></p> |
|---|--|

- 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 I: Regional Adjustments and the World Economy —*Burnham Campbell, April 1982*
- No. 9 Developing Asia: The Importance of Domestic Policies —*Economics Office Staff under the direction of Seiji Naya, May 1982*
- No. 10 Financial Development and Household Savings: Issues in Domestic Resource Mobilization in Asian Developing Countries —*Wan-Soon Kim, July 1982*
- No. 11 Industrial Development: Role of Specialized Financial Institutions —*Kedar N. Kohli, August 1982*
- No. 12 Petrodollar Recycling 1973-1980. Part II: Debt Problems and an Evaluation of Suggested Remedies —*Burnham Campbell, September 1982*
- No. 13 Credit Rationing, Rural Savings, and Financial Policy in Developing Countries —*William James, September 1982*
- No. 14 Small and Medium-Scale Manufacturing Establishments in ASEAN Countries: Perspectives and Policy Issues —*Mathias Bruch and Ulrich Hiemenz, March 1983*
- No. 15 Income Distribution and Economic Growth in Developing Asian Countries —*J. Malcolm Dowling and David Soo, March 1983*
- No. 16 Long-Run Debt-Servicing Capacity of Asian Developing Countries: An Application of Critical Interest Rate Approach —*Jungsoo Lee, June 1983*
- No. 17 External Shocks, Energy Policy, and Macroeconomic Performance of Asian Developing Countries: A Policy Analysis —*William James, July 1983*
- No. 18 The Impact of the Current Exchange Rate System on Trade and Inflation of Selected Developing Member Countries —*Pradumna Rana, September 1983*
- No. 19 Asian Agriculture in Transition: Key Policy Issues —*William James, September 1983*
- No. 20 The Transition to an Industrial Economy in Monsoon Asia —*Harry T. Oshima, October 1983*
- No. 21 The Significance of Off-Farm Employment and Incomes in Post-War East Asian Growth —*Harry T. Oshima, January 1984*
- No. 22 Income Distribution and Poverty in Selected Asian Countries —*John Malcolm Dowling, Jr., November 1984*
- No. 23 ASEAN Economies and ASEAN Economic Cooperation —*Narongchai Akrasanee, November 1984*

- No. 24 Economic Analysis of Power Projects
—*Nitin Desai, January 1985*
- No. 25 Exports and Economic Growth in the Asian Region
—*Pradumna Rana, February 1985*
- No. 26 Patterns of External Financing of DMCs
—*E. Go, May 1985*
- No. 27 Industrial Technology Development the Republic of Korea
—*S.Y. Lo, July 1985*
- No. 28 Risk Analysis and Project Selection: A Review of Practical Issues
—*J.K. Johnson, August 1985*
- No. 29 Rice in Indonesia: Price Policy and Comparative Advantage
—*I. Ali, January 1986*
- No. 30 Effects of Foreign Capital Inflows on Developing Countries of Asia
—*Jungsoo Lee, Pradumna B. Rana, and Yoshihiro Iwasaki, April 1986*
- No. 31 Economic Analysis of the Environmental Impacts of Development Projects
—*John A. Dixon et al., EAPI, East-West Center, August 1986*
- No. 32 Science and Technology for Development: Role of the Bank
—*Kedar N. Kohli and Ifzal Ali, November 1986*
- No. 33 Satellite Remote Sensing in the Asian and Pacific Region
—*Mohan Sundara Rajan, December 1986*
- No. 34 Changes in the Export Patterns of Asian and Pacific Developing Countries: An Empirical Overview
—*Pradumna B. Rana, January 1987*
- No. 35 Agricultural Price Policy in Nepal
—*Gerald C. Nelson, March 1987*
- No. 36 Implications of Falling Primary Commodity Prices for Agricultural Strategy in the Philippines
—*Ifzal Ali, September 1987*
- No. 37 Determining Irrigation Charges: A Framework
—*Prabhakar B. 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 L.F. 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 SPDMS—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 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; \$10.00 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 Ghatte 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. Labor Markets in Asia: Issues and Perspectives
Edited by Jesus Felipe and Rana Hasan, 2006
2. Competition Policy and Development in Asia
Edited by Douglas H. Brooks and Simon Evenett, 2005
3. Managing FDI in a Globalizing Economy
Asian Experiences
Edited by Douglas H. Brooks and Hal Hill, 2004
4. Poverty, Growth, and Institutions in Developing Asia
Edited by Ernesto M. Pernia and Anil B. Deolalikar, 2003

SPECIAL STUDIES, IN-HOUSE

(Available commercially through ADB Office of External Relations)

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

About the Paper

Duo Qin, Marie Anne Cagas, Geoffrey Ducanes, Xinhua He, Rui Liu, and Shiguo Liu conduct a pilot empirical study to determine how income inequality affects growth by incorporating panel data information into a macroeconometric model. Using People's Republic of China as a pilot field, results show that changes in income inequality carry adverse effects on gross domestic product and sectoral growth.

About ADB

The work of the Asian Development Bank (ADB) is aimed at improving the welfare of the people in Asia and the Pacific, particularly the 1.9 billion who live on less than \$2 a day. Despite many success stories, Asia and the Pacific remains home to two thirds of the world's poor. ADB is a multilateral development finance institution owned by 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 the quality of life of their citizens.

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

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