



Growth and Poverty: Lessons from the East Asian Miracle Revisited

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This paper provides an extensive review of growth, inequality and poverty reduction in the East Asian miracle economies. This review suggests that the basic impetus for poverty reduction was robust economic growth, which was fostered by a conducive policy and institutional framework. This framework—which helped to create a “level playing field”—encouraged high investment, production over diversion, and efficient use of investible resources.



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PREFACE

The ADB Institute aims to explore the most appropriate development paradigms for Asia composed of well-balanced combinations of the roles of markets, institutions, and governments in the post-crisis period.

Under this broad research project on development paradigms, the ADB Institute Research Paper Series will contribute to disseminating works-in-progress as a building block of the project and will invite comments and questions.

I trust that this series will provoke constructive discussions among policymakers as well as researchers about where Asian economies should go from the last crisis and recovery.

Masaru Yoshitomi
Dean
ADB Institute

ABSTRACT

This paper provides an extensive review of the development experiences of the Asian miracle economies in the areas of growth, inequality and poverty reduction. This review suggests a number of empirical regularities as well as salient lessons for policies.

First, there is a robust association between sustained growth and poverty reduction (an association that seems to have a much wider validity beyond this small set of economies). Second, there has been no robust correlation between inequality and aggregate growth. Inequality, which is often ingrained in the structure of an economy, has remained largely invariant to the process of economic growth. Indeed, some of the miracle economies have even suffered some deterioration in income distribution. Third, the most important proximate cause of the miraculous transformation of the East Asian economies was rapid capital accumulation, a process that was nurtured and sustained by a combination of market-oriented policies and institutions. This combination of policies and institutions emphasized, on the one hand, the openness of these economies to the external world, and on the other hand, a domestic economic environment conducive to production. Their openness allowed these economies to tap into the virtually unlimited international trading opportunities in the world economy and to access new technology. The domestic economic environment, which was underpinned by a combination of macroeconomic stability, labor market flexibility, and good economic governance, harnessed by conducive legal and political institutions, encouraged production (over rent-seeking), high investment, and efficient use of investible resources. Rapid growth, which was nurtured by a commensurate increase in employment, led to quick dissolution of the poverty problem.

Fourth, initial conditions, such as low initial inequality of income and assets, high initial educational attainment, and dynamic agriculture sectors, were not common to all the miracle economies. To the extent these factors existed, they may have helped growth and poverty reduction, but they were not the forces that unleashed the economic dynamism of these economies. Fifth, whether politically autocratic or not, the miracle economies provided an economic framework that allowed critical economic freedoms and a structure of market-supporting institutions needed for the economy to blossom. Without this framework, which this paper has termed constitutional liberalism—reflected in the enlightened policy instincts of the autocrats and the operational insulation of the bureaucracies—the economic miracle would not have been possible. The policy lesson from this, however, is not to make a transition from a democratic polity to an autocratic regime, but to create an institutional framework for greater constitutional liberalism in otherwise illiberal democracies.

While these lessons are useful, one should keep in mind that policies and institutions cannot just be “cherry-picked” from one empirical context to another. Policies and institutions evolve and flourish in the context of societies, which have their own dynamics. The important thing to explore is the feasibility—economic, social, and political—of these policy and institutional changes

and examine how much can be implemented and how much needs to be adjusted to respond to changed circumstances.

The future is not going to be a replay of the past. The internal and external environments within which the miracle economies operated and achieved their economic breakthrough have changed significantly in recent years. On the one hand, the policy autonomy the miracle economies enjoyed in their heyday is no longer available to aspiring miracle economies. An important instrument in this respect was the so-called industrial policy, which allowed a whole variety of incentives for industrial development and export promotion. However, the new World Trade Organization regime has significantly tightened multilateral rules on subsidies and related industrial policies for the developing countries. Export subsidies are largely prohibited, and trade-related investment measures that discriminate against imports have been outlawed. Similarly, the advent of democracy and political pluralism constricts many programs and policies that were feasible under authoritarian regimes. For example, compared with most developing countries under democratic regimes today, the miracle economies had fewer labor market regulations and more flexibility. In addition, in a democracy the process of policy consultation, adoption, and execution involves many procedural formalities—and is therefore more time-consuming—than in an authoritarian regime. Given these and other changes, the developing countries have much less flexibility in policy formulation than before.

However, the revolutionary changes in information and communications technology have opened up new economic opportunities for developing countries. This technology has the potential of integrating world labor markets more smoothly and more rapidly than was thought possible in the past. This undoubtedly expands the range of economic options for poor countries to improve their economies and reduce poverty.

TABLE OF CONTENTS

<i>Acknowledgments</i>	II
<i>Preface</i>	III
<i>Abstract</i>	IV
<i>Table of Contents</i>	VI
1. Introduction	1
1.1. Many Lessons, Little Agreement	2
1.2. Rethinking the Lessons Learned	3
1.3. Overview	4
2. The Complex Inter-Relationships between Growth, Poverty, and Inequality	7
2.1. The Situation in Developing Asia	7
2.1.1. Economic Growth	7
2.1.2. Poverty and Quality of Life	9
2.1.3. Income Inequality	11
2.1.4. Conclusions	13
2.2. Some Empirical Regularities	14
3. Explaining the Miracle	15
3.1. Sources of Growth	16
3.2. Factors behind the Miracle	21
4. Policies and Initial Conditions	23
4.1. Openness to Foreign Trade and Investment	23
4.1.1. Openness and Economic Success	23
4.1.2. Trade and Growth	26
4.1.3. Openness, Growth, and Poverty	28
4.2. Labor Market Flexibility	34
4.2.1. Role of Labor Market Flexibility in Growth and Poverty Reduction	35
4.2.2. Labor Market Developments in the Miracle Economies	36
4.3. Macroeconomic Stability	38
4.4. Educational Attainments	41
4.4.1. Role of Favorable Initial Educational Attainments	41
4.4.2. Role of Human Capital in Sustaining Development	43
4.5. Industrial Policy	46
4.5.1. Rationale and Role of Industrial Policy in the Miracle Economies	47
4.5.2. An Empirical Assessment	48
4.6. Agricultural Development	51

4.7. Equitable Distribution	54
4.7.1. Income	54
4.7.2. Land	55
4.7.3. Affirmative Action	59
5. Institutions and Political Economy	60
5.1. Role of Institutions in the Miracle Economies	61
5.2. Authoritarian Regimes and Governance	62
5.3. Insulated Bureaucracies and Governance	65
5.4. Nature of Governance	67
5.4.1. Credible Policy	67
5.4.2. Rule of Law	68
5.4.3. Limited and Centralized Corruption	70
5.4.4. Accountability	71
5.5. Concluding Remarks	71
6. India: Data Conundrum and Conflicting Trends in Poverty Reduction	72
7. Concluding Remarks	78
Tables and Figures (in body of text)	
Table 2-1. Economic Indicators, Selected Asian Economies and Selected Regions, 1961–96	8
Table 2-2. Incidence of Poverty, Selected Asian Economies, Selected Years	9
Table 2-3. Social Indicators, Selected Asian Economies and Selected Regions, Selected Years	10
Table 3-1. Sources of Growth, Selected Asian Countries and Selected Regions	18
Table 3-2. TFP Growth Rates for East Asia Implied by Different Assumptions about Elasticity of Substitution	18
Table 3-3. Gross Domestic Investment, Selected Asian Economies and Selected Regions	20
Table 4-1. Trade Indicators, Selected Asian Economies and Selected Regions	25
Table 4-2. Openness Indicators, Selected Asian Economies and Years	29
Table 4-3. Macroeconomic Indicators, Selected Asian Economies and Selected Regions	40
Table 4-4. Educational Attainments, Selected Asian Economies, Regions & Years	43
Table 4-5. Growth in Agricultural Value Added, Selected Asian Economies and Selected Regions	52
Figure 2-1. Gini Coefficients of NIEs	11
Figure 2-2. Gini Coefficients of Southeast Asian Economies	12
Figure 2-3. Gini Coefficients of South Asian Economies	13

Figure 4-1. Growth in Educational Capital and Economic Growth, East Asia and Sub-Saharan Africa	45
Figure 5-1. Relationship between the Rule of Law and Per Capita GDP, Selected Economies	69
Figure 6-1. Ratio of NSS to NAS Per Capita Consumption, India	73
Figure 6-2. Poverty in India Stagnated, or Did It?	73
Figure 6-3. National, Rural, and Urban Poverty, India	75
Figure 6-4. Trend Rates of Poverty Reduction and Nonfarm Output Economic Growth, Selected Indian States	75
Figure 6-5. Elasticities of Consumption Poverty to Nonfarm Output, India	77
References	80

Growth and Poverty: Lessons from the East Asian Miracle Revisited

M. G. Quibria

1. Introduction

In the past four decades, a number of East Asian economies have recorded extremely high rates of economic growth and achieved spectacular improvements in the quality of life. Some, particularly the newly industrialized economies (NIEs) such as Hong Kong, China; Singapore; Taipei, China; and the Republic of Korea (henceforth referred to as Korea), have telescoped into a single generation a process of socioeconomic development that took the advanced economies of Western Europe centuries to achieve. The dramatic improvement in the quality of life that accompanied this miraculous economic transformation has virtually abolished extreme poverty in these societies. A number of Southeast Asian economies, such as Malaysia, Thailand, and Indonesia, have also made impressive strides in economic development that have resulted in a rapid reduction in poverty and brisk social development. Even though the 1997–98 financial crisis undid some of the economic advances these economies had made, their achievements in improving the quality of life of the general populace remain largely unscathed. Growth has by and large resumed in all the crisis economies except Indonesia, albeit more slowly than before. The case of Indonesia is somewhat complex. It has had to cope not only with the rough and tumble of the financial crisis, but also with the difficult process of transition from a stable authoritarian regime to a raucous democracy, intertwined with insurgencies and civil war. While jolted by the crisis, the socioeconomic transformation of these economies—henceforth collectively referred to as the miracle economies—that has unfolded over the last 40 years has been singularly impressive, and has understandably attracted wide academic and policy interest.

However, developing Asia is also home to the majority of the world's poor. When one juxtaposes this fact against the performance of the miracle economies and their enormous strides in poverty reduction, one is struck by the stark contrast that Asia offers. Despite some progress in recent decades, South Asia remains the bastion of poverty in both Asia and the world. One in three Indians still falls below the national poverty line, and almost one in two would be classified as poor based on the US\$1 per day international poverty line, and the extent of poverty in Bangladesh and Nepal exceeds that in India.¹ This sharp contrast between East Asia and South Asia is also apparent when considering other aspects of the quality of life, not just income poverty.

The spectacular performance of the miracle economies has spawned an extensive economic literature, including a number of well-known, oft-cited studies initiated by the multilateral development institutions such as the World Bank (1993) and the Asian

¹ While poverty is largely concentrated in South Asia, substantial pockets of poverty also persist outside South Asia. In 1998 in the People's Republic of China, which has a much lower incidence of poverty than South Asia, 213 million people—or 17 percent of the population—lived on an income of less than US\$1 per day (World Bank 2000b). The situation in other Asian transition economies has not been particularly bright either. In Mongolia about 2 million people—or almost 80 percent of the population—live below the international poverty line of US\$1 per day. The poverty situation in the Central Asian republics is somewhat better, but still distressing.

Development Bank (ADB) (1997). One principal purpose of these studies has been to derive lessons about accelerating growth and reducing poverty that might be applicable elsewhere. This study, which compares the social development of the miracle economies and South Asia, seeks to explore whether lessons learned from the experiences of East Asia can be applied to chart a similar path of success for South Asia.

1.1. Many Lessons, Little Agreement

While the various studies have shed light on many important dimensions of the economic miracle, a significant problem with these studies is that there are few areas of consensus that policymakers can draw on. Indeed, in some cases different studies have arrived at different lessons. For example, the World Bank (1993, p. 367) listed six lessons that countries need to follow, namely: keep the macroeconomy stable, focus on early education, do not neglect agriculture, use banks to build a sound financial system, be open to foreign ideas and technology, and let relative prices reflect economic scarcities. This study also found that a successful export push, whether an outcome of open economic policies or of ingenious policy interventions, offers large economic dividends.

The study also came up with a list of things to avoid. This list included (a) don't promote specific industries or attempt to leapfrog stages of technological development, as such attempts will generally fail; (b) don't pursue a policy of negative interest rates or provide large subsidies to borrowers, because this will debilitate the financial system; and (c) don't provide direct credit without adequate monitoring and proper selection of borrowers, as this will distort credit allocation.

In subsequent studies the World Bank revised and modified these lessons. In a recent World Bank publication Leipziger and Thomas (1997) underscored three attributes of the East Asian miracle: outward orientation, macroeconomic stability, and investment in people. In the same volume, in his concluding overview Petri (1997) emphasized only the first two attributes and ignored the last one based on "having different readings of the latecomers' lack of human capital investment" (Westphal 2000).

In an even more recent "rethinking" of the East Asian miracle, the World Bank once again revised its views as to the salient lessons. In the introduction to this volume, Yusuf (2001) lists four "keys" to the East Asian miracle about which, according to Yusuf, a broad range of consensus is apparent both in World Bank and other studies. These keys are (a) adhering to sound macroeconomic policy; (b) having an efficient bureaucracy that can conceive and implement the policy designs needed for a "strong" state that is credibly committed to long-term development; (c) pursuing "activist" government policies to industrialize and export an increasing proportion of industrial output; and (d) adopting a flexible, pragmatic policy approach that incorporates an error correction mechanism.

Yusuf went on to emphasize the lack of consensus in a number of areas, including the advantages of an active industrial policy, the benefits of a "symbiotic" relationship between banks and industrial corporations, and the efficacy of exports as an engine of productivity and growth. On the last point, in contrast with the earlier World Bank (1993) finding that a successful export push offers high economic dividends, Yusuf found that the balance of the evidence points more in favor of imports than

exports as a factor contributing to growth and productivity, because imports increase competition in the economy and help introduce new technologies.²

Clearly, therefore, little consensus exists even within the World Bank, let alone within the larger development community, on the lessons to be drawn from the experience of the East Asian economies. If there is so little agreement on the mechanism of the economic miracle, there is likely to be even less agreement about its replicability elsewhere in the developing world.

1.2. Rethinking the Lessons Learned

In recent years, new evidence has led to improved understanding about the miracle economies in a number of areas. For example, recent evidence suggests that the growth process in these economies has been much less equitable than the World Bank (1993) claimed. In the 1970s and 1980s Hong Kong, China; Indonesia; Korea; and Malaysia saw modest reductions in inequality, but by international standards the levels of inequality were already extremely high in Hong Kong, China; Malaysia; and Thailand. In Thailand, inequality has increased secularly in the last three decades. In both Singapore and Taipei, China inequality has remained largely stable, though by international standards it remains high in Singapore (Deininger and Squire 1996). Furthermore, despite the widespread perception that all these economies had favorable initial conditions in terms of educational attainment or egalitarian land distribution following a round of land reform, recent evidence suggests that this viewpoint has little or no solid factual basis.

These facts suggest that poverty reduction in the miracle economies was essentially propelled by rapid economic growth, which was not always accompanied by improved income distribution. In light of this conclusion, how this growth process was initiated and sustained as well the mechanisms through which economic growth influenced poverty are of interest. Examining the extent to which this miracle process can be replicated in other countries to achieve rapid growth and alleviate poverty is also useful.

However, as one would expect, the impact of growth on poverty reduction has not been uniform across the economies and will not be elsewhere. It will presumably depend on a host of considerations, including the following:

- The source of growth: whether it is internally generated or externally sustained by foreign trade and investment
- The composition of output: whether the main impetus of growth is derived from agriculture or from light manufacturing or services

² This argument is not fully consistent with Yusuf's four keys to the East Asian miracle. The third key highlights the role of activist government policies to industrialize and increase the share of exports, while this argument gives the impression that export promotion was, after all, not the most efficient thing to do. The analytical underpinning for this argument comes from Lawrence and Weinstein (1999), whose empirical study of Japan suggested that the country's trade protection and dogged pursuit of export expansion was not particularly helpful to its total factor productivity (TFP) growth. They argued that by enhancing domestic competition and opportunities for learning from foreign rivals, a liberal import policy can be a powerful instrument for growth, particularly when domestic industries have converged with market leaders.

- The functioning of the labor markets along with the wage-setting mechanisms: whether markets are encumbered by excessive restrictions and regulations
- The types and qualities of market and nonmarket institutions: how they help generate growth impulses in the economy and transmit them into the lives of workers.

In considering the lessons from the miracle economies one must keep in mind that the future process will not be an exact replica of the past. The internal and external environments within which developing countries are operating today have undergone significant changes since the 1960s and the 1970s, when the miracle economies underwent their first growth spurt. Some notable changes include the following. First, the external trading environment is much more open today, which offers new opportunities, as well as challenges, for developing countries aspiring to achieve a rapid social and economic transformation.

Second, even if the economies' industrial policy had been as effective as some of its proponents claimed, it would be much more difficult to adopt and implement now because of the implications of World Trade Organization membership. In the near future, the developing member countries of the World Trade Organization will have to conform fully to the terms of the Trade-Related Investment Measures and Trade-Related Aspects of Intellectual Property Rights agreements.

Third, the advent of democracy and political pluralism hinders the adoption of some programs and policies that were feasible in the absence of democracy. For example, the miracle economies had fewer labor market regulations—and had much more flexibility—than most developing economies under a more democratic political regime have today. In addition, in a democracy with a thriving civil society the process of policy consultation, adoption, and execution is much more time-consuming and involves many more procedural formalities than under an authoritarian regime.

Fourth, the rapid development of information and communications technology makes moving financial capital much easier and faster than before. This enhanced mobility narrows the range of choices for a government, particularly in the area of monetary and fiscal policies, as it is virtually barred from adopting policies that are not to the liking of the mobile capitalist and entrepreneurial classes. At the same time, the new technology opens up fresh opportunities for developing countries to accelerate growth and employment. Moreover, many applications of the new technology have a direct bearing on the welfare of the poor.

1.3. Overview

This study takes a fresh look at the East Asian miracle and its lessons from the poverty and equity perspective. This fresh look is warranted by two sets of developments in particular: the recent financial crisis that devastated these economies raised questions about the fragility of the miracle, and the availability of new information and data. This study focuses on the second issue.

The study offers a number of salient findings, namely:

- The East Asian miracle economies achieved rapid economic growth and poverty reduction, but the process was not necessarily accompanied by improvements in income distribution. In other words, the most important mechanism for reducing

poverty in the East Asian miracle economies was rapid growth, which was not always distributionally favorable to the poor.

- The proximate cause of high economic growth was sustained high investment that was fostered by a congenial investment climate. The congenial investment climate, which reflects the general market orientation of these economies, was underpinned by favorable policies and institutions.³
- The most critical element of the policy package was openness to trade and technology, which gave these economies the opportunity to exploit trading possibilities in the international market place and to access new technologies and raw materials. The latter was vital both to sustain international competitiveness and to modernize the economy.
- The other policies and institutions that were critical complements to openness were adherence to prudent macroeconomic principles, labor market flexibility, and market-supporting political and legal institutions that favored production over diversion. The credibility of the policies and the stability of the institutions were often maintained by authoritarian regimes and efficient, insulated bureaucracies.
- Not all the miracle economies had favorable initial conditions, such as high educational attainment (in relation to income levels), equitable asset distribution (because of land and other reforms), and a well-developed agriculture sector (because of past high rural investment), nor were such conditions critical to initiating the takeoff of these economies. Where present these factors might have contributed to making the growth process more equitable, but they were certainly not the magic key that unlocked the process.
- Even though all the miracle economies did not have favorable initial conditions in terms of educational and skills endowments, they responded quickly to the evolving skills needs of an outward-oriented economy. Openness meant the availability of new, imported technologies and greater international competition, both of which heightened the demand for new and sophisticated skills.

These findings are not earth shattering. Indeed, other scholars who have studied the miracle economies have also cited similar findings. What is perhaps new is the re-conceptualization of the miracle process in a coherent framework that addresses the various issues pertaining to miracle economies.

This study reviews a vast literature on the subject and uses results from both qualitative and quantitative studies to draw its conclusions. However, this study, like others in this area, was greatly constrained by the lack of reliable data on poverty, income distribution, and other related variables that could have a significant bearing on important dimensions of the inquiry. In particular, an empirically rigorous inquiry into the different mechanisms through which various policies and institutions influence growth, poverty, and inequality requires relevant meso-data and micro-data and

³ The distinction between institutions and policies has been the source of good deal of confusion. Institutions generally refer to various nontechnological constraints to human behavior. They include a plethora of formal and informal rules and customs within which individuals, firms, and other economic entities operate. By contrast, policies refer to various strategies and measures a government adopts to achieve its goals and objectives within the country's institutional framework. I am indebted to Pranab Bardhan for clarifying this distinction (personal correspondence).

intensive country studies (for in-depth country studies on poverty see, for example, Pernia 1994; Quibria 1996, 1996).⁴

In the absence of such studies, empirical work on the East Asian miracle has been largely macro-oriented and has proceeded along two lines. One type of work has focused on growth accounting,⁵ which breaks down growth in output into growth in inputs and growth in total factor productivity (TFP). The latter, which is calculated as a residual, is considered an indicator of an economy's long-term (as opposed to transitional) growth potential. The second line of empirical work has focused on cross-country growth regressions,⁶ which explore empirically the role of various policies and institutions in the economic transformation of economies, including the miracle economies. Recent years have seen the proliferation of these types of empirical work, which has increasingly figured in policy debates. However, this body of literature has been controversial and has not been enthusiastically accepted either by growth theorists or by econometricians. In the words of Temple (1999): "There is a widespread feeling that growth theory and econometrics are best kept apart. Their off-spring, cross-country regressions are not greatly loved by either parent" (pp. 112–13).

This study is organized as follows. Chapter 2 provides a brief overview of the performance of the miracle economies in the areas of growth, poverty, and inequality and how they differ from the South Asian economies. Chapter 3 explains the causes for the economic miracle. It first discusses the literature on the sources of growth, the controversy it has generated, and the policy insights it has provided. It then goes on to explain in the form of a schematic framework the role of major policies, initial conditions, and institutions in creating the economic miracle. In this connection, the study distinguishes between primary factors and important but secondary factors. Chapters 4 and 5 provide detailed discussions of major policies, initial conditions, and institutions and compare policies and institutions in the miracle economies with those in South Asia. Chapter 6 is a brief overview of the evolution of poverty in India and how various policies and initial conditions influenced that evolution. Finally, chapter 7 offers some concluding remarks that highlight the lessons one can draw from the East Asian experience. In light of the changed internal and international environments, the study also draws some inferences about future strategies for countries striving to imitate the performance of the miracle economies.

⁴ The economic status of a household depends on its command over resources. This command, in turn, is determined by the assets the family owns, the prices for the use or sale of those assets, the net transfers received by the household, and the prices that the household pays for the goods and services it consumes. The microeconomic determinants of the command over resources are affected by policies and institutions, which operate through intermediate or meso variables. These meso variables are the conduit mechanisms that transfer the effects of broader macroeconomic policies and changes in the institutions to the proximate microeconomic determinants of the household's command over resources (Behrman 1993).

⁵ Growth accounting is a quantitative, analytical procedure to decompose growth into various sources, such as physical and human capital, labor, and TFP. TFP refers to the residual that is not accounted for by such factors as physical and human capital and labor. Different theories emphasize different views of TFP. Some theories focus on technical change, others on impediments to the adoption of new technology, externalities, sectoral change, and cost reduction. While different models highlight different forces of TFP change and their underlying policy implications, distinguishing between them empirically is difficult (Easterly and Levine 2001).

⁶ These regressions are also known as Barro regressions after Robert Barro of Harvard University who popularized this type of work. However, if we follow the line of genealogy strictly, they should perhaps be referred to as Robinson regressions after Sherman Robinson (1971).

2. The Complex Inter-Relationships between Growth, Poverty, and Inequality

The relationships between growth, poverty, and inequality are complex and multidimensional. An understanding of these relationships and their underlying determinants are a key to successful policymaking.

2.1. The Situation in Developing Asia

The economic performance of developing Asia varied significantly across the region. However, within this diversity certain patterns emerged in relation to economic growth, income inequality, poverty, and quality of life. These empirical patterns offer some valuable insights into policies for effective poverty reduction and social development.

2.1.1. Economic Growth

The miracle economies of Asia have gone through a tremendous economic and social transformation since the 1960s. This transformation was most evident in the area of economic development: the miracle economies grew faster than any other group of developing countries in the world. While the NIEs grew the fastest, the growth performance of the Southeast Asian economies was almost equally impressive. Between 1961 and 1996, the longest period for which comparable data are available, the NIEs grew at more than 8 percent per year, while Southeast Asian economies grew at a slightly slower, yet still respectable rate of about 7 percent per year. This growth translated into a remarkable rise in economic prosperity. In 1960 gross national product (GNP) per person in the NIEs was only 16 percent of that in the United States, but by 1995 it had reached 77 percent of that in the United States. Similarly, in 1960 GNP per person in the Southeast Asian economies was only 4 percent of that in the United States, but by 1995 it had risen to 10 percent of the U.S. level. The improvement was spectacular. In roughly three decades, the income levels of the NIEs had increased more than ninefold.

The performance of the miracle economies, however, contrasts sharply with that of South Asia, where growth was much slower and social transformation was much less impressive. Between 1961 and 1996, growth in per capita GNP averaged a little more than 2 percent (table 2-1). As a result, the average income in South Asia during this period was just 1.4 percent of U.S. income in 1960. In the 1990s, some improvement in South Asia's economic performance was apparent with the adoption of more liberal economic policies and enhanced institutional infrastructure.

Table 2-1. Economic Indicators, Selected Asian Economies and Selected Regions, 1961–96

Economy and region	GDP growth (%)					GNP per capita growth (%)					GNP per capita (constant 1995 US\$)					
	1961-70	1971-80	1981-90	1991-96	1961-96	1961-70	1971-80	1981-90	1991-96	1961-96	1960	1970	1980	1990	1995	1998
Miracle Asia																
Hong Kong, China	9.87	9.38	6.63	5.21	7.77	7.06	6.73	5.32	3.46	5.64	3,022	5,947	11,290	18,813	22,619	21,726
Korea, Rep.	8.26	7.67	9.08	7.35	8.09	5.18	5.53	8.03	6.23	6.24	1,322	2,171	3,686	7,960	10,844	10,972
Singapore	9.96	9.04	7.36	8.88	8.81	7.16	6.40	5.99	6.97	6.63	3,145	6,208	11,516	20,465	28,794	32,602
Taipei, China	-	9.7	7.96	6.48	8.04	5.20	9.20	7.70	-	7.37	1,489	2,797	5,839	12,652	-	-
Indonesia	4.18	7.87	6.41	7.83	6.57	1.83	4.91	4.46	6.27	4.37	250	298	481	741	992	896
Malaysia	6.49	7.87	6.00	8.67	7.26	3.61	5.30	3.00	5.74	4.41	959	1,366	2,283	3,051	4,032	4,107
Thailand	8.17	6.89	7.89	8.05	7.75	5.41	3.90	5.95	6.49	5.44	451	762	1,115	1,977	2,771	2,579
<i>Average</i>	7.82	8.35	7.33	7.49	7.76	5.06	6.00	5.78	5.86	5.73	1,520	2,793	5,173	9,380	11,675	12,147
Philippines	4.93	5.93	1.80	2.80	3.86	1.70	3.46	-0.51	1.17	1.46	701	829	1,164	1,091	1,114	1,182
South Asia																
Bangladesh	4.06	1.79	4.77	4.53	3.79	1.11	-0.57	2.54	2.95	1.51	214	237	219	281	324	361
India	4.10	3.06	5.87	5.66	4.68	-	0.87	3.46	3.81	2.71	-	216	234	328	387	441
Nepal	2.52	2.11	4.79	5.22	3.66	0.48	-0.31	2.09	2.56	1.21	150	157	151	185	211	222
Pakistan	7.24	4.72	6.29	4.87	5.78	4.31	1.38	3.43	2.54	2.91	175	266	304	425	486	489
Sri Lanka	4.58	4.43	4.18	5.12	4.58	2.06	2.84	2.86	3.44	2.80	278	340	449	595	712	792
<i>Average</i>	4.50	3.22	5.18	5.08	4.50	1.99	0.84	2.87	3.06	2.23	204	243	272	363	424	461
Regions																
East Asia and Pacific	5.2	6.6	7.8	8.9	7.1	3.17	4.71	6.14	7.35	5.34	181	244	386	700	1,002	1,092
Latin America and Caribbean	5.40	5.90	1.21	3.63	4.04	2.68	3.33	-1.05	1.86	1.71	2,060	2,678	3,712	3,327	3,635	3,883
South Asia	4.36	3.12	5.76	5.45	4.67	-	0.81	3.36	3.51	2.56	-	223	240	334	391	437
Sub-Saharan Africa	5.22	3.64	1.75	1.84	3.11	2.57	0.59	-1.07	-0.62	0.37	456	587	620	555	526	535
<i>World</i>	5.47	3.79	2.94	2.28	3.62	3.37	1.79	1.19	0.77	1.78	2,638	3,674	4,383	4,931	5,048	5,276

- Not available.

GDP Gross domestic product.

Source: ICSEAD (1999); Leipziger (1997); World Bank (2000d).

2.1.2. Poverty and Quality of Life

In tandem with their economic performance, the miracle Asian economies have made commensurate improvements in their citizens' quality of life. Even though poverty was pervasive in the miracle economies in the 1960s, by the 1990s it had been virtually abolished in the NIEs. The other miracle economies—such as Indonesia, Malaysia, and Thailand—also made dramatic strides in poverty reduction. By the mid-1990s both Indonesia and Thailand had reduced their poverty levels, as measured by the US\$1 per day poverty line, to a quarter of their levels in the mid-1970s. In Malaysia, poverty as measured by the US\$1 per day poverty line has become virtually extinct. No matter what poverty threshold is used—the national poverty line or the international US\$1 per day criterion—the performance of the miracle economies in poverty reduction remains impressive (table 2-2). Similarly, the miracle economies have made remarkable strides in social indicators of the quality of life. Whatever social indicator one considers—be it life expectancy, infant mortality, or adult literacy—the progress of these economies in the last three decades has been remarkable (table 2-3). The social indicators of most of these countries are gradually converging toward industrial country averages.

Table 2-2. Incidence of Poverty, Selected Asian Economies, Selected Years
(headcount index)

Economy	US\$1 per day				National poverty line				
	1975	1985	1995	1998	1965	1970	1975	1985	1996
Miracle Asia									
Hong Kong, China	-	-	-	-	-	21.0 ^a	14.0 ^b	-	-
Korea, Rep.	-	-	2.0	-	41.1	23.0	14.6 ^b	5.0 ^c	9.6
Singapore	-	-	-	-	-	31.0 ^d	-	10.0 ^e	-
Taipei, China	-	-	-	-	47.0	30.0	23.0	3.0	-
Indonesia	64.3	32.2	11.4	15.2	-	58.0	40.0 ^b	28.0 ^c	11.3
Malaysia	17.4	10.8	<1.0	-	-	49.0	43.9	24.0	8.2 ^f
Thailand	8.1	10.0	<1.0	<2.0	57.0 ^g	39.0 ^h	32.0 ^b	26.0 ⁱ	11.4
Philippines	35.7	32.4	25.5	-	-	-	52.0 ^j	52.0	36.8 ^f
South Asia									
Bangladesh	-	-	29.1	-	-	-	73.0 ^j	52.0 ⁱ	35.6
India	-	-	47.0 ^k	44.2 ^f	-	52.0 ^d	51.0 ^l	45.0 ^c	35.0 ^k
Nepal	-	-	37.7	-	-	-	-	-	42.0
Pakistan	-	-	31.0	-	-	-	43.0	25.0	22.0 ^m
Sri Lanka	-	-	6.6	-	37.0	-	19.0 ^l	40.6 ⁱ	21.0 ^f

- Not available.

- a.1971. f.1997. k.1994.
- b.1976 g.1962. l.1978.
- c.1984. h.1968. m.1993.
- d.1972. i.1986.
- e.1982. j.1973.

Source: ADB (2000); Kwon (1992); Porametee (1999); Tabatabai (1996); Warr (2001); ESCAP (1998); World Bank (1997, 2000d).

The picture in South Asia is somewhat different. After a period of lackluster performance, South Asia also made some progress in poverty reduction during the last two decades (table 2-2). Given its slower economic growth and higher rate of population increase, its achievement in reducing poverty was somewhat offset by the increase in the size of the population. Using the US\$1 per day poverty line, one-third of South Asia's population, about 270 million people, are still considered poor. Similarly, in the area of social indicators, except for Sri Lanka the performance of the South Asian economies remains largely lackluster (table 2-3).

Table 2-3. Social Indicators, Selected Asian Economies and Selected Regions, Selected Years

<i>Economy and region</i>	Life expectancy at birth (years)		Infant mortality rate (per 1,000 live births)		Adult Illiteracy rate (percentage of people age 15+)	
	1967	1997	1967	1997	1970	1995
Miracle Asia						
Hong Kong, China	68.4	78.7	23.0	4.6 ^a	21.5	8.2
Korea, Rep.	57.7	72.3	58.0	9.0	13.2	3.1
Singapore	66.5	76.4 ^a	26.1 ^b	4.0 ^a	26.9	9.2
Taipei,China	64.0 ^c	74.8 ^a	24.0 ^d	6.4 ^a	46.0 ^c	5.6
Indonesia	46.0	65.1	124.0	47.0	43.7	16.3
Malaysia	59.4	71.7 ^a	50.0	11.0	41.7	15.6
Thailand	56.7	68.8	84.0	33.4	19.7	5.8
<i>Average</i>	59.8	72.5	55.6	16.5	30.0	9.1
Philippines	56.2	68.3	72.0	33.0	16.0	6.0
South Asia						
Bangladesh	43.3	58.1	140.0	75.0	75.9	61.9
India	48.0	63.1	145.0	71.0	66.9	46.7
Nepal	41.0	57.4	175.0	79.0	83.9	64.1
Pakistan	47.8	61.7	145.0	95.0	79.3	58.8
Sri Lanka	64.2	73.1	61.0	17.0	19.5	9.7
<i>Average</i>	48.9	62.7	133.2	67.4	65.1	48.2
Regions						
East Asia and Pacific	57.1	68.7	88.8	36.3	44.2	17.4
Latin America and Caribbean	59.3	69.6	90.5	31.6	26.2	13.3
South Asia	47.5	62.2	145.1	76.6	68.5	49.1
Sub-Saharan Africa	43.0	50.7	143.1	92.1	71.8	44.1
<i>World</i>	57.509	66.729	104.77	55.219	45.1	26.5

a. 1995.

b. 1965.

c. 1960.

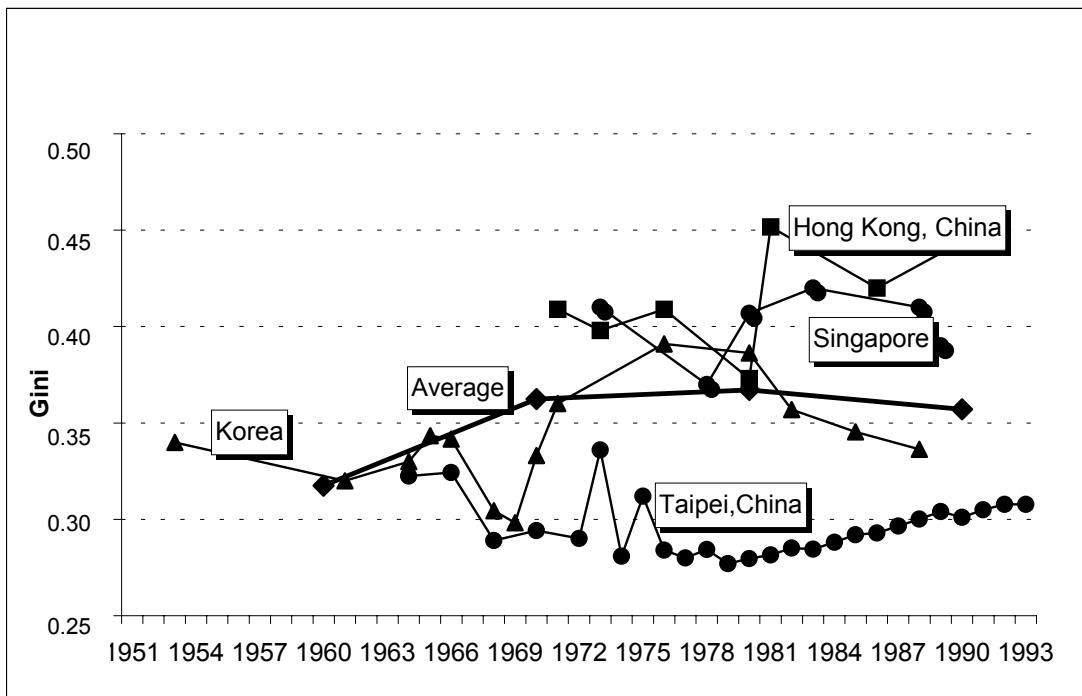
d. 1970.

Source: ICSEAD (1999); Leipziger and Thomas (1997); World Bank (2000d).

2.1.3. Income Inequality

As noted earlier, despite the widespread perception that the process of evolution of the miracle economies was one of “shared” growth, that is, that these economies experienced substantial and monotonic reductions in inequality over time (World Bank 1993), the reality of the growth-equity nexus was much less unilinear. Indeed, it was far too complex to be codified into a simple relationship. Singapore has registered a high Gini coefficient since the 1970s and has shown little improvement since then (figure 2-1). As regards the other NIEs, the Gini coefficients for Hong Kong, China and Taipei,China have deteriorated since the 1970s, only slightly in Taipei,China, but quite significantly in Hong Kong, China, where it hovered around 0.45 in the 1990s, with the income of the richest 20 percent reaching more than 10 times that of the poorest 20 percent. Income distribution has improved slightly in Korea during the last three decades, though the current situation may not be any better than what it was in the 1960s.

Figure 2-1. Gini Coefficients of NIEs, 1951–93

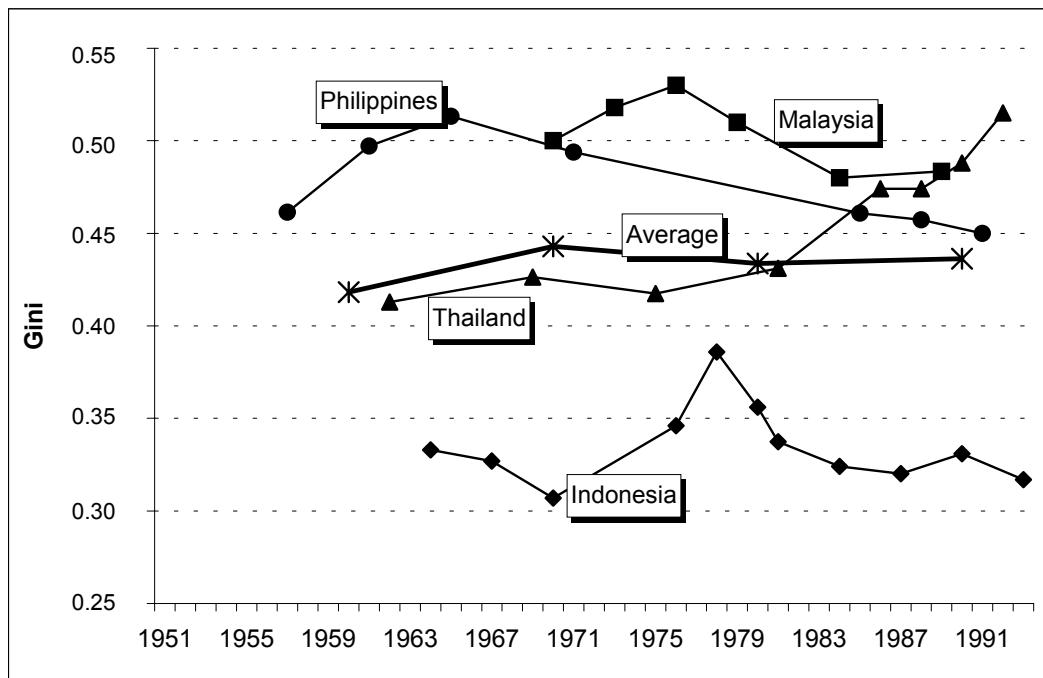


Source: Deininger and Squire (1996).

In Southeast Asia, both Malaysia and Thailand remained highly inequitable societies, with the Gini coefficient hovering around 0.5 (figure 2-2). However, the important difference between the two economies was that while in Malaysia it improved over time, in Thailand it kept on deteriorating until the recent crisis arrested the trend. Inequality remained low in Indonesia, where income distribution improved over time, although recent statistics seem to indicate a sudden, significant deterioration of the situation, and even in the 1990s, many expressed serious doubts about the quality of income distribution data for Indonesia (Tjondronegoro, Soejono, and Hardjono 1996).

Compared with the miracle economies, South Asian economies are generally both poorer and more egalitarian.⁷ Moreover, inequality seems to have declined in both Bangladesh and Sri Lanka, while it has remained largely static in India, Pakistan, and Nepal (figure 2-3).

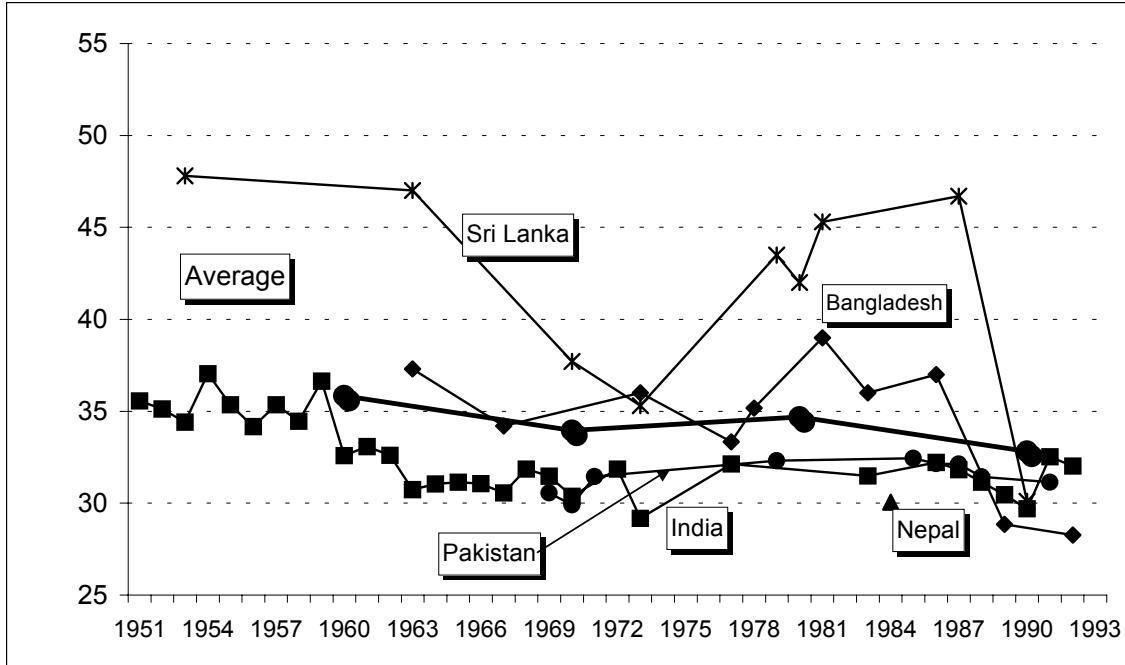
Figure 2-2. Gini Coefficients of Southeast Asian Economies, 1951–93



Source: Deininger and Squire (1996)

⁷ Reliable data on asset distribution are difficult to obtain. The fragmentary evidence that is available on land distribution in the 1960s and 1970s suggests that land distribution in the miracle economies, despite land reforms in some of these economies, was not significantly more equitable than in South Asia, although it may have been more equitable than in Latin America (Otsuka 1993).

Figure 2-3. Gini Coefficients of South Asian Economies, 1951–93



Source: Deininger and Squire (1996)

2.1.4. Conclusions

The principal message that emerges from the foregoing discussion is that the main impetus for poverty reduction in the miracle economies was rapid growth, which received little or no help from improvements in income distribution. Indeed, when some of these countries were making major strides in poverty reduction in the 1970s and 1980s, income distribution either deteriorated or remained largely unchanged. In other words, the process of poverty reduction in developing Asia—when the largest segment of humanity was transported out of poverty and thereby became the stuff of the Asian miracle—was not necessarily pro-poor.⁸ By contrast, some of the South Asian economies experienced growth that was more distributionally favorable, yet it did not translate into rapid reduction in poverty because of slower growth in income.

While all the miracle countries generally performed well both in achieving economic growth and in reducing poverty, their performance was far from uniform in terms of growth rates and the pace of poverty reduction. The elasticity of poverty to growth, that is, the responsiveness of the incidence of poverty to economic growth, was higher in countries where income distribution was improving or stable rather than deteriorating. Thus during 1970–92, Korea displayed a higher poverty elasticity (1.77) than Thailand (0.66), which was relatively slow to respond to general economic growth because of its rising income inequality. The same was true of the Philippines (0.74), which is not part one of the miracle economies (ADB 2000).

⁸ Pro-poor growth has been defined as a situation where growth has resulted in improved income distribution for the poor (Kakwani and Pernia 2000).

Thus while economic growth helped the process of poverty reduction in the miracle economies, it had a greater impact on poverty reduction when it was combined with equity.

2.2. Some Empirical Regularities

Growth, poverty, and income inequality are closely intertwined. The extent of poverty in a country is essentially determined by two factors: economic growth that enhances average income within a society and the distribution of that income among the members of society. In recent years this observation has led to a number of efforts to decompose change in poverty into two broad components. The first is the economic growth component, which tracks the change in poverty resulting from growth when income distribution remains unchanged. The second is the distribution component, which tracks the change in poverty resulting from income distribution when growth remains unchanged. The relationship can be expressed as follows:

$$P^* = E(y)y^* + E(i)i^*,$$

where P^* is the rate of change in poverty indicators, y^* is the rate of change in per capita income, i^* is the rate of change in the inequality indicators, $E(y)$ is the growth elasticity, and $E(i)$ is the inequality elasticity of poverty. In general, one expects the first term on the right-hand side of the equation to dominate the second term, which would mean that economic growth always leads to some poverty reduction. In cases where the growth component and the inequality component go hand in hand, that is, when growth is shared, rapid poverty reduction ensues. However, when growth and inequality produce effects that operate in opposite directions, the overall effect of growth is weaker.

As the Deininger and Squire (1996) dataset reveals, income distribution across countries has remained largely unchanged with growth. This implies that the overall poverty impact is equivalent to the growth impact. In other words, changes in poverty can, in general, be tracked exclusively by economic growth. However, empirical generalizations are not universal laws and individual deviations from this stylized empirical fact occur. In some countries growth has been accompanied by improvement in the distribution of income, and they have acted in concert with the reduction of poverty. In other countries a deterioration in income distribution has hampered the pace of poverty reduction that was induced by growth.

A burgeoning empirical literature seeks to explore the relationship between growth and poverty. This literature, which includes studies by Bruno, Ravallion, and Squire (1998); Ravallion (2000); Ravallion and Chen (1997); De Janvry and Sadoulet (2000); Morley (2000); and Smolensky and others (1994), uses an absolute concept of poverty. The first three studies use a global dataset, while the last three limit themselves to Latin American countries. Their results also differ: the last three find poverty elasticity around unity, while the first three find the value of poverty elasticity much exceeding unity at higher than 2.

Another strand of literature in this area relies on a relative concept of poverty. This literature, which includes Dollar and Kraay (2000a); Gallup, Radelet, and Warner (1998); Roemer and Gugerty (1997); and Timmer (1997), defines the poor as those who

fall in the first quintile of the income distribution. These studies use the same dataset and arrive at similar empirical results. Except for Timmer, who surprisingly found the poverty elasticity to be less than 1, the other researchers found it to be unity. What this result suggests is that the poor gain proportionately from overall income growth. Alternatively, it suggests that income distribution remains invariant with economic growth. Here again, these results are true in an average sense, and are not a universal generalization.

In short, the principal lever of poverty reduction globally seems to have been growth, and not income distribution.⁹ This has also been the case with the miracle economies, where the cutting edge of rapid growth was sometimes muted by adverse trends in income distribution

3. Explaining the Miracle

Economic growth is the outcome of accumulation and of the efficient use of capital, both physical and human. Many earlier development economists have emphasized the role of investment in economic growth, most notably Nobel Laureate Arthur Lewis. To Lewis (1954), the central problem of economic development was to understand the process by which an economy that was previously saving and investing 4 or 5 percent of its national income transforms itself into an economy that saves 12 to 15 percent of its national income. He argued that this transformation is fundamental to economic growth as “the central fact of economic development is rapid capital accumulation” (p. 155).¹⁰ However, this emphasis on investment as the critical driving force of growth waned with the rising popularity of the neoclassical growth theory (the Solow-Swan growth model) (Solow 1956; Swan 1956). According to neoclassical growth theory, investment has no role in determining the long-term (steady-state) growth rate, although it does have a role in determining the level of per capita income.¹¹

While the basic Solow-Swan model did not distinguish between different types of capital, recent research on economic growth distinguishes between physical and human capital. This body of work (see, for example, Aghion and Howitt 1998; Lucas 1988; Mankiw, Romer, and Weil 1992) attributes a central role to human capital in the process of economic growth (although different authors have emphasized different channels through which human capital affects growth). While some view human capital as a

⁹ Note that income distribution is difficult to change, even with radical government policies. Empirical simulation results by Adelman and Robinson (1989) suggest that with such large parameter changes as doubling the tax rate; increasing the agricultural capital stock by as much as 30 percent; and subsidizing the consumption of food, housing, and medical services for the poorest 60 percent of households, the impact on the Gini coefficient in Korea would be marginal, no more than 1 or 2 percent in most cases. This led Adelman and Robinson (1989) to conclude: “The size distribution is very insensitive to exogenous and policy shocks. Trends in the size distribution seem to be rooted in initial conditions, including resource endowments, asset distribution, and institutions” (p. 981).

¹⁰ However, without the right economic environment, rapid accumulation may not result in rapid growth, as much of the investment would be wasted in inefficient production, thereby jeopardizing the accumulation momentum. This is starkly illustrated by the experience of the former Soviet Union as well as of countries that imitated the Soviet model.

¹¹ Note that capital accumulation in the sense Lewis meant it is different from that of neoclassical growth theory. In neoclassical theory, capital accumulation means more of the same equipment, whereas capital accumulation in the way Lewis used it means more equipment of newer vintage that results in higher production.

primary input into the standard production technology, others view it as an essential ingredient for innovation and the adoption of technology. In the former construct, changes in the level of human capital affect the rate of growth in output, while in the latter construct the level of human capital affects the rate of growth in output through its impact on innovation and adoption.

3.1. Sources of Growth

An important focus of the recent empirical research on the East Asian miracle economies has been to identify the sources of growth in these economies, that is, to identify the contributions of factor accumulation and technical progress to output growth. This research was greatly stimulated by the controversial findings of Young (1992, 1994, 1995) and Kim and Lau (1994), who suggested that almost all the growth in the East Asian economies could be attributed to capital accumulation and only a small fraction to total factor productivity (TFP) growth. In the words of Young (1995): “While the growth of output and manufactured exports of the newly industrializing economies of East Asia was virtually unprecedented, the growth of total factor productivity in these economies is not” (p. 641). If one follows the logic of neoclassical growth theory, this finding has a devastating implication. That is, once the phase of capital accumulation comes to an end, the growth of these economies would come to a grinding halt.¹² With this message, Krugman (1994) wrote a widely publicized article that generated much consternation in Asian policy circles.¹³

The argument that the miracle economies experienced few or no efficiency gains over the years flies in the face of plausibility. Partly in reaction to such findings, an entire cottage industry of research on this topic has emerged in recent years. To survey the whole literature on growth accounting would take us too far afield from the main focus of this study. Note, however, that some of these studies found much higher TFP growth in the miracle economies than reported by the Kim and Lau (1994) and Young (1995) studies. One recent study is by Bosworth and Collins (1996), who paid considerable attention to data, in particular, to the construction of measures of human capital. Their study covered 80 countries over 1960–94 (table 3-1) and found that TFP growth for the miracle economies was much greater than suggested by the earlier studies.¹⁴ Moreover,

¹² According to neoclassical growth theory, if a simple Cobb-Douglas production function is assumed, as is done in most empirical exercises, then the rate of growth in income of a country can be decomposed as follows: growth in per capita income = growth in technical progress + factor share x the rate of capital accumulation per worker. In the long run, when the economy attains balanced growth, the Solow-Swan type of model would imply that the rate of capital accumulation per worker would be zero. Then if the growth in technical progress is also zero, the economy would register zero growth in the long run.

¹³ Drawing a parallel between East Asia and the former Soviet Union, Krugman went on to argue that growth in East Asia would cease as it did in the Soviet Union, because growth in both cases was driven exclusively by capital accumulation. However, his article ignored two important features of the miracle economies that contrast sharply with the former Soviet Union. First, these economies are open, whereas the Soviet Union was closed. Second, the principal driver of growth, savings and investment, in these economies is the private sector, whereas in the Soviet Union it was the public sector. Both these features have a critical bearing on the sustainability of the growth process. Consequently, while the Soviet Union registered a declining trend in TFP growth, the miracle economies exhibited an upward trend.

¹⁴ A recent study by Hsieh (2000c), which used a methodological approach different from that of earlier studies, confirmed these findings. He used a dual price-based approach to calculate TFP growth for the NIEs. While his dual estimates for Korea and Hong Kong, China were similar to the primal estimates, they

the TFP growth exhibited an upward, rather than downward, trend over the years. The overall message from these recent studies is that capital accumulation, not TFP growth, was the main source of growth in the miracle economies.

While growth accounting is interesting, it falls seriously short on policy content. Moreover, recent research has brought to the fore some serious shortcomings of the use of growth accounting as an analytical tool. First, in open economies, where technical advances are largely embodied in successive vintages of capital imports as was the case with the miracle economies, the growth accounting exercises seriously underestimate the extent of productivity growth because of the way the accounting is done (Srinivasan and Quibria 1996).¹⁵

Second, as Klenow and Rodriguez-Clare (1997) showed, TFP estimates are highly sensitive to the choice of data on human capital. Using secondary school enrollment as the measure of human capital, Mankiw, Romer, and Weil (1992) found that almost 80 percent of the variation in income across countries can be explained by factor accumulation. Using a different definition of human capital that included both primary and secondary school enrollments, Klenow and Rodriguez-Clare found that factor accumulation accounted for a significantly smaller, yet nevertheless hefty 70 percent of the variation in income. Thus estimates of TFP can vary significantly depending on how human capital is measured.

differed for Taipei, China and Singapore by roughly 1 percent and more than 2 percent, respectively. The basic reason for this discrepancy for Singapore is that despite its high rate of capital accumulation, the return to capital has remained constant. The dual estimate, which used the data on the growth of real wages and growth of return to capital, suggests that TFP growth for Singapore was much higher than the estimates suggested by Kim and Lau (1994) and Young (1995).

¹⁵ Conventional growth accounting is based on gross domestic product, and the contribution of imported equipment to growth is measured by its productivity in the country where it is being used. According to this convention, the increase in productivity gained by the importing country from the purchase of new equipment is attributed to input growth rather than to technical progress. However, this change in productivity—unless eliminated by large imports of equipment all at once—should be treated as technical progress.

Table 3-1. Sources of Growth, Selected Asian Countries and Selected Regions, 1960–94

(percent per year)

Economy and region	Output per worker	Contribution of		
		Physical capital	Education	TFP
Miracle Asia				
Hong Kong, China	-	-	-	-
Korea, Rep.	5.7	3.3	0.8	1.5
Singapore	5.4	3.4	0.4	1.5
Taipei, China	5.8	3.1	0.6	2.0
Indonesia	3.4	2.1	0.5	0.8
Malaysia	3.8	2.3	0.5	0.9
Thailand	5.0	2.7	0.4	1.8
Philippines	1.3	1.2	0.5	-0.4
Regions				
East Asia	4.2	2.5	0.6	1.1
Latin America and Caribbean	1.5	0.9	0.4	0.2
South Asia	2.3	1.1	0.3	0.8
Sub-Saharan Africa	0.3	0.8	0.2	-0.6

- Not available.

Source: Bosworth and Collins (1996).

Table 3-2. TFP Growth Rates for East Asia Implied by Different Assumptions about Elasticity of Substitution

Elasticity of substitution	Implied TFP growth after			Implied factor share of capital after		
	10 years	20 years	30 years	10 years	20 years	30 years
1.0	1.03	1.03	1.03	0.35	0.35	0.35
0.8	1.28	1.51	1.73	0.31	0.28	0.24
0.5	1.93	2.53	2.89	0.21	0.12	0.06
0.3	2.68	3.17	3.27	0.10	0.02	0.00

Source: Rodrik (1998).

Third, and more fundamental, the methodology is subject to a serious “identification problem.” This point was implicit in Diamond, McFadden, and Rodriguez (1978), and was later highlighted by Hsieh (2000a), Nelson and Pack (1999), and Rodrik (1998), among others. The essence of the identification problem can be stated as follows. TFP growth is calculated as a residual whose value depends on the assumption about the elasticity of substitution of the underlying production function (which is not directly observable). Indeed, disentangling factor-augmenting technical change from the shape of the production function is impossible. As a consequence, one can have different estimates of TFP growth for a given rate of capital accumulation and output growth, depending on the assumptions about the elasticity of substitution in production and the nature of technical progress. According to a general theorem in this area (Diamond, McFadden, and

Rodriguez 1978; discussed at length by Rodrik 1998), if the assumed elasticity of substitution in production is higher than the true elasticity of substitution and the technical change is Hicks-neutral, then for a given rate of capital accumulation and output growth, the calculated TFP growth would be an underestimate, and the extent of underestimation will be proportional to the magnitude of capital deepening. Table 3-2 provides a numerical illustration, based on Bosworth and Collins (1996), and shows the sensitivity of TFP growth to the assumed elasticity of substitution in production for a given rate of technical change.

The most important point that emerges from the foregoing discussion is that given the various problems associated with calculating TFP, one should not attach too much importance to a precise estimate of TFP growth. In the case of open economies, the standard TFP growth estimates are likely to be biased downward. In these economies, much of their capital accumulation takes place through imports and much of their technological progress is embodied in imported capital. In other words, in an open economy capital accumulation and technological progress go hand in hand.¹⁶ Capital accumulation thus becomes a proxy for technological progress.¹⁷ This seems to explain the close empirical relationship between economic growth and capital accumulation. Note that Levine and Renelt (1992), who investigated the robustness of the results of the vast literature on cross-country growth regressions,¹⁸ found that the share of investment in gross domestic product (GDP) is the only variable that is systematically correlated with growth. In light of the previous discussion, we can view capital accumulation as the proximate source of growth.¹⁹

As the data show, all miracle economies devoted a hefty proportion of their incomes to investment (table 3-3), and the level of investment increased over time with economic growth. Indeed, high investment was not only a cause, but also an effect of the high rate of economic growth, leading to a possible virtuous cycle.²⁰ In addition, since the 1980s foreign direct investment (FDI) financed a significant part of this investment, especially in the

¹⁶ This close relationship does not stem from the fact that more of the same equipment makes workers more productive. On the contrary, technological change that accompanies capital accumulation in an open economy allows workers to use more and more powerful types of equipment. However, in a closed economy, for example, the former Soviet Union, capital accumulation can take place without technological progress (that is, more of the same equipment). If that happens, capital accumulation quickly encounters diminishing returns, thereby resulting in a slowdown of economic growth.

¹⁷ The use of modern equipment and machinery requires better trained labor. Effective use of new-vintage capital through imports requires an effective complement of human capital accumulation.

¹⁸ Levine and Renelt used extreme bound analysis to test the robustness of the coefficient estimates. A coefficient in a cross-country regression is robust if it keeps its sign and remains statistically significant irrespective of what other variables are included in the regression.

¹⁹ However, this should not be seen as undermining the importance of TFP in the long-run growth process. According to Easterly and Levine (2001, p. 37): “TFP residual accounts for most of the cross-country and cross-time variation in growth. Income across countries diverges over the long run, while the growth rates of the rich are not slowing and returns to capital are not falling. This observation is less consistent with simple models that feature diminishing returns, factor accumulation, some fixed factor of production and constant returns to scale and consistent with the observation that [TFP growth] is important for explaining long-run economic success.” However, TFP growth in an open economy may be associated with new investments. The new growth theory emphasizes the role of investment as a source of innovation and long-term growth.

²⁰ The impact of economic growth on investment has been emphasized in the recent empirical growth literature. According to Barro (1996), much of the estimated effect of the investment ratio on growth really reflected the reverse relationship between growth and investment.

Southeast Asian economies. The 1985 Plaza Accord, which led to a massive realignment of currency values, triggered a large flow of FDI, first from Japan and then from Korea and Taipei, China, to a number of neighboring Asian economies.²¹ These investments, which were concentrated in a narrow range of products such as consumer electronics and other lower-end electrical and electronic goods, constituted the core of the industrial structure that led to outward-oriented growth.

Table 3-3. Gross Domestic Investment, Selected Asian Economies and Selected Regions, 1961–96

(percentage of GDP)

<i>Economy and region</i>	<i>1961–70</i>	<i>1971–80</i>	<i>1981–90</i>	<i>1991–96</i>	<i>1961–96</i>
Miracle Asia					
Hong Kong, China	25.43	26.78	27.25	30.34	27.45
Korea, Rep.	20.10	28.90	30.92	37.39	29.33
Singapore	22.68	41.24	41.48	35.72	35.28
Taipei, China	17.08	26.39	23.18	-	22.22
Indonesia	10.40	22.45	27.51	29.87	22.56
Malaysia	19.87	26.27	30.85	38.92	28.98
Thailand	21.54	26.17	30.66	41.06	29.86
<i>Average</i>	19.59	28.31	30.26	35.55	27.95
Philippines	16.67	22.89	22.21	22.33	21.03
South Asia					
Bangladesh	16.36	13.92	19.69	19.38	17.34
India	16.06	19.64	22.65	23.01	20.34
Nepal	5.46	13.11	19.41	22.84	15.20
Pakistan	17.91	16.31	18.72	19.41	18.09
Sri Lanka	18.95	18.97	24.91	24.95	21.94
<i>Average</i>	14.95	16.39	21.08	21.92	18.58
Regions					
East Asia and Pacific	19.15	28.59	31.80	36.73	29.07
Latin America and Caribbean	20.44	23.58	20.34	20.57	21.23
South Asia	16.20	18.62	21.95	22.35	19.78
Sub-Saharan Africa	16.85	21.12	17.54	16.68	18.05
<i>World</i>	24.29	25.31	23.19	22.25	23.76

- Not available.

Source: Penn World Data; World Bank (2000d).

The situation in the miracle economies contrasts sharply with that in South Asia. While the investment rates in South Asia increased over the decades, they remained much more modest than in the miracle economies. In addition, as the South Asian economies were largely closed until the early 1990s, the efficiency of the investments was not high,

²¹ As this flow ensued, a number of miracle economies became heavily dependent on FDI for investment and growth. For example, FDI constituted a large portion of total investment in Singapore, while in other neighboring Southeast Asian countries it constituted a significant, if not as large a share. Singapore's reliance on FDI was so critical that Leipziger and Thomas (1997) commented that "Singapore put its industrialization squarely on the shoulders of multinational corporations and foreign direct investment" (p. 15).

nor did they translate into rapid growth. Moreover, these economies did not succeed in attracting much FDI until recently, and their manufacturing sectors have been largely closed to modern technologies and management practices. Taken together, these factors resulted in a vicious cycle of low investment, low growth, and low social development.

The foregoing analysis, which draws largely on the recent growth accounting literature, sheds some light on the sources of growth in the miracle economies. Yet as Barro (1998) rightly noted: “The accounting exercise is—a preliminary step for the analysis of the fundamental determinants of economic growth” (p. 1). The important task in explaining the Asian miracle lies in identifying these fundamental determinants. That is, the policies and institutions that generally sustained the high rates of investment, transformed investments into rapid economic growth, and dramatically reduced poverty.

3.2. Factors behind the Miracle

Researchers have devoted much intellectual effort to explaining the factors behind the East Asian economic miracle, and have come up with at least four major explanations (Petri 1997). These explanations include the neoclassical explanation, which emphasizes outward orientation and macroeconomic discipline; the structuralist explanation, which highlights the activist role of the government in industrial policy; the cultural explanation, which focuses on governance, culture, and social characteristics; and the geographical explanation, which emphasizes resource endowments and geographical proximity. This study takes a fresh look at policies, institutions, and initial conditions as major explanations of the economic miracle. These factors include being open to foreign trade and investment; encouraging labor market flexibility; maintaining macroeconomic stability; giving high priority to educational attainment; having industrial policy in place; emphasizing agricultural development; attempting to achieve equitable distribution of assets and income; and providing market-supporting legal, political, and bureaucratic institutions.

To distinguish between causal factors that were critical to the success of the miracle economies and those which were merely supportive, I follow a simple methodology, that is, dividing the relevant factors into primary and secondary factors. Primary factors are defined as those that were common to all the miracle economies at the time of their economic takeoff. I argue that these factors, which constitute the common denominator between the miracle economies, are the fundamental determinants of the miracle. Other factors were also present in some, but not all, the miracle economies during their economic takeoff. These secondary factors, while they could conceivably have been significant influences on economic growth or income distribution, were not what really propelled these economies into the miracle trajectory.

The explanation in this study is a multifactor one. That is, a number of factors were responsible for the miracle, not just a single factor, although a single factor may have played a lead part in the process. In my explanation the primary factors worked in concert as a bundle, contributing in a complementary manner to the miracle process. An economy’s success depends on its ability to put together the bundle of required complementary factors. Together these factors created an incentive structure—a level playing field—where investment could flourish. The secondary factors could have made a separate, additional contribution to the economy’s performance depending on the presence of the bundle of primary factors.

While the subsequent chapters discuss the role of various individual factors in detail, the following summarizes how they interacted in producing the miracle:

- The most critical factor that underlay the miracle process, both growth and poverty reduction, was these countries' openness to trade and technology. Openness helped them overcome the limitations of domestic markets, provided new economic opportunities to exploit in international markets, created competitive pressures for the domestic economy, and allowed access to new technology through imports of new machinery and equipment.
- Economic openness is largely unfruitful unless complemented by other factors, such as macroeconomic stability, labor market flexibility, and good economic governance. These latter primary factors together helped to create a domestic economic environment that encouraged productive investment and production rather than diversion (unproductive resource use in socially unproductive activities such as rent-seeking, corruption, and theft).
- These economies had authoritarian or semi-authoritarian regimes with insulated bureaucracies. While these institutions may not have promoted many political and civil liberties, they do seem to have done a good job of fostering good economic governance and maintaining the credibility of policies and institutional stability.
- The outward-oriented polices created a virtuous circle of accumulation and assimilation. The rapid accumulation of capital and acquisition of new technology went hand in hand with the formation of new skills. The new machinery and equipment obtained through imports would have been largely useless unless complemented by the requisite skills. The new demand and supply impulses that outward orientation helped to create facilitated the process of skills formation. On the one hand, export-oriented policies helped to raise the economies' income levels, which in turn increased both private and public investment in education. On the other hand, the availability of new technology led to new pressures on the labor force to upgrade its skills to meet the evolving demands of the new range of equipment. In addition, the economic success of these economies led to rising expectations of international competitiveness that was accompanied by greater demands for new and sophisticated skills.
- Favorable initial conditions, such as high educational attainment, equitable income and asset distribution, and a dynamic agriculture sector, did not exist in all the miracle economies to the same extent, nor did they all undergo a wrenching process of comprehensive land reform. Thus these were not the primary factors that initiated the miracle growth process, but to the extent that these favorable initial conditions existed, they might have helped make the growth process more equitable, or may even have enhanced it.
- Industrial policy was certainly not a common feature of all the miracle economies. The countries that practiced it succeeded in some sectors but not in others. The overall impact of industrial policy on growth remains conclusively inconclusive.

4. Policies and Initial Conditions

A large economic literature deals with the role of various economic policies and initial conditions in relation to the Asian miracle. While different authors have emphasized the role of various policies and initial conditions, the following provides reviews the salient issues. In so doing, it offers some policy insights that countries aspiring to be economic miracles may find relevant.

4.1. Openness to Foreign Trade and Investment

Openness to trade and investment has a critical bearing on economic development. Openness can foster economic development by offering easier access to raw materials, new machines and technologies, and skills and investible resources and by promoting market discipline.

4.1.1. Openness and Economic Success

Asia's development experience provides almost a laboratory for exploring the link between openness, growth, and poverty.²² Over the past four decades, the miracle economies pursued an outward-oriented strategy of development, whose outcome is reflected in the rising shares of exports and imports as a proportion of these economies' GDP (table 4-1).

During this period, these economies achieved spectacular improvements in their incomes as well as in their quality of life. Of those economies, the NIEs in particular, which were the first adopters of this strategy, have made tremendous strides in economic development and virtually eradicated abject poverty. The Southeast Asian economies that followed the strategy also made impressive economic and social advances. By contrast, the economies that were largely closed, such as those of South Asia (as well as the transition economies of Central Asia and Indochina), have lagged behind economically and have been less successful in reducing poverty. This contrast has led many to conclude that outward orientation has a strong and inexorable connection with economic growth and poverty reduction.

Outward orientation does not necessarily mean free trade. The thrust of outward-oriented trade policies in these economies was both to remove trade barriers and to eliminate the anti-export bias of import protection measures to ensure the neutrality of incentives between exports and domestic production.

After an early phase of import substitution, the miracle economies embarked on a strategy of outward orientation from the 1960s. This outward orientation was reflected in their lowering of tariff rates and exports taxes, removal of quantitative restrictions on trade, and reduced barriers to international investment flows (ADB 1997). By the 1970s, it was not only Hong Kong, China and Singapore that maintained few or no trade barriers, but other miracle economies had also substantially reduced their trade barriers. The average tariff rates in Korea, Malaysia, and Thailand, 9, 9, and 13 percent, respectively, were much lower than the corresponding rates in India (29 percent), Pakistan (23 percent), and the developing world as a whole (23 percent) (World Bank 2001). Even in areas where the

²² I use the terms openness and outward orientation interchangeably to convey the same ideas.

miracle economies maintained trade protection, they undertook countervailing measures to avoid the anti-export bias that was common in most other developing countries. These countervailing measures included adhering to competitive exchange rate policies, allowing exporters easy access to inputs at world market prices through duty exemptions and free access to foreign exchange, and developing new institutions such as export processing zones.²³

This combination of policies helped to replicate a price structure for traded goods that corresponded closely to world prices. In the 1980s and 1990s, the miracle economies further reduced their import tariffs and largely eliminated their export taxes and nontariff barriers. By the mid-1990s, the average tariff rates in Korea, Indonesia, and Malaysia had already fallen below the 5 percent level, whereas in India tariff rates remained high at 30 percent (although the average for the developing world as a whole has fallen considerably to about 13 percent). With increased openness, these economies made further inroads into international markets.

²³ Export processing zones represent an innovative way to circumvent the political difficulties associated with across-the-board trade liberalization. They create new opportunities for trade and employment without eliminating protection from import-substituting industries. While export processing zones have a mixed record in other parts of the world, they were generally more successful in the miracle economies (ADB 1997).

Table 4-1. Trade Indicators, Selected Asian Economies and Selected Regions, 1960s–1990s

<i>Economy and region</i>	Exports (percentage of GDP)					Imports (percentage of GDP)					Export + imports (percentage of GDP)				
	<i>1960s</i>	<i>1970s</i>	<i>1980s</i>	<i>1990s^a</i>	<i>Average</i>	<i>1960s</i>	<i>1970s</i>	<i>1980s</i>	<i>1990s^a</i>	<i>Average</i>	<i>1960s</i>	<i>1970s</i>	<i>1980s</i>	<i>1990s^a</i>	<i>Average</i>
Miracle Asia															
Hong Kong, China	79.7	87.8	112.8	138.7	104.7	81.7	83.2	106.5	136.8	102.0	161.3	170.9	219.3	275.4	206.7
Korea, Rep.	8.9	26.8	34.6	32.9	25.8	19.2	33.1	33.7	32.0	29.5	28.1	59.9	68.3	65.0	55.3
Singapore	118.7	155.5	188.9	180.1	160.8	129.7	166.2	188.1	168.0	163.0	248.5	321.7	377.0	348.1	323.8
Taipei, China	21.6	46	53.2	46.6	41.8	23.6	44.7	43.0	43.9	38.8	45.2	90.7	96.2	90.4	80.6
Indonesia	10.3	24.4	24.6	30.3	22.4	12.5	19.5	22.5	27.7	20.6	22.8	44.0	47.2	58.0	43.0
Malaysia	41.7	45.7	59.0	93.1	59.9	37.9	41.7	56.6	88.5	56.2	79.6	87.3	115.6	181.6	116.0
Thailand	16.2	19.9	26.9	43.8	26.7	18.4	23.7	30.0	44.1	29.0	34.6	43.6	56.8	87.9	55.7
<i>Average</i>	42.4	58.0	71.4	80.8	63.2	46.1	58.9	68.6	77.3	62.7	88.6	116.9	140.0	158.1	125.9
Philippines	16.0	21.7	25.1	39.2	25.5	17.0	24.4	26.7	45.3	28.4	33.1	46.1	51.9	84.5	53.9
South Asia															
Bangladesh	7.0	4.0	5.4	10.4	6.7	10.5	11.5	15.2	16.0	13.3	17.5	15.5	20.5	26.3	20.0
India	3.5	5.4	6.2	10.5	6.4	4.2	6.3	8.8	13.0	8.1	7.7	11.7	15.0	23.5	14.5
Nepal	6.5	8.8	11.3	20.9	11.9	9.3	13.0	20.4	31.2	18.5	15.8	21.8	31.7	52.1	30.4
Pakistan	8.7	10.9	12.4	16.1	12.0	15.4	19.3	22.4	22.4	19.9	24.0	30.2	34.7	38.5	31.9
Sri Lanka	33.7	28.9	27.1	34.1	31.0	37.1	34.7	39.0	43.0	38.4	70.8	63.5	66.1	77.1	69.4
<i>Average</i>	11.9	11.6	12.5	18.4	13.6	15.3	17.0	21.1	25.1	19.6	27.2	28.6	33.6	43.5	33.2
Regions															
East Asia and Pacific	10.2	16.7	23.1	31.7	20.4	13.3	18.1	23.2	30.2	21.2	23.5	34.7	46.2	61.8	41.6
Latin America and Caribbean	9.5	10.9	14.3	14.4	12.3	9.9	12.5	11.8	15.5	12.4	19.4	23.3	26.0	30.0	24.7
South Asia	5.0	6.9	7.7	12.1	7.9	6.9	9.4	12.1	15.6	11.0	11.9	16.3	19.8	27.7	18.9
Sub-Saharan Africa	24.7	27.2	26.8	27.9	26.6	24.3	28.0	26.9	29.1	27.1	49.1	55.2	53.7	57.0	53.7
<i>World</i>	13.0	16.9	19.0	21.7	17.7	13.0	17.2	19.0	21.2	17.6	26.0	34.1	38.0	42.9	35.3

a. Data are for 1991–99.

Source: ICSEAD (1999); World Bank (1980, 2000d).

These countries were equally outwardly oriented in their pursuit of technology. The miracle economies aggressively sought foreign technology through a variety of mechanisms, including technology transfer via licenses, imports of capital and intermediate goods, and foreign training. Openness to FDI further facilitated this process in Hong Kong, China; Malaysia; and Singapore, and later in Indonesia and Thailand (World Bank 1993). Even though Korea and Taipei, China restricted FDI, they encouraged the acquisition of foreign technology through licenses and other means. This contrasts with the experience of many other developing countries such as India and other South Asian countries. These countries actively discouraged the entry of FDI, restricted imports of foreign capital, and virtually shunned advanced foreign technology and its benefits.

While the contrasting experiences of different Asian regions suggest an empirical link between openness to trade and technology on the one hand and economic growth on the other, the channels through which such a link works are far from obvious. Nevertheless, various channels that have often been suggested include the following:

- Increased exports by the outward-oriented economies enhanced their capacities to import inputs that embodied new technology. This access to new technology helped these countries circumvent the diminishing returns associated with increased accumulation of capital.
- The miracle economies' export orientation was a critical factor in accelerating the process of skill formation (Pack 2001). Export orientation increased the pressure for learning, because they increasingly had to move toward modern sophisticated technology to remain competitive and to meet the requirements of complex contracts from Western countries.
- Inadequate domestic demand (Ades and Glaeser 1999) or inadequate availability of foreign exchange (Findlay 1971) can constrain growth. The miracle economies' outward orientation helped alleviate both these constraints.
- In tandem with their export orientation, the miracle economies underwent a process of import liberalization. This had a positive effect on growth both during the period of liberalization and for some time thereafter, because of the lagged response to resource allocation (Cooper 2001).
- FDI brought new production techniques, quality control, and access to external markets to the miracle economies. The role of the production network of FDI is particularly relevant to the export expansion of the miracle economies (Urata 2001).
- FDI created competitive pressure on local firms to acquire new skills. FDI also created a number of spillover effects in the labor market, such as the emergence of specialized firms to provide such services as accounting, from which both domestic and foreign companies benefited. However, according to Caves (1999), the most important spillover effect was the demonstration effect to domestic firms regarding feasibility in terms of production and quality.

4.1.2. Trade and Growth

As argued earlier, a spectacular rise in investment sustained the growth process in the miracle economies, nurtured by the outward-oriented policies that these economies pursued. However, this view is not universally accepted. Rodrik (1995a) argues that the increase in the relative profitability of exports that outward-oriented policies created in the 1960s was not significant enough to cause the investment boom that followed.

According to Rodrik, exports were initially too small in relation to GDP to have a significant effect on aggregate growth. In other words, the investment boom that took place in Korea and Taipei, China was independent of the trade policy reforms of the 1960s. According to Rodrik, the boom was the outcome of a number of “strategic” government interventions and favorable initial conditions, such as the presence of an educated labor force and the equality of income and wealth.

Many have contested Rodrik’s argument. Bhagwati (1996) opined that even if it had originated from sources other than trade policy reform, the investment boom could not have been nurtured in a closed economy. According to Bhagwati (1996):

This argument [Rodrik’s] is totally unpersuasive because East Asia would have run into precisely the problem of demand constraint that India was afflicted with if an IS [import-substitution] strategy had been followed, with the efficacy of the other policies in generating investment seriously impaired. Moreover, the ultra-EP [export-promotion] strategy, with its mild bias in favor of the export market and the policy-backed ethos of getting into world markets, meant that the export incentives must have played a major role in influencing investment decisions, not just in the exporting countries, but also in the much larger range of non-traded but tradable industries. In any event, the growth of exports from East Asia was so phenomenal that the share of initial exports in GNP quickly rose to levels that would lay Rodrik’s objection to rest, even if it were conceptually correct (p.18).

Rodrik’s contention has received further scrutiny at the empirical level. First, Nam and Kim (2000) re-examined the Korean case and argued that the domestic investment boom only followed after the country had shifted from a policy of inward orientation to one of outward orientation in the 1960s. They noted that in the aftermath of the reform, export response was quick, doubling every five years, but that the investment response was much slower: “Investment responded vigorously only after export growth moved into a higher gear in the later half of the 1960s” (p. 126). They argued that the virtuous cycle of growth, initially ignited by the policy of outward orientation, continued until the late 1980s, when the export to GDP ratio began to fall and domestic savings and investment started to decline.

Second, in another recent paper Frankel, Romer, and Cyrus (1996) addressed the problem of reverse causality raised by Rodrik and other observers at a more technical level, that is, they examined whether the causality runs from investment to economic growth and exports rather than the other way around. Their results suggest that reverse causation (implying simultaneity) is not a serious problem in appraising the effects of openness on trade. According to Frankel, Romer, and Cyrus, “To the extent that simultaneity is present, it seems to produce the opposite effect on the estimate from what has previously been feared” (p. 13). When they corrected for the simultaneity problem, the effect of openness on growth in East Asia was indeed much stronger.²⁴

Finally, the empirical evidence from developing Asia suggests that irrespective of the initial impetus, a virtuous circle between investment and growth can only be sustained

²⁴ Correction of the simultaneity problem requires identifying a good instrumental variable, that is, a truly exogenous variable that is at the same time highly correlated with the endogenous explanatory variable. Frankel, Romer, and Cyrus (1996) use trade shares as predicted by the gravity model as the instrumental variable. In its simplest form the gravity model states that bilateral trade between two countries is directly proportional to the product of their GDPs and inversely proportional to their distance.

by a strategy of outward orientation. A comparison of the development experience of India and East Asia underscores this point. According to Bhagwati (1996), the development strategy of the miracle economies was remarkably similar to that of India until the end of the 1950s, when the miracle economies embarked on a strategy of outward orientation, while India continued with its inward-looking strategy. The outcome was that while the inducement to invest in India was constrained by the growth of demand in agriculture, which cannot grow at more than 4 percent over a sustained period, it was largely unconstrained in East Asia. Unshackled from the tyranny of agricultural growth, East Asia was free to exploit the vast potential of the elastic world markets. Meanwhile the situation in Africa was somewhat similar to that in South Asia. Akyüz and Gore (2001) attributed Africa's growth tragedy to its failure to establish a virtuous circle of growth and investment. The main reason for African countries' failure to establish such a link, despite an initial investment boom after they achieved independence, was their zealous pursuit of an inward-looking development strategy.

4.1.3. Openness, Growth, and Poverty

A burgeoning empirical literature, in which East Asia figures prominently, is devoted to the inter-relationships between openness, growth, and poverty. This literature follows two strands: one explores the link between openness and growth and the other examines the link between growth and poverty.

Openness and Growth. The study on the relationship between openness and growth that has probably received the most attention is by Sachs and Warner (1995). In this study they constructed a trade openness index based on five important aspects of trade policy, and classified an economy as open if (a) the import duties averaged less than 40 percent, (b) the quotas covered less than 40 percent of imports, (c) the black market premium on the exchange rate was less than 20 percent, (d) a state monopoly of major exports was absent, and (d) the economy was not socialist.

They combined these indicators of trade policy, which represent the different ways policymakers can close the economy to international trade, into a single dichotomous variable. The Sachs-Warner trade openness index indicates that by the 1960s, almost all the miracle economies were open economies except Indonesia, which became open in the early 1970s (table 4-2). Sachs and Warner (1995), who used these data in their cross-country regressions to explain growth between 1970 and 1989 in 117 countries, found

a strong association between openness and growth, both within the group of developing and the group of developed countries. Within the group of developing countries, the open economies grew at 4.49 percent per year, and the closed economies grew at 0.69 percent per year. Within the group of developed economies, the open economies grew at 2.29 percent per year, and the closed economies grew at 0.74 percent per year (pp. 35–36).

The Sachs-Warner trade openness index had a high, robust coefficient in the growth regression. In the original benchmark specification the effect of openness on growth was about 2.5 percent, which means that, on average, open economies grew 2.5 percent more rapidly than closed economies.

Table 4-2. Openness Indicators, Selected Asian Economies and Years

Economy	Not open	Open
Miracle Asia		
Hong Kong, China		1950–92
Korea, Rep.	1950–68	1969–92
Singapore		1965–92
Taipei, China		1964–92
Indonesia	1950–70	1971–92
Malaysia		1963–92
Thailand		1950–92
Philippines	1950–88	1989–92
South Asia		
Bangladesh	1971–92	
India	1950–92	
Nepal	1950–1991	1992
Pakistan	1950–1992	
Sri Lanka	1957–77, 1984–91	1950–56, 1978–83, 1992

Source: Sachs and Warner (1995).

Another paper that has also received a good deal of attention is by Dollar (1992) who, like Sachs and Warner, tried to establish a relationship between openness and economic growth. He constructed two indexes of trade distortion: the index of real exchange rate distortion and the index of real exchange rate variability. His justification for using these indexes as indicators of outward orientation is as follows:

Outward orientation generally means a combination of two factors: first the level of protection, especially for inputs into the production process, is relatively low (resulting in a sustainable level of the real exchange rate that is favorable to exporters); and second, there is relatively little variability in the real exchange rate, so that incentives are consistent over time (p. 524).

Dollar found that each of these indexes was negatively correlated with growth during 1976–85 for a sample of 95 developing countries.

Edwards (1998) recognized that devising a summary measure of openness that fully and satisfactorily captures the extent of trade openness is difficult. He therefore suggested that research should “concentrate on whether econometric results are robust to alternative indexes” (p. 386). Accordingly, Edwards (1998) carried out a robustness analysis that ran regressions of TFP on nine alternative indicators of openness that included the Sachs-Warner index, the Leamer index,²⁵ the average import tariff rates, and the average coverage of nontariff barriers. His results, which are based on comparative data for 93 countries, showed a remarkable degree of consistency in the correlation between openness and productivity growth.

²⁵ The Leamer index for a country is measured by the difference between actual and predicted levels of trade, the latter being determined by using the Heckscher-Ohlin-Vanek type of factor endowment models. Leamer uses the deviation of the actual from the predicted volume of trade as a measure of openness and the deviation of the actual from the predicted pattern of trade as a measure of intervention (Leamer 1988).

In addition to the studies described, a plethora of other studies have also explored the relationship between openness and growth. Recent notable works include Ben-David (1993), Frankel and Romer (1999), Harrison (1996), Lee (1993), and Wacziarg (1998).²⁶ These studies, which used different empirical strategies, time periods, openness indicators, and datasets, have all reached conclusions that confirm the positive effect of openness on economic growth.

However, not all economists were persuaded by this literature, with the most serious challenge coming from Rodrik. Rodriguez and Rodrik (2000) argued that the literature that shows a positive link between trade and growth is largely flawed, because the measures of trade barriers that it employs are measures of either macroeconomic imbalance or bad institutions, but not of trade restrictions. In particular, they argued that the Sachs-Warner openness index is largely a dummy for Sub-Saharan Africa (with state monopolies of exports) and for Latin American countries (with high levels of black market premiums on the exchange rate, reflecting serious macroeconomic imbalances). Similarly, they argued that the Dollar index of real exchange rate distortion is a measure of real exchange rate divergence, and not a measure of trade barriers,²⁷ and that the Dollar measure of real exchange rate variability has little to do with trade orientation, but is more closely related to macroeconomic stability.

Rodriguez and Rodrik contend that no strong negative relationship exists between trade barriers and economic growth. Such a relationship does not exist empirically, because “there is no theoretical presumption in favor of finding an unambiguous, negative relationship between trade barriers and growth rates in the type of cross-national data sets typically analyzed”²⁸ (pp. 8–9).

In another policy paper Rodrik (1999a) was even more skeptical about the benefits of openness. He contended that openness was not a reliable mechanism for generating sustained economic growth in that it tends to widen income and wealth disparities within countries, creates vulnerabilities to external shocks, and triggers domestic conflicts. Moreover, Rodrik argued that the import substitution policies of the 1980s had by and large succeeded, bringing high growth to Latin America and North Africa, and that their costs had been vastly exaggerated. Finally, he argued that the most important mechanism for growth is not openness, but investment and macroeconomic policy.

²⁶ This paper is somewhat more ambitious than others in that it attempts to identify the channels through which openness affects economic growth. The quantitative results of the paper, which are based on data from 57 countries for 1970–89, suggest that the most important channel through which openness works is investment, which accounts for more than 60 percent of the total effect. This finding lends further credence to the argument that openness is the basic impetus behind the investment-growth virtuous circle that existed in the miracle economies.

²⁷ The Dollar index of real exchange rate distortion does produce some anomalous results. As Rodriguez and Rodrik (2000) note: “The ten least distorted countries by this measure include not only Hong Kong, Thailand, Malta, but also Sri Lanka, Bangladesh, Mexico, South Africa, Nepal, Pakistan and Syria! Burma’s rating (90) equals that of the United States” (p. 20).

²⁸ This contention contrasts with the findings of Sala-i-Martin (1997), whose robustness test of cross-country growth regressions indicates that openness (the Sachs-Warner index) is one of the few variables consistently correlated with economic growth. Sala-i-Martin’s robustness test is less stringent than that of Levine and Renelt (1992). He generated distributions for the coefficient estimates across specifications, which enabled him to assess the strength of the correlation with economic growth.

Rodrik's critique has received wide attention among economists as well as in the popular press. While his critique unveils some of the deficiencies in the existing literature, it is misleading in a number of ways.

First, as Srinivasan and Bhagwati (2001) have pointed out, the contention that there is no theoretical presumption that openness accelerates growth is both true and false. The argument that trade leads to static efficiency gains, but not to sustained growth, refers only to the neoclassical Solow-Swan model. As Srinivasan (1999) recently demonstrated, that is not necessarily true for other models, such as the Harrod-Domar model, where when labor is in excess supply, the marginal productivity of capital is constant. Trade liberalization, which allows the conversion of domestic consumption goods into investment goods at favorable terms of trade compared with the autarkic level, enhances investment and growth. This growth effect of openness, derived from a framework that is apparently applicable to many labor-surplus developing economies, is significant from the policy perspective.

Indeed, in another influential paper Ventura (1997) demonstrated that by combining the Ramsey type of growth model with a weak form of the factor-price equalization theorem, overcoming the influence of the law of diminishing returns in the growth rate is possible.²⁹ The model shows that as the capital stock grows, it does not lead to the production of the same goods with more capital-intensive methods (as would happen in an autarkic economy), but brings about structural transformation. Structural transformation entails the movement of resources from labor-intensive to capital-intensive industries, a process that in turn implies an increased demand for capital. International trade converts the excess production of capital-intensive goods into exports, thereby averting a fall in prices. In such a trade integrated world, diminishing returns apply to the world economy as a whole, and not to individual countries. In a given time investment is equally productive in each of the integrated economies, and the growth rate in each economy is determined by its rate of investment. Depending on other factors such as labor force growth and technological change, the model shows that the returns to capital can increase or decrease.³⁰

These two examples show that constructing models that can demonstrate the beneficial effects of openness on growth is possible, as is building ingenious models that show the inferiority of free trade. However, as Srinivasan and Bhagwati (2001) recently argued, the relevant question is, what is the "central tendency" in the real world, rather than the "pathologies"?

Second, as Rodriguez and Rodrik have convincingly demonstrated, the fragility of cross-country regressions should not be construed to mean that the relationship between trade and growth is fragile. In this connection, Hsieh (2000b) argued that the lack of a robust correlation between trade barriers and growth once macroeconomic

²⁹ This model can explain the persistent high growth rates and undiminished returns to capital that are the two salient features of the East Asian growth experience

³⁰ More intuitively, the reason the miracle economies were able to sustain a high, undiminished rate of return to capital was that they were able to move continuously to higher levels of production by virtue of their openness to trade and technology. These shifts in production functions were associated with two types of structural changes: first, a rapid growth in the relative changes in the importance of large firms using modern technology (with a parallel decline in firms using traditional technology, along with the agriculture and informal sectors); and second, a rapid shift in the sectoral mix of production, from labor-intensive industrial products toward increasingly more complex capital-intensive goods (Nelson and Pack 1999).

imbalances and bad institutions have been controlled for does not mean that trade barriers do not have an adverse effect on growth. He rightly noted the presence of a fundamental identification problem in separating the effects of trade restrictions from those of macroeconomic imbalances and bad institutions. In other words, an open trading regime is often a proxy for a whole host of liberal policies and effective institutions.³¹

Finally, the impact of trade liberalization on a particular country depends on a whole host of factors, many of which are neither quantified nor quantifiable. Therefore cross-country regressions, however carefully specified, cannot answer the question whether some liberalization of trade would improve a particular country's economic performance. As Srinivasan and Bhagwati (2001) and Cooper (2001) have emphasized, answering this question would require detailed analysis of the particular country.

Openness and Poverty. While the foregoing studies focused on the relationship between openness and growth, some recent writings have directly addressed the relationship between openness and poverty reduction (for a survey of this nascent literature see Adhikari 2001). First, an ADB (2000) study, which looked at data for 40 countries for 1970–92, found that the incidence of poverty, as measured by the headcount index based on national poverty lines, was strongly linked to growth. In particular, it found that for every 1 percent increase in per capita GDP the incidence of poverty fell by one percentage point. This result is consistent with earlier World Bank (1997) findings. The ADB study also analyzed the relationship between poverty and openness as measured by the share of trade in GDP, and found a strong relationship between these two variables, with an implied elasticity nearing unity. Together these two relationships suggest that the impact of openness works largely through growth, a finding that has other studies have corroborated.

Second, Winters (2000a,b) explored the links between openness and poverty both analytically and empirically. Winters' analytical exploration delineated the main channels through which trade liberalization affects the welfare of the poor. These channels include changes in the prices of tradable goods, in wages and employment, and in government revenues. Winters suggested that the impact of trade liberalization depends on how it affects the creation and destruction of effective markets in which the poor participate, the intrahousehold allocation of resources, the concentration of spillovers in areas relevant to the poor, the factor intensity of production in the most affected sectors and the elasticity of the supply of the intensive factors, the impact on government revenues, and the concentration of transitional unemployment among the poor.

Winters' empirical paper summarized the research on the economic impact of trade liberalization in Zambia and Zimbabwe in Africa and Bangladesh and India in South Asia. The South Asian studies indicate that trade liberalization had a positive effect on the poor, but that its impact was constrained by the fragmentation of the labor market. In India, liberalization accelerated the growth of formal sector employment, but

³¹ The point was anticipated by Sachs and Warner (1995), who noted that "open trade has tended to be correlated with other features of a healthy economy, such as macroeconomic balance and reliance on the private sector as the main engine of growth" (p. 63). However, they correctly emphasized that government policies in other areas improve with trade opening, and to that extent trade policy is the primary instrument of reform.

decelerated (though did not reduce) the growth of real wages. However, employment in the informal sector declined significantly. On balance, according to Winters the net impact was positive.

The African studies suggest that the impact of liberalization was different in the two countries reviewed. In Zambia, deregulation of the cash crop market led to greater poverty because of the absence of buyers in remote areas. Before liberalization, a government monopsony that had lavished large subsidies on farmers in remote areas had largely dominated the maize market. The government's withdrawal from the maize market led to the market's virtual disappearance from remote areas because of a deterioration of transport facilities. In Zimbabwe, deregulation of the cotton market led to an increase in the price of cotton and an improvement in the economic conditions of small farmers. Before deregulation the government had been a monopsonist buyer that underpriced cotton to subsidize inputs into textile industries. The government's withdrawal led to more efficient functioning of the market, thereby increasing the price of cotton and small farmers' economic welfare. According to Winters, the important distinction between the two cases is that in one it led to the creation of markets in which the poor participated, while in the other it led to their destruction.

Finally, a paper by Dollar and Kraay (2000b) has received a good deal of both popular and professional attention. They defined the poor as the lowest 20 percent of the population, and assumed that poverty falls if the mean income of the bottom 20 percent goes up relative to the mean income of the population. Dollar and Kraay's regression analysis, which used data from 80 countries for four decades, indicated that trade openness enhances growth, which affects all income groups proportionately, including the lowest quintile. This result was robust with respect to variations over time, between rich and poor countries, and between crisis and noncrisis periods. However, openness does not have any direct impact on income distribution—either positive or negative—other than through growth.

Like other papers on this topic, the Dollar and Kraay paper suffers from a number of shortcomings. First, aside from the fact that income distribution data are unreliable and often are not comparable across countries, the poverty indicator used in the paper (the lowest quintile of the income distribution) is really an indicator of income distribution and not of absolute poverty.³² Second, as Rodrik (2000) noted, the paper has a number of serious methodological problems. These include the choice of variables and data for the exercise, such as the openness indicator, which does not distinguish between policy actions and policy outcomes; the use of different base years for calculating changes in tariffs and trade volumes; and the selection of "globalizers."³³ In addition, the results seem to be largely driven by two large countries, the People's Republic of China (PRC) and India.³⁴

As the foregoing brief sampling of the empirical literature suggests, it is rife with controversies and fraught with numerous conceptual and methodological difficulties. Defining openness or measuring poverty is not simple. As Rodriguez and Rodrik (2000)

³² In many developing countries poor people show up in quintiles other than the lowest, and in industrial countries the lowest quintiles would include people who are not poor and who may even be middle class.

³³ Globalizers have been defined as those developing countries that have both reduced import tariffs and significantly increased trade relative to GDP. Dollar and Kraay (2000b) identified 18 such countries in the post-1980 period.

³⁴ I am indebted to Charles Adams (personal correspondence) for this observation.

have persuasively argued, all the well-known empirical measures of openness are subject to serious criticisms. Similarly, defining and measuring poverty has not been a straightforward exercise in most developing countries. In addition, relevant data are fragmentary and unreliable. Given the difficulties associated with the concepts, the task of compiling and constructing relevant data has been extremely problematic.

At a more fundamental level, as Rodriguez and Rodrik have convincingly argued, the existing cross-country studies that purport to show that liberal trade fosters growth are flawed. Indeed, this indictment generalizes to all cross-country regression exercises, irrespective of whether they are applied to trade or to other issues. In addition to their ad hoc theoretical foundation, there are numerous problems of estimation and interpretation. The estimation problems, which are essentially technical in nature, include such econometric issues as unobserved fixed effects, measurement error, and endogeneity (for an elementary explanation of these problems see Wooldridge (2000)). In addition, the cross-country regressions suffer from a severe parameter heterogeneity problem that makes the estimates extremely fragile.³⁵ Given these estimation problems, in his commentary on the Rodriguez and Rodrik paper Jones (2000), a distinguished contributor to the cross-country regression literature, observed that cross-country regression was “a coarse tool” for this particular question.

However, as argued earlier, the lack of robust evidence from cross-country regressions does not mean that a relationship between openness and growth or openness and poverty alleviation does not exist. Even such ardent critics of globalization as Rodriguez and Rodrik (2000) have admitted this:

We do not want to leave the reader with the impression that we think that trade protection is good for economic growth. We know of no credible evidence—at least for the post-1945 period—that suggests that trade restrictions are systematically associated with higher growth rates (p. 61).

They also concluded that the relationship between trade policy and growth is a contingent one. This study shares a similar perspective, and argues that the important contingent conditions relate to labor market flexibility, macroeconomic stability, and the nature of economic governance.

4.2. Labor Market Flexibility

The impact of economic growth on poverty works primarily through the labor markets by means of the impact on wages and employment. Labor market institutions have a critical bearing both on growth and on how it is distributed.

³⁵ This was famously stated by Harberger (1987), when he asked: “What do Thailand, the Dominican Republic, Zimbabwe, Greece, and Bolivia have in common that merits their being put in the same regression analysis?” (p. 256). In other words, the countries’ social, economic, political, and cultural characteristics vary so widely that running regressions assuming common parameters is an inappropriate way to investigate the growth issues. See Temple (1999) for an interesting discussion of the econometrics problems with growth regressions and how to overcome them.

4.2.1. Role of Labor Market Flexibility in Growth and Poverty Reduction

The miracle economies maintained greater flexibility in their labor markets and more closely approximated a competitive framework than other developing economies. They also imposed fewer regulations with respect to terms of employment. In many other countries, governments tried to regulate labor markets by establishing unions, setting minimum wages, providing unemployment insurance, and regulating employment contracts. As Hasan (2000) noted, East Asian economies tend to have the most flexible labor markets in the developing world, both in terms of the number of International Labour Organisation conventions ratified (with or without adjustment for enforcement), and in terms of other labor market rigidity indicators, such as wide scope for initiating industrial disputes or lengthy and drawn-out procedures for dispute settlement). This contrasts sharply with South Asia's experience, where in India in particular, labor regulations, especially job security provisions, have been excessive in relation to countries' stage of development. While India ranks high in terms of the quality of its labor force, it ranks low in terms of labor market flexibility. The *Global Competitiveness Report 1998* (as cited in World Bank 2000a) ranked India first among 53 countries in terms of the quality of its labor force as measured by the abundance and level of technological skills, particularly among engineers and scientists, but almost at the bottom (45th place) in terms of labor market flexibility.

Economists disagree about the desirability of labor market intervention. The distortionist view sees all market regulations as distortions in an ideal competitive world and calls for the repeal of policy-induced restrictions. The institutionalist view highlights labor market imperfections that create large divergences from the competitive ideal and calls for regulatory interventions to rectify these imperfections (see Freeman 1992 for a caricature of these conflicting views). However, the superiority of one view over the other cannot be settled on the basis of theoretical grounds, but only by looking at empirical experiences, which differ from country to country.

Nevertheless, few would disagree about the adverse impact of excessive labor market regulations on economic development. While an objective of labor market regulations is to help workers and improve their welfare, excessive regulations have generally worked against their interests by creating an inflexible market. (The experience of South Asia, especially India, is a case in point.) This can happen in a number of ways. First, these regulations tend to raise the cost of labor and reduce labor demand in the formal sector. Sluggish growth in employment in the formal sector means that most workers have to be absorbed in the urban informal sector and in agriculture, where labor productivity is generally low. Thus instead of protecting workers' welfare as originally intended, excessive regulations end up reducing the demand for labor, and consequently the incomes and welfare of the poor. In this context, the experiences of the miracle economies are highly instructive. These economies were able to achieve rapid growth in real wages for their workers without recourse to protective labor legislation. For example, Korea, which achieved one of the highest rates of growth in real wages in recent history, did not institute a minimum wage policy until 1988, when it had already joined the ranks of NIEs. It also lacked other labor protection, including freedom of association and many other employment protection statutes (Lindauer 1999).

Second, labor market regulations can lead to economic rigidities and economic rents, and in turn to rent-seeking behavior by interest groups. Rent-seeking behavior, which imposes deadweight losses to society, can generate further distortions in the labor market.³⁶ For example, extensive government policies ensuring labor protection in the formal sector can lead to serious segmentation of the labor market between those market sectors that are covered and those that are not. This might generate further pressures by “insiders” in the covered sector for even more protective job security legislation, thereby exacerbating the existing labor market segmentation.

Third, an inflexible labor market adjusts poorly to macroeconomic shocks and suffers painful adjustments. By contrast, in economies with more flexible labor markets, as was the case with most of the miracle economies, the adjustment shocks are far smoother and less painful.

Finally, extensive labor market regulations may lead to the redistribution of economic rent from capital to labor and reduce the profitability of investments. This has an adverse effect on the overall investment rate in the economy.

These arguments suggest that excessive labor regulations hurt both wage and employment growth. While extensive regulations may benefit some workers who find employment in covered sectors, they do not help workers as a group. The poor are likely to be particularly adversely affected by reduced labor demand, as labor power is their principal, and often only, asset.

Recent empirical studies suggest that the beneficial impact of openness on labor market outcomes is stronger in the context of a flexible labor market. Using panel data from 48 countries, Hasan (2000) examined the effects of openness and labor market distortions on labor market outcomes in the manufacturing sectors of these countries. His results suggest that the impact of trade liberalization depends strongly on the flexibility of labor markets: it had a weaker impact on wages and employment in countries with rigid labor markets and a much stronger impact in countries with flexible labor markets. The empirical studies reviewed by Winters (2000b) also indirectly corroborate this finding.

4.2.2. Labor Market Developments in the Miracle Economies

This section briefly reviews labor market developments in some of the miracle economies (and is derived largely from Fields 1994).

Hong Kong, China: Hong Kong, China made few interventions in the labor market. Its labor market institutions were close to *laissez faire*. The government was not involved in wage determination and did not pass any minimum wage legislation or other mechanisms to influence wages, such as the National Wages Council in Singapore. Unions are permitted, but the law neither encourages nor discourages them. Workers are largely apathetic about joining unions or engaging in collective bargaining to improve

³⁶ Acemoglu and Robinson (2001) argued that many labor market regulatory policies that enhance workers’ ability to unionize and engage in collective action to raise their wages are essentially redistributive measures and that such measures are socially inefficient. A more efficient approach would be to initiate direct income transfer to “insiders,” which also permits necessary job and worker reallocation.

their work conditions.³⁷ Strikes are permitted in the private sector, but few unions have resorted to them or have built up strike funds. The labor codes provide for easy hiring and firing practices. Employers need give only seven days' advance notice for layoffs and offer only seven days' worth of severance pay.

Growth in labor productivity generally exceeded growth in the wage rate. In the 1980s the labor market continued to be tight with a fall in the unemployment rate. The rise in real wages caused the poverty rate to decline from about 28 percent in 1981 to some 18 percent in 1986.

Korea. Korea did not allow the free play of trade union forces that push wages above market clearing levels, and largely followed a market-driven labor market policy that enabled the attainment of full employment except during recessions. During 1960 to mid-1980 real wages in manufacturing grew at about 8 percent, while annual growth of real GDP averaged about 7 percent.

Until 1987 unions were extremely weak, and covered only 15 percent of workers. Korea only allowed unions at the enterprise level. The government maintained tight control over national unions, and the National Federation of Korean Trade Unions was not allowed to intervene in collective bargaining. The government cajoled private firms into restricting wage growth based on its "guidelines" for wage increases and limited the availability of credit to those who failed to comply.

In 1987 Korea introduced significant reforms of its industrial relations system. In particular, the government agreed to keep out of negotiations between labor and management and give both sides bargaining autonomy. This liberalization had two immediate impacts: increased unionization and more strikes. In July and August 1987 Korea had as many strikes as in the previous 25 years. However, the torrid industrial climate soon cooled down. The trade union movement also expanded substantially. Between July 1987 and December 1989 the number of unionized establishments tripled and union membership doubled, but even so fewer than 20 percent of all employees were covered by collective bargaining agreements. Nevertheless, the liberalization of Korea's labor markets had a significant influence in changing labor market conditions. Between 1986 and 1991 the increase in productivity of about 41 percent in the manufacturing sector trailed growth in real wages, which amounted to some 20 percent. The government's recent efforts to constrain real wage increases have focused on financial sanctions in relation to credit allocations and safety and health inspections.

Data on poverty in Korea are scanty. The number of people who received "livelihood protection," that is, assistance from the Ministry of Health and Social affairs in the form of home care, institutional care, or consumption assistance, was about 5 percent in 1980. This figure rose to about 9 percent during the recession of the early 1980s, declined to about 5 percent in 1985, and shot up again to the double-digit level during the 1997 Asian financial crisis.

Singapore. Until 1972 Singapore relied on market forces in determining its wage rates. In 1972 the government set up the National Wages Council to make an annual recommendation for wage increases. Management, the National Trade Union

³⁷ Immigrants contributed significantly to maintaining the unusual degree of labor market flexibility in Hong Kong, China. The economy has received a substantial flow of migrants from the mainland since the 1940s, and these migrants are extremely politically apathetic and have been concentrated in weakly organized blue-collar sectors. For more details see Quibria (1997).

Congress, and the government were equally represented on the council; however, the government had a strong role in the council, which always followed the government's guidelines for wage increases. During the 1970s the council recommended only modest wages increases, and real wage increases lagged significantly behind real GDP increases. The purpose of this wage repression was to maintain international competitiveness in labor-intensive exports, but it went too far, and the labor market tightened significantly, leading to severe labor shortages by the late 1970s. The government relaxed immigration regulations somewhat to relieve these shortages, but the situation remained tight. This led not only to slower growth, but also to a deceleration in the rate of improvement in the standard of living. In 1979 the government announced a policy of wage correction that allowed real wages to grow at a rate commensurate with productivity increases. In the 1980s the government's role in the National Wages Council declined substantially, and except for recession years the government has kept itself largely out of wage setting.

Meanwhile, poverty has continued to decline, though no direct estimate of poverty is readily available. However, the proportion of households with incomes of less than S\$1,000 per month (in 1982–83 prices) declined from about 31 percent in 1982–83 to about 26 percent in 1987–88.

Taipei, China. The labor market in Taipei, China was kept largely free of various types of government interference, and wages were essentially determined by the free play of demand and supply. Union coverage was limited. The minimum wage is of little relevance, because it is set at less than half the average wage. Taipei, China introduced the Basic Labor Standard Law in 1984, but hardly ever enforces it.

The labor market seems to be remarkably integrated: the differential between manufacturing and agricultural wages had fallen to less than 20 percent by the early 1990s. The unemployment rate has remained extremely low over the years. Given the rapid growth of GNP and the rise in real wages, poverty declined sharply, from more than 20 percent in 1975 to less than 5 percent by the mid-1980s.

4.3. Macroeconomic Stability

Macroeconomic stability is a precondition for sustained high investment, which has important ramifications for growth and poverty reduction.³⁸ Manageable levels of external and internal debt, low inflation, and realistic exchange rates are important factors for creating a conducive environment for high savings rates, efficient investment, and robust growth, all of which affect the welfare of the poor.

Recent empirical studies have corroborated the adverse impact of macroeconomic instability and high inflation. Using polling data from 38 countries, Easterly and Fischer (forthcoming) showed that high inflation tends to lower the share

³⁸ Fischer (1993) found that macroeconomic instability in the form of inflation and budget deficits enhances uncertainty and contributes to reduced investment and productivity growth. Macroeconomic uncertainty reduces investment because it induces potential investors to delay their investment decisions and encourages capital flight. Similarly, uncertainty associated with high inflation, large budget deficits, or big current account imbalances generally undermines efficient functioning of the price system, thereby affecting productivity and its growth. At a more general level, Friedman (1977) emphasized the critical coordination role of the price system in a market economy, a function that might be disrupted by high inflation.

of income of the bottom quintile of the population and the real minimum wage, and thus tends to increase poverty. Romer and Romer (1998) found that high inflation and macroeconomic instability are inversely related to the income of the poor. This inverse relationship, which is both quantitatively large and robust to permutations in samples and control variables, stems from less rapid growth in income and lower equality.

The miracle economies showed a high degree of macroeconomic stability, which differentiated them from most other developing countries. They either maintained a budget surplus or kept their budget deficits small, maintained price stability, and limited their internal and external debt. This combination of price stability and manageable debt—maintained until the onset of the Asian crisis—helped the miracle economies follow a realistic exchange rate policy that avoided overvaluation of their currencies and maintained their export competitiveness.

However, this does not imply the absence of variations in the macroeconomic performance of the miracle countries. While Malaysia and Singapore maintained consistently low, single-digit inflation, this was not the case with Korea and Indonesia, which posted double-digit inflation rates in the 1960s and 1970s (table 4-3). Similarly, while Singapore has always maintained a budget surplus, Malaysia maintained an average deficit of around 7 percent of GDP in the 1970s and 1980s. Hong Kong, China; Singapore; and Taipei, China avoided borrowing abroad, while Korea and Indonesia relied on substantial foreign borrowing during the 1980s and 1990s. Nevertheless, all these economies financed their deficits in a prudent manner that helped them avoid serious economic destabilization.

Table 4-3. Macroeconomic Indicators, Selected Asian Economies and Selected Regions, 1961–96

Economy and region	Inflation rate (annual, percent)					Overall budget deficit (percentage of GDP)				
	1961-70	1971-80	1981-90	1991-96	1961-96	1961-70	1971-80	1981-90	1991-96	1961-96
Miracle Asia										
Hong Kong, China	2.40	9.20	7.90	8.75	7.06	-	0.70	2.10	-	-
Korea, Rep.	12.51	16.48	6.39	5.99	10.35	-0.76	-1.71	-0.83	-0.13	-0.86
Singapore	1.11	6.72	2.28	2.36	3.12	1.55	1.07	3.86	13.12	4.90
Taipei, China	2.80	11.1	3.13	3.63	5.17	-	1.40	2.40	-	-
Indonesia	210.57	17.48	8.61	8.76	61.36	-	-2.61	-1.47	0.82	-1.09
Malaysia	0.93	5.98	3.25	4.20	3.59	-	-6.32	-7.20	1.41	-4.04
Thailand	2.30	9.98	4.44	4.97	5.42	-	-3.10	-2.06	2.80	-0.79
<i>Average</i>	33.23	10.99	5.14	5.52	13.72	-	-1.51	-0.46	3.60	-0.37
Philippines	5.68	14.93	13.67	9.90	11.04	-	-1.19	-3.07	-0.49	-1.58
South Asia										
Bangladesh	-	-	7.36	5.15	-	-	0.14	-0.22	-	-
India	6.36	8.16	8.88	10.24	8.41	-	-4.29	-7.01	-5.44	-5.58
Nepal	6.75	7.76	10.19	10.90	8.90	-	-2.35	-6.53	-5.46	-4.78
Pakistan	3.51	12.42	6.98	11.06	8.49	-	-7.88	-6.74	-7.67	-7.43
Sri Lanka	2.95	8.91	12.36	11.23	8.87	-6.39	-8.64	-10.14	-7.64	-8.20
<i>Average</i>	4.90	9.31	9.16	9.72	8.67	-	-4.60	-6.13	-6.55	-6.50
Regions										
East Asia and Pacific	-	-	-	-	-	-	-	-0.85	-0.53	-
Latin America and Caribbean	-	-	-	-	-	-0.07	-1.14	-6.82	-2.20	-2.56
South Asia	-	-	-	-	-	-	-4.63	-6.65	-5.84	-5.71
Sub-Saharan Africa	-	-	-	-	-	-	-4.30	-3.86	-5.57	-4.57
<i>World</i>	-	-	-	-	-	-	-3.35	-4.55	-3.14	-3.68

- Not available.

Source: ICSEAD (1999); Leipziger (1997); World Bank (2000d).

How does this compare with macroeconomic management in India or other South Asian countries? Certainly, macroeconomic management in the South Asian countries was generally not as efficient as in the miracle economies. Nevertheless, until recently, when Pakistan's macroeconomic instability became severe and India's fiscal deficit ballooned, all the countries in the region maintained a reasonable degree of internal and external balance, avoided high inflation, and established a measure of exchange rate stability. In other words, most South Asian countries maintained a fair degree of macroeconomic stability from the 1960s through the 1990s. In relation to India, Srinivasan (1997) observed:

India's macro policies (until the eighties) had the stability of a graveyard and there was no political instability at the center. In fact, in the eighties when macro prudence was abandoned with rising fiscal deficits financed by domestic and external borrowing and political instability seemed to threaten the center, growth was relatively rapid. Of course, it was a debt-led, unsustainable growth because there was no change in the 'fundamentals' as compared to the pre-1980's period. It came to an inevitable end as a severe macroeconomic and

balance of payments crisis hit the economy in 1991 following the Gulf War (pp. 30–31).

Nevertheless, in the absence of other complementary government policies and appropriate institutions, despite their attainment of a fair degree of macroeconomic stability the South Asian economies, could not achieve the kind of rapid growth and poverty reduction that the miracle economies did.

4.4. Educational Attainments

Education is an important constituent of human welfare. However, educational attainments have varied significantly across Asian societies, and so have their contribution to economic growth.

4.4.1. Role of Favorable Initial Educational Attainments

Many commentators have extolled the favorable initial conditions of the East Asian miracle economies, in particular, their educational attainments (Booth 1999; Rodrik 1994; World Bank 1993). According to these accounts, these countries further built on their initial advantage through liberal investment in education, particularly primary and secondary education. However, a closer look at these data suggests that the extent to which this applied to individual countries varied.³⁹

In the 1960s, Korea and Taipei, China had relatively high literacy rates and primary and secondary enrollment rates, partly as a result of historical circumstances (Booth 1999). Educational attainments were relatively high in Taipei, China under Japanese occupation during World War II, and in the 1950s the government built upon this favorable colonial legacy. In the 1960s, when Taipei, China embarked full-speed on industrialization, more than half the population had attained literacy and the enrollment rate for primary education had reached nearly 70 percent. In the case of Korea, when Japan began its colonial rule in the early 20th century, it had a network of private schools. In 1919 Japan introduced universal primary education, yet surprisingly, at the time of Korea's independence in 1948 the literacy rate was reportedly only 13 percent (Hong 1994). However, by the 1960s, when industrialization had gained momentum, only 30 percent of the population was illiterate and the primary enrollment rate had reached more than 90 percent.

In most miracle economies in Southeast Asia, the colonial regimes left behind an deplorable educational legacy.⁴⁰ The provision of educational facilities was inadequate and was concentrated in urban areas, with places at these facilities allocated based on

³⁹ When Japan started its industrialization, its educational attainments were truly spectacular. As Sen (1999) states, even at the time of Meiji restoration in the mid-19th century, when Japan was a rural economy, it already had a higher level of literacy than Europe, which had been industrializing for about a century. For a comparative assessment of the educational attainments of Japan and the United States see Godo and Hayami (1999).

⁴⁰ The exception was the Philippines, where educational performance during the colonial period, as well as in the 1960s, compared favorably with that in the best of the miracle economies. By contrast, even though Thailand was not colonized, its education performance during the 1960s was considerably behind that of the Philippines.

race and income rather than merit (Booth 1999). However, after these countries became independent, they placed a high priority on education, but they had to start from a low base. Even by the 1960s, the illiteracy rate was 77 percent in Malaysia, 53 percent in Indonesia, and 32 percent in Thailand (table 4-4). However, by the mid-1980s primary enrollment ratios averaged almost 100 percent for all these economies. Significant progress, albeit much less impressive, also took place in secondary enrollment ratios in these three economies, although in 1992 these ratios remained substantially lower than those for the NIEs. Behrman and Schneider (1994, p. 21), who provide the most authoritative assessment of the educational attainments of the miracle economies, summarized the situation as follows:

- The miracle economies had relatively high primary and secondary enrollment rates in 1965 in comparison with the international “average,” controlling for per capita income. However, their performance was not high relative to the Philippines and Sri Lanka at both levels and to India at the secondary level.
- For 1987, data are more sparse, but only Indonesia at the primary and secondary levels and Korea at the secondary level had high enrollment rates relative to the international regression line that controlled for per capita income. If there is also control for adult literacy rates, the schooling attainments of these countries appear much less impressive relative to other Asian developing countries.
- In sum, neither in 1965, before a quarter century of rapid growth, nor in 1987, after a number of years of relatively rapid growth, did the miracle economies as a group appear to have had unusually great schooling attainments.

In short, the evidence does not confirm that the miracle economies as a group had extremely high educational attainments or made unusually large educational investments by international standards, although there are exceptions on both accounts.

Table 4-4. Educational Attainments, Selected Asian Economies, Regions & Years

Economy and region	Adult illiteracy rate (percentage of people age 15+)			School enrollment (percentage of gross enrollment)						
	1960	1970	1995	1965	1995	1965	1995	Primary	Secondary	Tertiary
Miracle Asia										
Hong Kong, China	29.0	21.5	8.2	103.0	94.0	29.0	73.0	5.0	25.7	
Korea, Rep.	29.0	13.2	3.1	101.0	95.0	35.0	101.0	6.0	52.0	
Singapore	46.2	26.9	9.2	105.0	95.2	45.0	73.4	10.0	33.7	
Taipei, China	46.0	46.0	5.6	67.0	99.1	37.0	88.8	-	-	
Indonesia	53.0	43.7	16.3	72.0	113.4	12.0	51.5	1.0	11.3	
Malaysia	77.0	41.7	15.6	90.0	104.0	28.0	59.0	2.0	11.0	
Thailand	32.0	19.7	5.8	78.0	87.0	14.0	54.0	2.0	20.1	
<i>Average</i>	44.6	30.39	9.1	88.0	98.2	28.6	71.5	4.3	25.6	
Philippines	28.0	16.4	6.0	113.0	114.1	41.0	77.5	19.0	29.0	
South Asia										
Bangladesh	-	75.9	61.9	49.0	71.6 ^a	13.0	19.0 ^a	1	6.1	
India	-	66.9	46.7	74.0	100.2	27.0	48.8	5	6.5	
Nepal	-	83.9	64.1	20.0	109.1	5.0	39.7	1	4.8	
Pakistan	-	79.3	58.8	40.0	73.5 ^b	12.0	22.7 ^a	2	3.4	
Sri Lanka	-	19.5	9.7	93.0	113.4	35.0	74.8	2	5.1	
<i>Average</i>	-	65.1	48.2	55.2	93.6	18.4	41.0	2.2	5.18	
Regions										
East Asia and Pacific	-	44.2	17.4	87.2	114.9	24.0 ^c	63.8	1.1	8.7	
Latin America and Caribbean	-	26.2	13.3	98.6	112.0	20.1	53.1 ^d	4.3	17.2 ^d	
South Asia	-	68.5	49.1	67.3	99.5	23.8	48.5	4.2	6.0	
Sub-Saharan Africa	-	71.8	44.1	45.7	77.9 ^d	5.2	26.6 ^d	0.6	3.4	
<i>World</i>	-	45.1	26.5	83.6	104.7	27.3^e	66.2	6.8	18.3	

- Not available. a. 1990. b. 1993. c. 1966. d. 1994. e. 1960.

Source: Barro and Lee (2000); Leipziger and Thomas (1997); World Bank (2000d).

4.4.2. Role of Human Capital in Sustaining Development

How important is human capital development in the process of economic development and poverty reduction? While economists generally agree about the important role of human capital development,⁴¹ the empirical evidence is somewhat mixed, in particular, there is a serious divergence between the microeconomic and the macroeconomic evidence.

The microeconomic evidence from different countries suggests that education enhances people's productive capacity and earnings potential. According to these studies, returns to education can exceed 25 percent for primary education, 15 to 18 percent for secondary education, and 13 to 16 percent for tertiary education (Psacharopoulos 1994). To some extent the returns may reflect factors other than those that improve productivity, such as the role of education as a credential-creating

⁴¹ Early advocates of human capital include Schultz (1961). More recently it has received attention from such authors as Barro (1991) and Mankiw, Romer, and Weil (1992).

screening device, but even after such factors have been netted out, the role of education in increasing productivity stands out (Ashenfelter and Krueger 1994).

By contrast, the macroeconomic evidence from cross-country growth regressions suggests little or no impact of education on economic growth (see, for example, Benhabib and Spiegel 1994; Pritchett 1996). In one of the most influential papers in this area, provocatively titled “Where Has all the Education Gone?,” Pritchett (1996) argued that enormous educational investments since the 1960s have yielded little or no growth payoff in developing countries:

While enrollments and attainment have expanded, GDP per capita growth in the typical developing country has fallen: from 3 percent in the 1960s, to 2.5 percent in the 1970s to negative .48 percent in the 1980s—While the rapidly growing East Asian countries did have rapid growth of educational capital—2.8 percent per annum over 1960–1985 by the measure presented in this paper—4.2 percent in Sub-Saharan Africa, 3.98 percent in the Middle East and North Africa, 3.7 percent in South Asia. While there are examples of high education countries that did well, there are many examples of high education countries—Philippines, Sri Lanka, Hungary—that have stagnated and have much lower output than their less educated neighbors (p. 3).

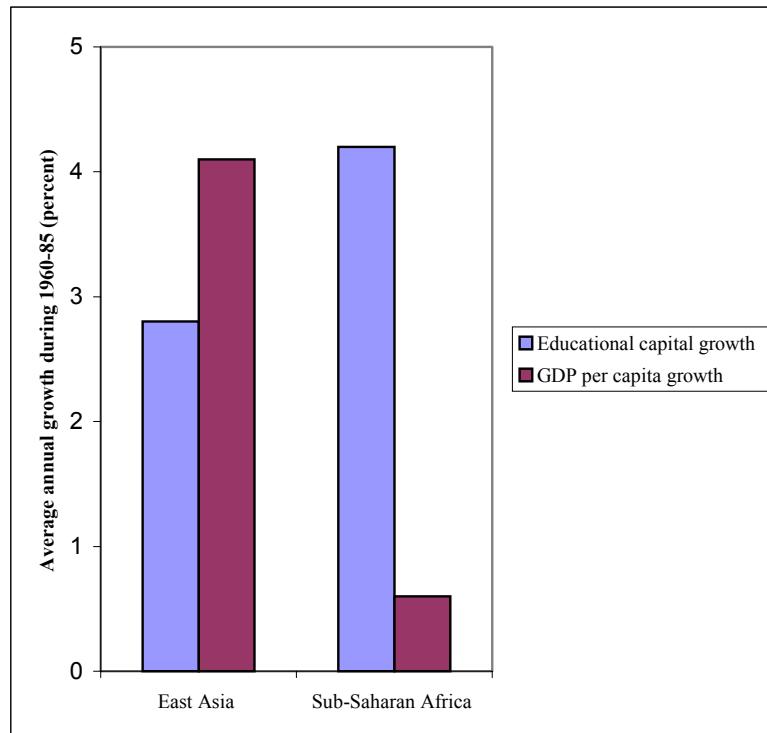
Nowhere is this lack of a correlation between growth in educational capital and economic growth more evident than in a comparison of the growth miracles of East Asia and the growth disasters of Sub-Saharan Africa. Figure 4-1 shows the growth of educational capital and economic growth in East Asia and Sub-Saharan Africa during 1960–85. While educational capital grew more rapidly in Sub-Saharan Africa than in East Asia, East Asia posted spectacular economic growth performance during the period and Sub-Saharan Africa simply floundered.

How does one explain this lack of a correlation between increased educational attainments and economic growth? Perhaps it simply means that education did not have the same impact on economic growth in all the countries and that the cross-country regressions masked an enormous heterogeneity in impact.⁴² This heterogeneity arises because in many developing countries education had little or no impact on growth. This may have been due to poor policy and institutional environments, including a lack of openness to the world economy;⁴³ to low-quality education that did not have any impact on productivity; or to limited demand for skilled workers in relation to the supply of skilled workers.

⁴² Even if education by itself does not have an impact on productivity, the decision to invest in education should not be guided by productivity alone. Education is a merit good and its provision should not be guided only by economic grounds. In addition, it has many direct impacts on human welfare, such as reducing child mortality rates, improving children’s nutrition, and enhancing cognitive skills.

⁴³ Stern (2001) stressed this same point when he pointed to the case of the Middle East and North Africa region in the 1980s and 1990s, when it suffered from the paradox of high investment in human and physical capital and economic stagnation.

Figure 4-1. Growth in Educational Capital and Economic Growth, East Asia and Sub-Saharan Africa, 1960–85



Source: Pritchett (1996), adapted from Easterly (2001).

In this light, the Philippine paradox is easily explained. Despite its strong educational attainments, which compare favorably with the best of the developing world, the Philippines could not attain the same kind of economic and social transformation as the miracle economies. Its inward-looking economic development strategy and rapacious political institutions precluded it from exploiting the favorable conditions provided by its educational attainments. For human capital to be a dynamic force of economic and social transformation, it must be combined with sophisticated equipment and machinery. The only way to acquire such equipment and machinery is through economic openness. According to Nobel Laureate Robert Lucas (1993):

The main engine of growth is the accumulation of human capital—of knowledge—and the main source of differences in living standards among nations is differences in human capital. Physical capital accumulation plays an essential but decidedly subsidiary role—Human capital accumulation takes place in schools, in research organizations and in the course of producing goods and engaging in trade. For learning to occur on a sustained basis, it is necessary that workers and managers continue to take on tasks that are new to them, to continue to move up—the “quality ladder”. For this to be done on a large scale, the economy must be a large-scale exporter (p. 270).

Thus the impact of education on growth depends on the economic environment. The more open and dynamic the environment, the higher the returns to education. A

recent microeconomic study from India (Foster and Rosenzweig 1996) found that farmers with a primary education were generally more productive than their uneducated counterparts. However, the differences in returns to educated and uneducated farmers were greatest in more dynamic regions with new seed and fertilizer technologies.

Even though many of the miracle economies did not have an extraordinary human resource base compared with that in many other developing countries when they embarked on an export-oriented strategy, they were able to establish a foothold in a number of labor-intensive industries. However, as these economies began to grow more rapidly, their educational attainments improved. Their success in export markets, coupled in some cases with an increased flow of FDI, enhanced their capacity to import new capital and equipment and their access to new technology. As the availability of new technology increased, so did the demand for increasingly sophisticated labor force skills. This, together with these economies' increasing aspirations to "make it big" in international markets, created an environment for improving skill levels and assimilating new technology. Some of this skill formation took place outside the formal schooling system in the form of on-the-job-training, informal acquisition of knowledge, and learning by doing. As the quality of the labor force continued to improve through skills formation, these economies not only consolidated their comparative advantage in labor-intensive exports, but some also gradually diversified into more skill-intensive products. Thus the policy of outward orientation created a virtuous circle of accumulation and assimilation.⁴⁴ The labor market outcome of this virtuous circle was a rapid increase in employment, an improvement in skill levels, an increase in wages, and a spectacular reduction in poverty (ADB 1997).

Compared with the miracle economies, the South Asian economies suffered a "double whammy." These economies were largely closed until the 1990s and had poor educational attainments. However, the situation has improved significantly in recent years. Primary school enrollments have become nearly universal, although illiteracy remains a curse for nearly 50 percent of South Asia's population. Nevertheless, given its large population base, South Asia has a large supply of skilled workers to tap.

4.5. Industrial Policy

Much has been written about the role of industrial policy in the economic transformation of the miracle economies (for summary assessments see, for example, ADB 1997; Leipziger 1997; Stiglitz and Yusuf 2001; World Bank 1993). The term industrial policy has been used to mean deliberate attempts by governments to change the industrial structure, usually to encourage the growth of capital-intensive industries (Leipziger and Thomas 1997). Industrial policy involving various types of credit and

⁴⁴ This view is different from that of Nelson and Pack (1999), who espoused a Schumpeterian view of development according to which the growth process of the miracle economies was driven by prior ability and willingness in terms of their human resource base. The distinction between theories of accumulation and assimilation, as highlighted by Nelson and Pack's (1999) paper, is somewhat overdrawn. As Topel (1999) rightly notes: "The difference between the theories is more semantic than real. Neoclassical theories define human capital broadly, so that accumulation of human capital encompasses the accumulation of knowledge and the ability to apply it in productive ways. When we think of new ways to do things, human capital has increased" (p. 18). In addition, there is no conclusive empirical evidence in support of one theory over the other.

noncredit support to selected industries to improve their international competitiveness was an integral part of the development planning of some of these economies.

4.5.1. Rationale and Role of Industrial Policy in the Miracle Economies

Korea, and to a lesser extent Taipei, China, were the most ardent practitioners of industrial policy. Amsden (1989), who provided the most detailed review of industrial policy in Korea, noted that the government provided trade protection to selected industries and gave them privileged access to various inputs and access to subsidized credit from the government-owned banking system. In return for these interventions, the selected industries had to conform to strict performance standards defined in terms of export targets. As the government maintained strict discipline in enforcing the targets, according to Amsden, Korea was largely free of the rent-seeking activities that were common in other developing countries following similar types of policies. The situation in Taipei, China was in many ways similar to that in Korea. According to Wade (1990), even though Taipei, China is essentially a market economy, it is a “governed” market economy. The government influenced private investments through its incentives and controls, which included import restrictions, domestic content requirements, entry requirements, fiscal incentives, and subsidized credit.

The economic rationale behind industrial policy is twofold: the existence of increasing returns to scale and the possibility of multiple equilibria. In an economy with multiple equilibria, without government intervention the economy can be stuck in a low-level equilibrium—the so-called poverty trap. In this connection, the literature identifies a number of different variants of increasing returns to scale. The first is increasing returns internal to a firm, a notion emphasized by Marshall (1879). According to this line of argument, in the face of increasing returns small and new producers are likely to face serious difficulties when they try to compete with well-established industrial firms in the industrial countries. Consequently, the argument goes, a massive investment program in the form of a “big push” is required to steer the economy above the threshold level below which these firms would not be able to compete (Rosenstein-Rodan 1943). This idea has also often been used to justify elaborate import substitution programs to shield small and new firms from competition from the industrial countries.

A variant of this increasing returns concept emphasizes the existence of large sunk costs. According to this idea, the main constraint to initiating production stems not so much from increasing returns to scale in production, but from the existence of large sunk costs in new activities. According to this argument, as firms expand and gain more experience, they improve their efficiency in production as well as in production-related activities such as marketing, design, and industrial organization. All this helps bring down the cost of production and the price of output to the buyers. Such distinguished authors as Arrow (1962), Stockey (1988), and Young (1991) have explored this idea of learning by doing.

Yet another variant of the idea of increasing returns is the notion of spillover effects, whereby increasing returns do not accrue only to firms, but to the entire industry, even across markets. As markets expand, tasks become more specialized and specialized firms undertake specialized tasks, such as accounting, legal services, commercial advertising, and public relations. When markets are small, manufacturing

firms undertake these tasks and the costs of production remain high. Increasing specialization and sophistication of the economy lead to many spillover effects in the form of pecuniary externalities. These are externalities because the cost advantage generated by the specialization is not fully captured by individual firms, and pecuniary because they operate through market transactions.

A variant of this spillover effects argument is the so-called coordination failure argument. According to this argument, which goes back to the work of Hirschman (1958) and Rosenstein-Rodan (1943), spillover effects are often more pronounced in a cluster of industries. In such a cluster, one industry is not viable if other complementary industries are absent. This complementarity leads to multiple equilibria (Murphy, Shleifer, and Vishny 1989a,b), that is, to a good equilibrium with coordination and to a bad equilibrium without coordination. In such a setting, through its various interventions the government can play an important role in overcoming the coordination failure.

The theoretical justification for industrial policy based on coordination failure or increasing returns to scale has been subject to criticism. Some have suggested that the problem of coordination failure could easily be overcome by an open economy without the development of backward and forward linkage industries.⁴⁵ As Stiglitz (1996) notes: “It is possible to develop a steel-using industry simply by importing steel and to develop steel producers without steel users simply by exporting steel” (p. 160). Similarly, it is widely believed that the industries that played a critical role in the economic takeoff of the miracle economies—such as textiles, footwear, toys, and sporting goods—are not those in which returns to scale or coordination failures are salient.

4.5.2. An Empirical Assessment

Even if industrial policy does have some theoretical justification, actually implementing such a policy is difficult. Targeting, sequencing, and fine-tuning industrial interventions require a large amount of information and some minimal governmental capability to design, plan, and implement decisive interventions. Many aspects of the increasing returns—in particular, the spillover effects that would arise from interactions among firms—are largely unobserved (as they are usually not captured in standard input-output tables). Given the huge information requirements in relation to the limited analytical resources of most developing country bureaucracies’, successful industrial policy is largely beyond the capability of most developing countries.⁴⁶ In addition to a capable

⁴⁵ This was clearly understood by the proponents of the idea of a big push and coordination failure. For example, Murphy, Shleifer, and Vishny (1989b) noted: “When domestic markets are small and *world trade is not free* and costless, firms may not be able to generate enough sales to make adoption of increasing returns to technologies profitable, and hence industrialization stalled. In this paper—we focus on the contribution of industrialization of one sector to enlarging the size of the market in other sectors. Such spillovers give rise to the possibility that coordination of investments across sectors—which the government can promote—is essential for industrialization” (pp. 1003–04, emphasis added). The critical caveat here relates to trade. If there are free trade opportunities that the firms can exploit, then they no longer need to rely on the demand spillover effects of other sectors for their continued economic sustenance. Therefore much of the theoretical validity of industrial policy—and government activism—ceases in the context of open economies.

⁴⁶ Even with strong analytical resources, when technologies become complex and the payoffs from exploring new technological opportunities are uncertain, for the state to coordinate private sector activities becomes increasingly difficult, as Japan’s recent experiences have shown (Aoki, Murdoch, and Okuno-Fujiwara 1997).

bureaucracy, Wade (1994) suggested that successful implementation of industrial policy requires a political framework that does not necessarily exist in—nor would it be welcomed by—many developing countries. In the words of Wade (1994): “To do selective industrial policy well on the scale done in East Asia probably does require a strong, fairly authoritarian state (but not necessarily a nondemocratic one: Japan has had a democracy of sorts these past fifty years)” (p. 76). If the price of successful industrial policy is indeed authoritarianism, many developing countries today are unlikely to be willing to pay that price.

The performance record of industrial policy in the miracle economies has at best been mixed. However, coming to a definitive conclusion about the efficacy of industrial policy is difficult in the absence of the counterfactual, that is, the absence of benchmark outcomes of what would have happened in the absence of industrial policy. Nevertheless, the limited evidence that is available suggests that industrial policy was not particularly successful in these economies. According to Bhagwati (1996), Korea’s diverse quantity interventions did not significantly alter the pattern of incentives that world market prices would have provided.⁴⁷ Similarly, the World Bank (1993) study of the East Asian miracle argues that there is no conclusive evidence that sectoral interventions by the economies’ governments were quantitatively significant and altered sectoral patterns of growth and trade. Indeed, most of the sectors that were growing in the 1960s through the 1980s were labor intensive. By contrast, the capital-intensive sectors, which the governments favored, were lagging behind in productivity and did not succeed. In this connection, a study by Dollar and Sokoloff (1990) suggests that TFP growth in most of Korea’s capital-intensive sectors that were subject to industrial policy was less than half that in most labor-intensive sectors.⁴⁸ This suggests that government policies may be effective if they favor sectors that have a comparative advantage, but that they do not succeed if they deviate too far from the market’s basic directions. Examples of the latter include Korea’s drive to develop heavy and chemical industries in the 1960s and 1970s and Singapore’s attempts to move into high-tech, high value added exports in the 1970s (ADB 1997).

The miracle economies varied both in the degree of government intervention and in the economic success they achieved. Industrial policy may have had some measure of success in Korea and Taipei, China in some areas, but even in those economies the overall effect was at best ambiguous. The well-known studies of industrial policy in Korea and Taipei, China focus heavily on specific case studies of successful industries, but pay little or no attention to industries that failed. To evaluate the overall impacts one needs to examine both successes and failures. According to the ADB (1997), studies that have evaluated both successes and failures cast doubt on the strategy’s overall effectiveness.

⁴⁷ The detailed studies by Amsden (1989) for Korea and Wade (1994) for Taipei, China, while otherwise informative, do not provide much illumination on whether the myriad interventions really canceled each other out and led to a neutrality of incentives. Their discussions of this issue are both incomplete and confused. As Rodrik (1995b) correctly argues, “On this important issue, Amsden openly contradicts the Lerner symmetry theorem (and Walrus’ Law) without attempting a reconciliation. Wade does the same, and also contradicts himself” (p. 2947).

⁴⁸ However, Pack (2000) found somewhat higher TFP growth in the capital-intensive sectors than Dollar and Sokoloff. Nevertheless, he did not find that industrial policy had contributed significantly to aggregate growth.

In other miracle economies industrial policy had little or no role. In Hong Kong, China state intervention in the form of industrial policy was minimal. The private sector thrived in an environment of free markets and “positive nonintervention” by the government. Singapore’s policy had been close to the free market approach (although it has many successful state enterprises and has made a few interventions in regard to high-tech industries).

Governments did intervene in Indonesia, Malaysia, and Thailand, but were more often guided by political considerations (that is, supporting individuals, families, and firms in return for political favors) than by economic considerations. As one would have expected, many of these interventions failed miserably in terms of economic objectives. These failed interventions include Malaysia’s efforts at heavy industrialization in the 1980s and Indonesia’s high-tech industrialization in the 1990s (Jumo 2001). According to Jumo (2001):

Such efforts did not attempt to achieve international competitiveness or to provide support for other industries seeking to achieve international competitiveness, even in the long run. Such apparently arbitrary interventions have given industrial policy in Southeast Asia a bad reputation (p. 473).

Similarly, a closer review of the Thai situation led Christensen and others (1997) to conclude that even though the government had intervened, “its actions have not been very effective, well-coordinated or carried out with a clear development purpose in mind” (p. 381). They also observed that Thai sectoral policies

were not guided by a strategy of picking winners and have often been marked by patronage and rent-seeking...an activist state may require certain institutional skills that on many measures have eluded Thai economic policy making, at least on the sectoral side (p. 346).

In light of these diverse experiences, Little (1996) observed:

Since the less interventionist Hong Kong, Singapore and Taiwan grew faster than Korea, it is unclear why the revisionists think it is simply less plausible that less intervention would have been better, given also the widespread failure of government industrial policies elsewhere (p. 12).

Little found it simply more plausible that Korea grew rapidly despite its industrial policies, not because of them. Even other scholars who have generally been more positive about the efficacy of industrial policy remain concerned about its replicability and long-term consequences. For example, Westphal (1990), who has a generally positive assessment of industrial policy in Korea, was highly skeptical when he wrote that the evidence does not suggest that

selective industrial policies must necessarily succeed, either to foster international competitiveness or to increase welfare. Indeed, from my reading of the evidence around the Third World, I am fully persuaded that such policies have generally inhibited effective development” (p. 42).

Similarly, Pack (2000) suggested extreme caution:

Industrial policy may have been a minor growth hormone [to the East Asian economies]—But in view of the minor benefits and the potential adverse effects on the financial sector and the neglected industrial sectors, countries should be exceptionally cautious before embarking on such policies (p. 64).

To sum up, the miracle economies diverged widely in terms of their industrial policy. Some governments intervened heavily and others did not. Economies like Korea and Taipei, China intervened extensively. They achieved some success in some areas, yet were largely unsuccessful in many others. By contrast, other economies that largely followed a free market approach were hugely successful. This has led Leipziger and Thomas (1997) to conclude, quite correctly in my view, that there are “merits to avoiding unbridled industrial activism” (p. 20).

4.6. Agricultural Development

A number of observers have suggested that the miracle economies paid special attention to agricultural development, which both helped to reduce poverty and acted as a foundation for subsequent industrial development (see, for example, ADB 1997; World Bank 1993). However, the agricultural growth performance of these economies was far from uniform (table 4-5). Of this group of economies two, Hong Kong, China and Singapore, are city states with little agriculture. While both Korea and Taipei, China had relatively high growth in agriculture in the 1950s and 1960s, about 5 and 4 percent, respectively, it tapered off in the 1970s largely because of the exhaustion of the potential associated with new agricultural technology and the withdrawal of price and input support. Agriculture in both Malaysia and Thailand grew robustly in the 1960s and 1970s at around 5 percent, but has suffered a slowdown since then. Indonesia was a late starter with the new agrarian technology. Its agricultural growth accelerated in the 1970s, but slowed in the 1980s and 1990s.

Despite the relatively high agricultural growth rates in some miracle economies, agricultural growth lagged behind the aggregate growth rate, which was largely propelled by manufacturing. Nonetheless, agricultural growth had some salutary effect on poverty before these economies began to industrialize. According to the ADB (1997):

Rural poverty was reduced; and rising agricultural incomes improved the health, longevity and productivity of the rural poor...Higher rural incomes also made it possible for the rural poor to invest more in education and thereby to enter the non-agricultural economy. Productivity improvements released labor to work in non-farm employment. In urban areas, reduced food prices helped increase the value of real incomes. Strong agricultural production helped stabilize prices, which enabled both economic and political stability (pp. 104–105).

While these mechanisms of poverty reduction are highly plausible, validating them empirically is difficult.

Table 4-5. Growth in Agricultural Value Added, Selected Asian Economies and Selected Regions, 1950–96

Economy and region	Percentage of GDP						Annual growth (%)					
	1950-60	1961-70	1971-80	1981-90	1991-96	1950-96	1950-60	1961-70	1971-80	1981-90	1991-96	1950-96
Miracle Asia												
Hong Kong, China	3.70	2.90	0.82 ^a	0.46	0.18	1.61	-	0.30	-10.30	-	-	-5.00
Korea, Rep.	41.70	33.88	22.37	11.54	6.72	23.24	5.50	4.76	1.45	3.34	3.03	3.61
Singapore	-	3.04	1.79	0.69	0.18	1.42	-	4.16	2.11	-5.74	1.87	0.60
Taipei, China	27.80	20.60	13.00 ^a	5.94	3.58	14.18	4.80	3.40	1.50	-	-	3.23
Indonesia	53.90	50.87	31.92	22.73	17.65	35.41	2.60	2.87	4.54	3.42	3.14	3.32
Malaysia	37.10	29.76	25.87	19.51	14.81	25.41	0.90	5.80	4.80	3.85	1.91	3.45
Thailand	39.80	31.14	25.40	16.85	11.13	24.86	3.80	5.64	4.00	3.89	3.73	4.21
<i>Average</i>	34.00	24.60	17.31	11.10	7.75	18.02	3.52	3.85	1.16	1.75	2.74	2.60
<i>Average without Hong Kong, China and Singapore</i>												
	40.00	33.25	23.71	15.31	10.78	24.62	3.52	4.49	3.26	3.62	2.95	3.57
Philippines	-	26.60	29.05	23.54	21.44	25.16	3.30	4.31	4.06	1.18	1.86	2.94
Regions												
East Asia and Pacific	-	37.10	28.51	22.33	16.45	26.10	4.80	5.14	2.71	4.65	3.75	4.21
Latin America and Caribbean	-	14.22	12.21	9.97	8.07	11.11	-	1.56	3.50	2.19	2.39	2.41
South Asia	-	43.83	39.47	32.27	29.02	36.15	3.20	2.74	1.67	3.67	3.71	3.00
Sub-Saharan Africa	-	24.10	19.83	18.74	17.41	20.02	4.80	3.38	2.13	2.10	2.17	2.91
<i>World</i>	-	10.44	8.17	6.13	4.74	7.37	-	-	1.73	2.89	1.67	2.10

- Not available.

a. 1970–77.

Source: ICSEAD (1999); World Bank (1980, 2000d).

In general, the governments of the miracle economies supported the agriculture sector and pursued less discriminatory policies against agriculture than many other regions (ADB 1997). Even though like many other developing economies they imposed both explicit and implicit taxes on agriculture, they also provided various public goods, such as major irrigation and drainage system, rural roads, and infrastructure for flood control. This situation contrasts with that of Africa, where according to Akyüz and Gore (2001), the major policy failure was not that governments taxed agriculture heavily, but rather that they did not invest in the rural sector to increase productivity and nurture an investible surplus.⁴⁹

East Asia's agricultural strategy, which involved both taxation and the public provision of infrastructure, had a sound economic logic. According to Platteau and Hayami (1998):

On a priori grounds, it is not clear whether it is more socially efficient (in terms of stimulation of agricultural growth) to reduce explicit or implicit taxes on the farmers—or to charge these—taxes and allocate the revenue thus derived to investment in public goods conducive to higher agricultural productivity—The

⁴⁹ Through a discriminatory exchange rate policy, many developing countries extracted a heavy implicit tax on agriculture (for more details see Schiff and Valdes 1998).

fact that for poor countries with inadequate infrastructure facilities, imperfect markets, and lack of capital and private research or organizations, long-run aggregate supply elasticities with respect to provision of public goods have been found to be significantly higher than price elasticities—suggests that the second strategy should be pursued in these countries at least up to a certain point (p. 358).⁵⁰

Thus the green revolution, which most of the miracle economies achieved in the 1960s and 1970s, was largely made possible through significant public investments in rural infrastructure. The process was greatly aided by comprehensive reforms of national agricultural research systems and the promotion of cooperative arrangements with key international agricultural institutes. While international research institutes carried out the initial development of high-yielding seed varieties, this was followed by adaptive research and extension activities at the national level. As these countries adopted more liberal import policies, farmers had freer and easier access to modern fertilizers. Moreover, the economies also avoided the worst form of indirect taxes on agriculture associated with the highly distortionary exchange rate systems pursued by many developing countries.

The agricultural growth performance of the South Asian economies has not been as impressive as in some of the miracle economies, although their agricultural development strategies were not significantly different. The initial strategy of taxing agriculture to finance industrialization was similar, but the rate of investment in rural infrastructure was lower. Also, the relative dearth of rural literacy and the lack of extension services might have played a part in the slower diffusion of new agricultural technology. However, the growth rate of agriculture in South Asia accelerated significantly in the 1980s.

Whatever role agriculture may have played in reducing poverty and sustaining growth in the import substitution phase of economic development, its role in initiating and sustaining the miracle process is not clear. Some observers, for example Bhagwati (1996), have suggested that the principal point of departure between India and East Asia was the end of the 1950s, when India continued with its inward-looking strategy while East Asia adopted an outward-looking strategy. A principal feature of India's inward-looking strategy was its heavy reliance on agricultural growth, which essentially propelled both manufacturing and aggregate growth of the domestic economy. By contrast, the outward-oriented strategy of the miracle economies largely relied on external demand for the growth of manufacturing and of the aggregate economy. According to this argument, the main constraints to India's rapid growth were its inward-looking development strategy and its excessive reliance on agriculture, which holds limited potential for sustained growth. Conversely, for the East Asian economies

⁵⁰ According to Platteau and Hayami (1998), the impetus behind adopting this type of agrarian strategy in the East Asian economies was the “ideology of peasant fundamentalism.” According to this ideology, it is legitimate for the ruler to tax the farmers the surplus above the subsistence level in return for providing rural infrastructure for flood control, irrigation, and drainage. This peasant fundamentalism, rooted in community norms, presumably contributed to economic efficiency and social stability in the miracle economies in the early stage of economic development. While such an institutional argument is plausible, testing it empirically and replicating it in a different social setting are difficult.

their outward-looking development strategies and freedom from the tyranny of agricultural growth set them free to embark on their path to rapid and sustained growth.

To sum up, while agricultural growth was a palliative for pervasive poverty in pre-miracle days, its role in initiating and sustaining rapid economic growth has been limited. Indeed, many East Asian economies made the economic breakthrough without a vigorous agriculture sector, whose importance and role diminished further as these economies industrialized.

4.7. Equitable Distribution

The role of income and asset distribution in economic growth and poverty alleviation has been widely discussed by economists. Despite the large literature on the topic, there is little agreement.

4.7.1. Income

Some economists have suggested that initial inequality has an adverse impact on economic growth. In other words, equitable income distribution promotes growth. Rodrik (1994) has emphasized the role of initial income equality as a major explanation for the economic dynamism of the miracle economies. However, while the miracle economies were more equal in terms of income distribution than Latin American economies,⁵¹ they were not necessarily more equal than the South Asian economies.

The theoretical literature identifies three major reasons why inequality may be detrimental to growth.⁵² The first reason is the political economy, which has been formalized in a set of models that include Alesina and Rodrik (1994) and Persson and Tabellini (1994). According to this line of reasoning, inequality reduces the income of the median voter (the middle class)—the critical social element that determines the outcome of the voting process—in relation to national income. As the relative position of the median voter deteriorates, the pressure for redistribution increases. The outcome of this redistributive pressure would be inefficient taxes on income and capital that would discourage investment.

The second reason relates to capital market imperfections. Examples of models that formalize this kind of reasoning include Aghion and Bolton (1997) and Galore and Zeira (1993). In the presence of credit constraints, the poor would be precluded from borrowing even if they wanted to undertake projects with high economic returns, such as investing in education or engaging in a profitable business. However, poor people cannot take advantage of most economic opportunities because they lack access to capital. In contrast, the rich will have access to resources even if their projects are not worthwhile. Thus a more equitable distribution, which creates more equitable access to capital, would lead to better investment and higher economic growth.

⁵¹ Note that the distribution of income and assets in Botswana, Africa's miracle economy that has achieved the highest per capita growth among developing countries in the last 35 years, was extremely unequal compared with Latin American countries (Acemoglu, Johnson, and Robinson forthcoming).

⁵² This is an evolving area of research. Some recent literature surveys include Aghion, Caroli, and Garcia-Penalosa (1999), Bénabou (1996), and Bourguignon (2000).

The third reason why inequality may harm growth relates to social conflict. Higher inequality leads to greater political instability, which in turn leads to greater uncertainty about property rights, suboptimal investments, and reduced growth (Alesina and Perotti 1996). Inequality may also lead to social conflict and lower productivity as more societal resources are diverted from productive to redistributive activities (Rodrik 1997).

How do these theories stand up to the available empirical evidence? The following is a small sampling of the diverse findings:

- A fairly sizable literature, surveyed by Bénabou (1996), confirms the negative relationship between initial inequality and growth, controlling for a host of other variables such as schooling and physical capital growth. Based on his survey of 23 studies, Bénabou concluded that a one standard deviation decrease in inequality increases per capita GDP by 0.5 to 0.8 percentage points.
- By contrast, using an improved dataset Deininger and Squire (1998) did not find any relationship between initial income and growth. However, they did find a relationship between initial asset inequality (represented by land distribution) and economic growth. This led them to conclude that there might be a relationship between growth and inequality arising from imperfections in the credit market.
- Forbes (2000), who used an improved dataset as well as econometric methodology, found a positive relationship between income inequality and subsequent growth. He found this relationship to be robust across samples, variable definitions, and different model specifications.
- Barro (1999) did not find any relationship between initial inequality and subsequent growth, but when he divided the sample, he found a negative relationship between initial inequality and growth in poor countries and a positive relationship in rich countries.
- Using the Deininger and Squire dataset and nonparametric econometric techniques, Banerjee and Duflo (2000) found that the growth rate is an inverted U-shaped function of net changes in inequality. In other words, changes in inequality in either direction are associated with reduced growth in the next period. They found the relationship to be quite robust to variations in controlled variables and estimation methods. This led them to conclude that “on the fundamental question of whether inequality is bad for growth, our data has little to say” (p. 27).

These findings highlight the inconclusiveness of the research into the relationship between inequality and growth. As expected, efforts to confirm the existence of specific mechanisms behind the relationship have also been inconclusive (Bourguignon 2000).

4.7.2. Land

It has now become almost conventional wisdom in development circles that land reform—especially redistributive land reform—had a tremendous role in the economic

and social transformation of the miracle economies.⁵³ The logical conclusion appears to be that without such asset redistribution, the kind of economic transformation that took place in the miracle economies would have been impossible. Therefore the possibility of replicating this kind of social transformation would be virtually impossible in countries that failed to implement similar reforms. According to Adelman (1980):

The successful countries all followed a process in which the asset that was going to be the major asset of production at each stage of development was redistributed before rather than after its productivity was improved. This asset was redistributed either in terms of direct ownership or in terms of institutional access to its productive utilization—At first, when the economy is primarily agrarian, the major asset of production is land (pp. 442–43).

The case for redistributive land reform has been based on the usual grounds of equity and efficiency. In most developing countries, the poor are largely those living in rural areas who have no significant landholdings. Distributing land, or for that matter any asset, would obviously improve the equity situation. With regard to efficiency, investigators have offered a number of arguments. First, some (see, for example, Binswanger, Deininger, and Feder 1995 and the references cited therein) have suggested that small farms are more efficient than large farms, presumably because the former can use land and other agricultural inputs more efficiently as a result of incentives. Second, a number of authors, such as Banerjee and Newman (1993) and Galor and Zeira (1993), have argued that the equitable distribution of wealth, including land, would promote efficiency. The putative source of this efficiency is the equitable ownership of assets, access to which allows the poor to obtain credit and insurance coverage, both of which contribute to more efficient allocation of investment. In particular, when the poor in developing countries obtain land through land reform, they can use this land as collateral to obtain credit and make use of their entrepreneurial capabilities. In addition, as land reform enhances the incomes of the poor, it allows them to make greater investments in their children's education and health, which eventually makes the children more productive workers. Finally, land reform can help avoid unproductive "banditry" by the landless (Grossman 1994). This view contends that when the poor have few assets and little or no stake in the economy, they can enforce the imposition of inefficient taxes on the economy (Alesina and Rodrik 1994).

In addition to theories, there is also some empirical support for arguments that land reform is an instrument of growth and poverty reduction. For example, Alesina and Rodrik (1994) found a strong correlation between inequality in land ownership and income, on the one hand, and subsequent lower economic growth, on the other. Deininger and Squire (1998) found that the initial inequality of assets, as measured by land distribution, is detrimental to growth (although they did not find any association between income inequality and subsequent growth). However, despite this evidence, the empirical literature on the relationship between asset inequality and growth is far from conclusive.

⁵³ Redistributive land reform refers to efforts to impose maximum ceilings on landholdings and distributing surplus land to tenants and landless farmers. This type of land reform should be distinguished from tenancy reform, which refers to regulations governing tenancy contracts.

Notwithstanding the putative economic benefit of land reform, the much touted East Asian experience seems to cast doubt about the centrality of land reform in the economic and social transformations of these economies. First, a number of miracle countries like Indonesia, Malaysia, and Thailand have achieved spectacular growth as well as poverty reduction based largely on growth-oriented policies, and without any significant redistributive land reform (Rashid and Quibria 1995).

Second, there is also a great deal of skepticism about the contribution of land reform to economic growth and poverty reduction even in such economies as Korea and Taipei, China. Some have suggested that in Taipei, China land reform did not have much impact on agricultural productivity. According to Koo (1968), following land reform in the 1950s, agricultural productivity did not differ significantly from that achieved under Japanese colonialism in the 1920s. Moreover, land reform measures were accompanied by hefty state taxes to transfer the surplus from agriculture to industry. Consequently, the peasants' economic situation did not improve significantly after land reform.

In terms of employment, land reform did not change the underemployment situation in Taipei, China for some time. According to Kuo, Ranis, and Fei (1981), underemployment in agriculture stayed high, around 40 percent, even a decade after land reform, while the rural-urban income gap continued to increase. The economy did not display any significant dynamism until it was propelled by vigorous growth in exports of labor-intensive products in the 1960s. Thus it was industrial, not agrarian, growth that led to strong economic expansion, full employment, and greater income equality.

In Korea, land reform did not have any immediate success in increasing rural productivity and reducing poverty, although it may have had some beneficial impact on education.⁵⁴ In this connection, Quibria and Srinivasan (1993) noted that tenants who were given land under the land reform program had to contribute 30 percent of their produce as payment toward the purchase of the land for five years and were subject to an agricultural income tax of 8 to 25 percent. In addition, these tenants turned new owners had to borrow working capital at an exorbitant interest rate. Because of these financial pressures, many tenants who received land subsequently lost it, and many of those who did not lose their land eventually turned out to be nonviable small farmers who became a financial burden to the government in the 1980s. These nonviable farmers were a stumbling block to agricultural transformation and economic liberalization (and were also the main source of opposition to foreign imports and openness to world agricultural markets). The restrictions on tenancy and the underdevelopment of land markets precluded the rapid consolidation of unviable holdings required for a dynamic agriculture sector. These facts led Rashid (2001) to question the role of land reform in reducing poverty in Korea. Instead, he opined that the Saemaul (New Village) Movement, a rural industrialization program, had a more substantial impact on poverty reduction.⁵⁵

⁵⁴ Rashid (2001) noted that land reform induced many landlords to establish private schools with the money they received from land compensation.

⁵⁵ According to Hayami (1988), even though land reform in Japan led to more equal asset and income distribution among farmers, it "did not induce changes in the basic direction of technological developments—[nor in] capital formation and productivity growth in agriculture" (p. 44).

Finally, whether radical redistributive land reform as attempted in Korea and Taipei, China can be implemented under normal political circumstances it is also debatable.⁵⁶ In both economies land reform was achieved under nondemocratic regimes. Such radical land reform will be difficult to undertake in countries with democratic regimes like India or the Philippines, because any proposed law will be diluted before its passage and sabotaged during its execution. According to Rashid (2001), radical land reform requires attention to three factors: speed in enforcement, low compensation to landlords, and extended support for beneficiaries. However, he maintains that meeting these three objectives democratically is difficult, because the political opposition will be too effective in blocking land reform unless land is a minor source of wealth. If, however, land is a minor source of wealth, he asks: why bother?

In short, the experiences of the miracle economies suggest that while land reform might help an economy achieve socioeconomic transformation, it is by no means an absolute necessity: many of the miracle economies have succeeded without such reform. In addition, the feasibility of effective land reform within a democratic polity remains questionable.

The experiences of Bangladesh and India highlight the problems associated with endogenous land reform. Democratic India has seen the passage of a large body of land reform legislation since its independence. However, the efficacy of this legislation subject to extensive debate. As concerns distributive land reform, it achieved little in terms of actually redistributing land or enhancing equity (Bardhan 1970). In practice, the land reform legislation set in motion a process of mass eviction of tenants by landlords and the subdivision of landholdings among dependents, relatives, and friends to avoid its expropriation. Indeed, as expected in a democratic and bureaucratic setting, efforts to implement the land reform effort lacked enthusiasm, and consequently little or no land was actually distributed to tenants.

While redistributive land reform has been widely considered a failure in India, some recent studies suggest that the impact of tenancy reform was perhaps more positive than is generally presumed. A study by Besley and Burgess (1998) found that the tenancy reform did not improve productivity—indeed, it reduced agricultural output—but did have a significant impact on poverty reduction. According to Besley and Burgess, this was largely due to improved terms and conditions of the tenancy contract and the rise in rural wage levels that the tenancy reform led to. This suggests an equity-efficiency tradeoff, which contrasts with the findings of a study by Banerjee, Gertler, and Ghatak (1998), who looked at tenancy reform in West Bengal in the late 1970s and 1980s. They found that tenancy reform had a positive impact on both productivity and poverty. In addition to the fact that the West Bengal reform might have been implemented more effectively than elsewhere because of the incumbent political regime, the two studies are not strictly comparable, because they used different control variables for their empirical analyses.⁵⁷

⁵⁶ Note that the drastic land reform in Japan was conceived and implemented by the U.S. occupation following World War II.

⁵⁷ As one of the authors of the study admitted elsewhere (Banerjee 2000), the study could not control for all the relevant factors that might have contributed to productivity increases. One such omitted factor was the change in agricultural extension services.

Bangladesh's experiences with land reform are similar to India's. Bangladesh enacted its first land and tenure reform legislation in 1950. The legislation, which was similar to India's, abolished intermediary tenancy holders between the peasants and the state after paying them compensation and conferred ownership on the peasants. The tenancy holders were allowed to retain up to 33.3 acres of land under direct cultivation (raised to 125 acres in 1981). The legislation has been undermined by a large number of exemptions and poor enforcement. As happened in many other developing countries, the land ownership ceiling has been widely evaded through the use of loopholes, such as transferring holdings to family, friends, and relatives.

In the area of tenancy reforms, legislation has, in principle, promoted sharecropping and avoided the more extreme forms of restrictions on tenancy found in India and elsewhere. Legally, sharecroppers cannot be evicted, have the right of first refusal on land sales, and are subject to prespecified contractual shares of output, but the enforcement of these laws has been less than strict. No systematic assessment of the impact of these reforms on agricultural productivity or poverty has been undertaken, although Bangladesh has had a fair degree of success on the agricultural front.

4.7.3. Affirmative Action

Multinational societies such as Indonesia, Malaysia, and Singapore have used affirmative action in varying degrees to address the problems of economic disparity among different ethnic groups.⁵⁸ In Malaysia, the new economic policy introduced under the second Malaysia Plan in 1973 sought to reduce poverty and income disparity among different racial groups by eliminating differences in access to employment and in asset distribution. Following the implementation of this affirmative action program, between 1973 and 1987 poverty among the Malays fell from 55 to 21 percent, among the Chinese from 20 to 4 percent, and among the Indians from 28 to 9 percent (Ahuja and others 2000).

Few systematic studies of the impact of affirmative action on poverty reduction in Malaysia are available. How much of the successful reduction in poverty was due to the robust economic growth induced by the country's pro-market, open economy policies and how much was due to the affirmative action policies has yet to be determined. Some have argued that Malaysia's affirmative action policies created inefficiency and reduced growth, while others see them as a positive force that boosted growth and poverty reduction. The evidence from the United States and other industrial countries does not suggest that affirmative action had an adverse impact on efficiency and growth (Holzer and Neumark 2000), although it might create other social problems. For example, while affirmative action in these countries had some positive redistributive effects, resources had to be used to enforce affirmative action, and it also created an adversarial social relationship between the favored and nonfavored groups.

⁵⁸ Loury (1999) classifies affirmative actions into two types. The first type is preferential affirmative actions, which include measures that give preference to the groups discriminated against by creating different thresholds of standards, that is, by lowering standards for those groups. The second type is developmental affirmative actions, which include measures that directly enhance the performance of the groups discriminated against so that they can compete on an equal footing. Singapore's efforts seem to emphasize developmental affirmative actions.

Like land reform, affirmative action policies are difficult to implement in a democratic polity without the convergence of ethnicity and class. In the case of Malaysia, the majority ethnic group, the Malays, was vastly poorer than the major minority group, the Chinese. Similarly, politics in Malaysia was ethnically structured, an arrangement that was constitutionally enshrined. Following independence, the Malays, led by their minuscule upper and middle classes, ascended to power and adopted a large number of direct redistributive measures, both in rural and urban areas, to increase the incomes of the majority ethnic group, the Chinese. Most other countries are unlikely to be able to achieve this confluence of ethnicity and class.⁵⁹

5. Institutions and Political Economy

Different authors have defined institutions in many different ways According to Nobel Laureate Douglass North (North 1994), one of the leading contributors to the literature:

Institutions are the humanly devised constraints that structure human interaction. They are made up of formal constraints (e.g., rules, laws, constitutions), informal constraints (e.g., norms of behavior, conventions, self-imposed codes of conduct) and their enforcement characteristics. Together they define the incentive structure of societies and specifically economies (p. 360).

North distinguishes institutions from organizations. According to North (1994):

Organizations are made up of groups of individuals bound together by some common purpose to achieve certain objectives. Organizations include political bodies (e.g., political parties, the Senate, a city council, regulatory bodies), economic bodies (e.g., firms, trade unions, family farms, cooperatives), social bodies (e.g., churches, clubs, athletic associations), and educational bodies (e.g., schools, universities, vocational training centers) (p. 361).

According to this perspective, “If institutions are the rules of the game, organizations and their entrepreneurs are the players” (North 1994, p. 361). This study takes a broader view of institutions that encompasses not only rules and enforcement mechanisms, but also organizations. At the same time, however, the discussion is limited to formal institutions and highlights the role of the political and legal framework that defines the formal rules and laws within which individuals, firms, and other economic entities operate. The decision to exclude informal institutions, which encompass a whole body of institutions in the form of taboos, customs, and traditions, was based not on their lack of importance, but on the lack of availability of data and information for systematic analysis.⁶⁰

⁵⁹ Among the South Asian countries, India has a number of affirmative action programs for “backward castes” that include quotas for government jobs and admission to higher levels of education. No systematic analysis on their equity or efficiency effects is available.

⁶⁰ A number of authors have emphasized the importance of such informal institutions as traditions and cultural practices (for example, Vogel 1991). According to this line of reasoning, Confucian values and traditions in the miracle economies were responsible for the high savings rates, the emphasis on education, the cohesiveness of political and business organizations, the development of meritocratic

5.1. Role of Institutions in the Miracle Economies

Available evidence suggests that the miracle economies operated within a set of economic, social, and political institutions that were conducive to growth and poverty reduction. While the types of institutions varied from economy to economy, in general, they were of uniformly high quality across the miracle economies in many relevant dimensions.⁶¹

While precisely measuring the quality of institutions in a country is difficult, this difficulty has not deterred analysts from trying to devise pertinent indexes. A number of authors have attempted to measure the quality of legal and political institutions that foster the organization and functioning of markets (see Aron 2000 for a catalogue of such measures). The state provides many of the institutions that support the efficient functioning of markets and provision of public services. Economic growth and poverty reduction depend on how successfully the state can provide such institutions.

Good economic governance refers to the successful provision of such market-supporting institutions. Knack and Keefer (1995) compiled an index of good economic governance from a set of surveys undertaken by the *International Country Risk Guide*.⁶²⁶³ This index highlights a number of important dimensions of the quality of governance, including the quality of the bureaucracy (its autonomy from political pressure and its operational efficiency), the rule of law (the existence of strong courts and orderly succession of political power), the risk of expropriation (the threat of confiscation and nationalization), and the risk of repudiation of contracts by the government (the modification of contracts, changes in government priorities, and so on). Scores on the index can range from 0 to 10, with high values indicating better governance. Hong Kong, China; Singapore; and Taipei, China scored between 8 and 10. Korea, Malaysia, and Thailand scored between 6 and 7; however, Indonesia scored less than 4 and the Philippines less than 3. Given that such exercises are subject to many conceptual shortcomings, one should not attach too much importance to the exact numerical values for individual economies. However, in terms of economic governance, the miracle economies rank high on a variety of different indexes.

Two recent empirical studies found a strong correlation between institutional quality and economic performance. The first (Rodrik 1998) was a cross-country growth regression model with three explanatory variables: initial income, initial education, and

institutions, and the durable authoritarian regimes. However, Confucian traditions are not equally prominent in all the miracle economies, which somewhat dilutes this argument.

⁶¹ The quality of institutions refers to the extent to which the relevant rules are present; when present, whether those rules are suboptimal; and whether the useful rules are strictly enforced.

⁶² According to the World Bank (2001): “Good governance includes the creation, protection and enforcement of property rights, without which the scope of market transactions is limited. It includes the provision of a regulatory regime that works with the market to promote competition. And it includes the provision of sound macroeconomic policies to create a stable environment for market—activity. Good governance also means the absence of corruption, which can subvert the goals of policy and undermine the legitimacy of public institutions that support markets”. (p. 99). However, the ability to provide good governance depends on such broad political institutions as the type of political regime and the nature of the bureaucracy.

⁶³ Since 1980 the PRS Group, an international business publisher in New York, has published the International Country Risk Guide each month, which offers financial, political, and economic risk ratings for more than 100 countries.

institutional quality. Rodrik reported that this parsimonious model did a good job of explaining the performance of the miracle economies. However, given that it included only a small sample of eight countries, one should not read too much into his results.

The second study (Hall and Jones 1999) represents a more elaborate effort to explain variations in per capita income across 127 countries. This study found that output per capita is strongly correlated with the quality of “social infrastructure,” as measured by a composite index reflecting the quality of institutions and government policies. Hall and Jones note that differences in social infrastructure, which reflect the overall economic environment within which individuals and firms operate, cause large differences in capital accumulation, educational attainments, productivity, and income across countries.

While the results of these two studies are eminently plausible, they are fraught with data and methodological problems. First, the institutional indexes they used are nonunique and the empirical results are subject to enormous data mining. Second, as these studies are based on cross-country regression analysis, they suffer from the usual shortcomings inherent in this type of analysis.⁶⁴ Nevertheless, the results indicate that institutional quality was important to the process of economic development, particularly in the miracle economies.

5.2. Authoritarian Regimes and Governance

The relationship between political regimes and economic governance is complex.⁶⁵ A political regime can be democratic or autocratic. Democracy refers to a political system where everyone is free to participate in the political process and rulers are selected by free and fair elections. It has little or nothing to do with the institutions of economic governance, which relate to the rule of law, freedom of economic transaction, property rights, and enforcement of contracts. These institutions are closely related to civil liberties and encompassed by what Zakaria (1997) calls “constitutional liberalism.” Constitutional liberalism refers to economic freedoms such as the separation of powers and the protection of basic liberties of assembly and property ownership, and as such has deep ramifications for economic and social transformation. A democracy does not need to be liberal, although democracies developed that way in the West. Similarly, an autocracy does not need to be illiberal, as was often the case in the miracle economies.

The one characteristic common to the political regimes of the miracle economies was their authoritarian nature. As Varshney (1999) noted, Singapore had been authoritarian since its founding in the mid-1960s, and Korea and Taipei, China conquered poverty during the mid-1950s to the mid-1980s under dictatorial regimes. Indonesia made significant strides in poverty reduction during 1971–91, when it was still under the dictatorial rule of Suharto. Similarly, Malaysia virtually eliminated

⁶⁴ A particular methodological problem with the Hall and Jones study is that it is based on “level regressions.” In the absence of good instruments, as rightly noted by Temple (1999), level regressions cannot explain cross-sectional variations in income by using variables that are endogenous to the level of income, like the development of physical infrastructure or of the financial system. Thus this type of regression tends to be short on policy implications in relation to growth regressions.

⁶⁵ This section and the next one draw on Bardhan (1999) and Varshney (1999).

poverty under a regime that was less than fully democratic.⁶⁶ When this experience is juxtaposed against that of India, it appears that whereas democracies have been slow in grappling with poverty the authoritarian regimes in the miracle economies achieved spectacular success.⁶⁷

How does one explain this seeming paradox? The tautological answer is, of course, that the authoritarian regimes were better at formulating and implementing good policies. To explain this further, one needs to look closely at the process of policymaking in a society. According to Varshney (1999), the impetus for policies can be pressure from below or above. Of the two, pressure from above is common to both democratic and authoritarian polities. With pressure from above both systems can, in principle, help the poor if the political elite are firmly committed to poverty reduction and compel the state structure—particularly its bureaucratic institutions—to translate that commitment into public policy. The other source of policy, pressure from below, operates differently in the two systems. In a democratic polity, the poor can pool their weight to push the government's economic policy toward their interests through political mobilization and/or voting. Political mobilization and regular and periodic elections, which are common to democratic systems, do not exist in authoritarian polities.

Why then were the authoritarian regimes in the miracle economies more successful? Varshney (1999) explains their success in terms of the comparative advantages of different regimes in exploiting different methods of poverty reduction. There are two principal methods of poverty alleviation: the direct method and the indirect method. The direct method generally entails distributive measures, including income transfers, such as food-for-work programs and credit and producer subsidies for small farmers, or asset distribution, such as land reforms. The indirect method is growth-mediated. While both methods can alleviate poverty, the indirect method, which relies on growth to create employment for the poor, seems to be more effective and sustainable in the sense that growth has a much larger impact on poverty and does not rely on the availability of public resources to sustain the process.

Whatever the superiority of one method over the other, the politics of direct and indirect methods of poverty alleviation diverge significantly. According to Varshney (1999):

Whether they are economically more productive or sustainable in the long run, direct methods—asset transfers or income transfers—have a clear logic and have effects that can be quite tangible. Most people, both politicians and others, can see the links proposed via land redistribution, land reforms can give land to those who have too little of it, or none at all; and via tenancy reforms, they can make poor tenants less dependent on the power and whims of landlords, potentially imparting a more secure source of income. A similar directness marks the symbolism of income transfers through credit and producer subsidies.

⁶⁶ In his celebrated accounts of democracy, Dahl (1971, 1989) lays out two basic criteria of democracy: contest (the freedom to contest the rulers) and participation (of diverse political groups in the process of determining the rulers). The first criterion pertains to political liberalization and the second to inclusiveness. Malaysia is considered by many political scientists to be lacking in political liberalization.

⁶⁷ Democracies have, however, prevented the worst kinds of human tragedies, including famines, but they have not achieved the spectacular economic performance of dictatorships. Meanwhile dictatorships span the whole gamut of outcomes from the best to the worst.

In contrast, the utility and value of the indirect methods of poverty-removal may be obvious to the scholars and specialists of development, but...is not easy to understand in political circles, and even if understood, rather difficult to push in political campaigns. The links proposed by the indirect method are subtle, and are also based on a long-run perspective—That is why in no developing country has *mass* politics, in which large numbers of average or poor citizens get involved (as opposed to *elite* politics confined mostly to the Westernized upper and middle classes), pushed for trade liberalization, currency devaluation and a market-oriented economic reform. A political constituency for economic reform may exist in the middle and upper classes, but it is still to be built among the poor (pp. 5–6).

According to Varshney (1999), this elite-mass distinction is critical to understanding the democratic political process. The reason democracies are more inclined toward distribution-oriented direct methods is that they are more amenable to pressure by mass politics.⁶⁸ As distribution-oriented direct methods are less effective at alleviating poverty in the long run, democracies in the developing world have been less successful than Korea; Singapore; and Taipei, China.

This does not, however, explain why an authoritarian ruler, who may be more insulated and less vulnerable than a democratic ruler to specific pressures, should be interested in playing a positive role in the development process. Olson (2000), who likened rulers to robbers, offered an explanation. He argued that a rational autocrat would behave like a “stationary bandit” with an “encompassing interest” in the productivity of society as a whole and avoid the deadweight losses arising from burdensome impositions on society’s productive capacity.⁶⁹

In light of these explanations, how does one explain the behavior of long-time autocrats who systematically plundered their economies? The answer is that in their cost-benefit calculus, these autocrats must have found that they would gain greater net benefits by plundering the economy than by investing in the expansion of its productive capacity. The policies that enhance a society’s productive capacity, such as safeguarding property rights, enforcing laws and contracts, and streamlining bureaucratic procedures, are likely to influence both the stream of future outputs for extraction and the ruler’s capacity to extract. Rulers’ capacity to collect rents is contingent on the policies they pursue to promote productivity. In a bet between the certainty of the current arrangement and the unsure prospect of the share of a bigger pie, the “roving bandit” would prefer the certainty of the current arrangement.

There is an alternative political explanation for the positive productive role of autocrats in the economic development of the miracle economies. According to this

⁶⁸ Huntington (1968) and others have made a similar argument in a slightly different context. This argument posits that democracy undermines investment and generates an explosion in demand in current consumption.

⁶⁹ Drawing upon his earlier work, Olson (2000) introduced an insightful metaphor that distinguishes between a “stationary bandit” and a “roving bandit.” A roving bandit takes away everything from his victims, while a stationary bandit has an interest in his victims’ continuing prosperity and takes away only part of their incomes. According to this line of reasoning, an unstable autocracy will be more predatory than a stable autocracy, which has a longer time horizon and a more encompassing interest in the future prosperity of its subjects. Olson invokes some empirical evidence from developing countries that seems to support his hypothesis.

explanation, as these autocrats came to power by nondemocratic means, they sought political legitimacy by undertaking ambitious development projects that promised the masses an improved economic future. In Korea and Taipei, China they also embarked on programs that represented nationalist goals, such as catching up with Japan or warding off the communist threat (World Bank 1993).

5.3. Insulated Bureaucracies and Governance

Some observers have suggested that the miracle economies did a good job of insulating their bureaucracies from the pulls and pushes of short-run, pork-barrel politics. The conditions that purportedly promoted this insulation include highly selective meritocratic recruitment and long-term career rewards for members of the bureaucracy. This insulated bureaucracy was entrusted with the task of formulating long-run development policies and guiding their implementation. Proponents of this view often cite the role played by such powerful, semi-autonomous, technocratic organizations as the Economic Planning Bureau in Korea; the Industrial Development Bureau in Taipei, China; and the Economic Planning Bureau in Malaysia.

Given independence, the insulated bureaucracies carried out their responsibilities with a degree of efficiency that is difficult to maintain in a democracy encumbered by pork-barrel politics.⁷⁰ However, autonomy can be a double-edged sword: it can lead to bureaucratic indifference, inflexibility, and inefficiency, especially when markets and technological conditions are uncertain. In addition, an autonomous bureaucracy may lack the flexibility required for error correction.⁷¹ However, Bardhan (1999) suggested that the bureaucracies in the miracle economies were not necessarily inflexible:

This flexibility has been maintained in East Asia by fostering a dense network of ties between public officials and private entrepreneurs through deliberative councils (as in Japan or South Korea) or through the tightly-knit party organization (as in Taiwan), allowing operational space for negotiating and renegotiating goals and policies, sharing information and risks, and for coordinating decisions (and mutual expectations) with remarkable speed (p. 11).

Not only did the bureaucracies implement the development agendas of the authoritarian regimes efficiently, they have also been credited with introducing innovative incentive designs in the form of economic “contests” (World Bank 1993). The basic idea of the contest—which is presumably organized around the three Rs, namely, rules, referees, and rewards⁷²—is simple. Firms receive various economic supports (rewards), but only on the basis of clearly defined criteria (rules) and in the presence of

⁷⁰ Many authors, including Weber (1968), have emphasized the need for bureaucratic insulation. Weber suggested that a simple correlation exists between a modern economy and an insulated bureaucracy.

⁷¹ Evans (1992) argued that economic development requires a “developmental state,” which requires a bureaucracy that is both insulated and “embedded.” According to Evans, embeddedness requires that the bureaucracy possesses “accurate intelligence, inventiveness, active agency and sophisticated responsiveness to a changing economic reality” (p. 148). If the bureaucracy is embedded, it can perhaps overcome inflexibilities.

⁷² According to the World Bank (1993), there are three conditions for a successful contest. The rewards must be substantial, the rules must be explicitly stated, and the referee must be impartial.

an enforcement mechanism (referees). Given its power, independence, and incentives to remain honest, the insulated bureaucracies ran these contests fairly and yielded the best of both worlds of collaboration and contests (World Bank 1993).⁷³

In short, the miracle economies seemed to have succeeded in capturing the good aspects of bureaucratic insulation while avoiding the bad ones. But the question is: Is authoritarianism necessary for bureaucratic insulation? Bardhan (1999) has correctly pointed out that authoritarianism is neither necessary nor sufficient for bureaucratic insulation. In East Asia, postwar Japan successfully insulated parts of its bureaucracy without giving up democracy.⁷⁴ By contrast, despite the powerful Marcos dictatorship, the Philippines could not achieve bureaucratic insulation. Similarly, in other parts of the world, despite authoritarian regimes many countries became more like the Philippines than Japan.

While the miracle economies provided their bureaucracies with a large degree of insulation from political pressure, no convincing explanation is available to account for why they succeeded whereas other countries failed. For example, despite the highly selective meritocratic recruitment and long-term career rewards for members of the bureaucracy, the insulation of the bureaucracy in postindependence South Asia was only short-lived. Under the rough and tumble of its raucous democracy, within a decade of independence India's bureaucracy lost its insulation and became an integral part of the rent-seeking process, while the bureaucracy gradually lost some of its traditional insulation in terms of security of tenure and autonomy in policy formulation. In South Asia, even though senior civil servants are still largely protected by a tenure system, they can be subjected to harassment and humiliation, including frequent job transfers to hardship positions in poor locations, when they incur the wrath of powerful politicians.⁷⁵ In recent years, the cadre of senior civil servants has seen occasional incursions by outsiders. The determining factor for such entry into the cadres has, of course, not been their bureaucratic competence, but political loyalty.

How does one reconcile the contrasting experiences of bureaucratic insulation? The existing theories seem to shed little light on the subject. Srinivasan (1997) eloquently expressed this inadequacy of theories in relation to India's experience as follows:

The lesson from the Indian experience is that it is simply not enough to assert that, given a framework of appropriate rules, rewards and their impartial enforcement...rapid growth will come about. It is also necessary to show that the incentives to deviate from the specified rules, for the referee to collude in condoning such deviation, etc., were absent. In fact, the range of government assistance in the form of subsidies, access to rationed credits and foreign exchanges, tax exemptions and so on was provided to exporters in many

⁷³ According to the World Bank (1993), the management of the miracle economies was similar to a contest-based competition, where for well-defined "prizes," firms collaborated with each other where collaboration was needed for sharing information and promoting interdependent investments and competed with each other where competition was needed.

⁷⁴ However, some authors have branded Japan's democracy as "semi-authoritarian" (see Richardson 1997).

⁷⁵ In many other parts of the developing world, selection to work in the bureaucracy is often more a matter of political patronage than of individual merit. This is particularly true in many parts of Latin America and Africa.

developing countries—But such assistance did not result in export performance similar to that of the miracle economies. The point is that without a deeper political-economy analysis to back it up, in particular whether or not an authoritarian framework committed to development is at the root of the impartiality of the referees, the three R's (Rules, Referees, Reward) are no more than catchy slogans. Indeed, why the authoritarian leaders of the miracle economies seemed to have been committed to development, while those of Nigeria, Philippines, and Zaire were apparently not, needs to be analyzed (p. 30).

In short, we still have much to learn about how the miracle economies achieved their bureaucratic insulation and ensured the efficiency of their bureaucracies.

5.4. Nature of Governance

The nature of governance has a critical bearing on economic development. A well-governed economy that secures individual property rights, ensures the rule of law, contains the extractive behavior of the government, and offers a credible policy framework is more likely to succeed than one that fails to obtain such conditions. There are many distinct dimensions of good governance. This section focuses on four such dimensions that were salient in the miracle economies.

5.4.1. Credible Policy

Some authors have suggested that an economy's success depends to a large extent on its ability to credibly pre-commit to policy (and to avoid any time inconsistency problem). The ability to pre-commit to policy depends on the nature of the state, that is, whether it is a “strong” or a “weak” state. A strong state is said to be an autonomous state. The autonomy of a state has been defined by the degree to which it can formulate and pursue its goals without being encumbered by the demands and interests of special interest groups or social classes. Some economists have stated this distinction more formally in terms of the metaphors of game theory. According to Rodrik (1997), rulers in strong states are Stackelberg leaders: they commit themselves to a particular policy, based on their welfare-maximizing calculus, and taking into account the reaction of private actors to the policy. In contrast, rulers in a weak state are Stackelberg followers: they cannot commit to a particular policy, but merely react to the independent actions of private actors like special interest groups. Thus compared to the strong state, the weak state will have few abilities to pre-commit and make too many undesirable interventions.⁷⁶ In the words of Haggard (1994): “Strong states [are] a crucial prerequisite for reform, important not only in guaranteeing the relative efficiency of interventions at the microeconomic level—but for the coherence of economic policy more generally” (p. 83).

⁷⁶ A fairly large political science literature is available on this topic. According to a well-known study by Migdal (1988), the principal distinction between weak and strong state lies in rulers' inability to govern effectively and pursue a broad political and social agenda as they remain engaged in brokering conflicting demands from interest groups.

Some authors have suggested that the miracle economies are exemplars of strong states. One can find a number of successful examples of pre-commitment to policy under the authoritarian regimes of the miracle economies in the area of infant industry protection, particularly in Korea and Taipei, China.⁷⁷ The governments in these economies held steadfastly to their commitment to withdraw protection after a pre-announced date. Proponents of this view suggest that this pre-commitment to policy was critical to inducing the protected industries to shape up to international competition. While democracy may be helpful, it is not necessary for establishing the credibility of commitment. Indeed, as democracy spreads to these economies, the evidence indicates that their governments' ability to commit and their resolve to stick to prior commitments have become weaker.

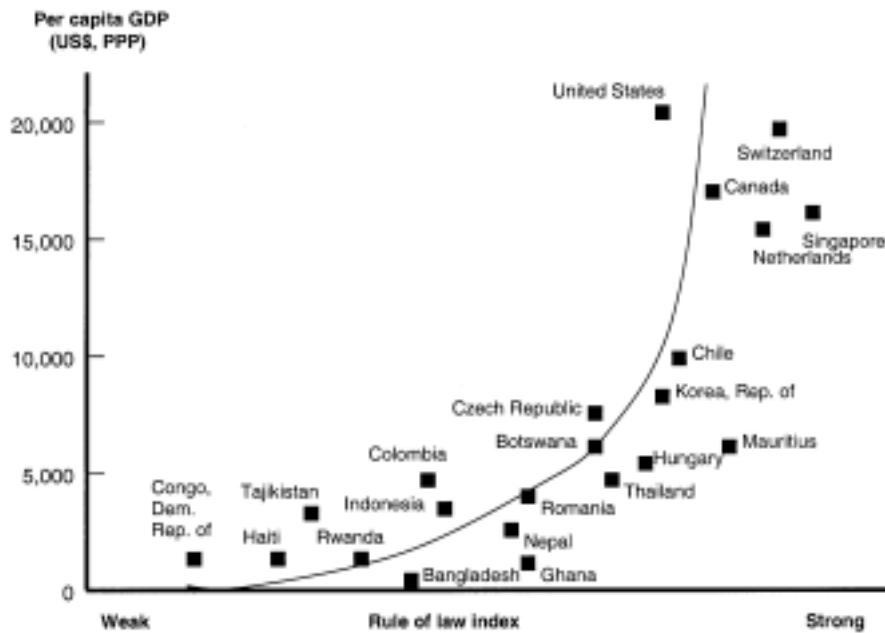
5.4.2. Rule of Law

In simple terms the rule of law refers to a society's adherence to its existing rules and regulations. This implies a legal system where laws are public knowledge, are clear in meaning, and are applied equally without any arbitrariness. It also implies that the government is embedded in a legal framework that constrains arbitrary actions on its part. The precondition for establishing the rule of law is a strong judicial system that is fair, competent, and efficient and not subject to political manipulation.

The rule of law has important implications for economic development. To sustain economic growth, one needs not only the freedom of personal economic choice and the freedom of exchange and production, but also such basic market institutions as property rights and contracts, which need to be founded on the law. Similarly, major economic organizations, such as firms, trade unions, and banks, cannot function without the rule of law. Similarly, the government cannot carry out its role as economic regulator, tax collector, monetary policymakers, and so on efficiently and fairly without a legal framework. The empirical literature suggests that the rule of law has a profound impact on economic growth. According to a study by Kaufmann, Kraay, and Zoido-Lobaton (2000) of 166 countries in 1997–98, a strong positive correlation exists between per capita GDP and the rule of law (figure 5-1).

⁷⁷ Some have suggested that credible and effective pre-commitment requires democracy. According to this argument, a ruler's promise is more credible if a well-established procedure exists for dethroning the ruler for reneging on a promise.

Figure 5-1. Relationship between the Rule of Law and Per Capita GDP, Selected Economies, 1997–98



PPP Purchasing power parity.

Source: Kaufmann, Kraay, and Zoido-Lobaton (2000).

The miracle economies did a good job of upholding the rule of law in the economy (although in a fundamental sense they lacked the rule of law in the political arena). The miracle economies have a good record of defining and enforcing property rights.⁷⁸ As Bardhan (1999) rightly noted, over the last three decades, the ruling family in Indonesia and the government in Taipei, China have provided the predictable and durable contractual environment that private business needs to thrive without the procedural formalities of a democracy. By contrast, despite the existence of an admirable legal and contractual infrastructure, in some democracies the courts and the administrative arbitration machinery were largely ineffective and offered little legal protection to contracts and property. It is highly likely that business people would find their connection with a durable politician in an authoritarian regime more valuable than the ineffective legal infrastructure of a democracy.

Nevertheless, while many presume that democracy provides a better institutional framework for securing property rights, many others disagree with that view. In the words of Przeworski and Limongi (1993): “The idea that democracy protects property rights is a recent invention, and we think it is a far-fetched one” (p. 52). They argue that

⁷⁸ Acemoglu, Johnson, and Robinson (2001) attributed the principal reason for the success of Botswana, the African miracle, to good institutions, particularly its effective property rights systems against state appropriation and predation by private agencies. Given the country’s relative political stability, it was able to maintain the continuity of property rights and effective constraints on rulers and political elites to limit arbitrary and extractive behavior.

in a democracy where most people are poor, the property rights of the rich may always be threatened, as the poor, who suffer as a consequence of private property, will use their power to vote to appropriate the wealth of the rich. In this regard, Bardhan (1999) contends that while democracy may be ideologically more hospitable to the rule of law, what is really important for business to thrive is predictability rather than legal accountability. In the past, many authoritarian regimes were more successful than democracies at providing a framework for predictable contracts.

While a democracy may uphold the rule of law, not all enacted laws are conducive to development.⁷⁹ Even in the industrial countries the legislative process is subject to enormous interest group pressures. In many countries, because elections have become enormously expensive, this problem of influence peddling has worsened over time. Given the disproportionately large influence of campaign contributors in many democracies, legislative outcomes are often determined by influence bought by campaign contributions rather than by the imperatives of development priorities. Consequently, in the list of priorities, development projects often get short shrift in a democracy. If the allocated funds are badly managed or the laws are inimical to development, whether the legislated policies are implemented efficiently by an insulated bureaucracy or adjudicated in a neutral court system in a democracy is unimportant.

5.4.3. Limited and Centralized Corruption

Many claim that the miracle economies were largely free from bureaucratic corruption because of the insulation of their bureaucracies. While corruption existed, the nature of such corruption was different from that in other developing economies, in that it was essentially centralized in the form of lump sum payments to top politicians or to the highest echelon of the bureaucracy.

Shleifer and Vishny (1993) have suggested that centralized corruption has less adverse consequences for resource allocation than decentralized corruption. The underlying logic of their proposition can be stated in terms of the “industrial organization” of corruption. Consider an example of centralized corruption, where to secure an import license the importer must pay a high-ranking functionary in the ministry of trade who has monopoly power over a set of complementary services. By contrast, in the case of decentralized corruption, the importer must pay a large number of low-ranking officials in different ministries who are involved in processing the import papers. For the importer, a centralized bribe is considerably less trouble than a decentralized bribe. The difficulties increase as the number of bribe takers in the chain increase. Shleifer and Vishny argue that where corruption is decentralized and bribe takers have monopoly power over a gamut of complementary services—such as foreign exchange licenses and import permits—then corruption becomes analogous to the double marginalization problem in industrial organization theory.⁸⁰ In the double marginalization problem, monopoly distortions are magnified with the addition of each

⁷⁹ There is no agreement on whether democracy does uphold the rule of law. In a recent quantitative study, Barro (1995) could not find any statistical association between democracy and the maintenance of the rule of law.

⁸⁰ If the services provided are not complements, but substitutes, for example, passports issued by a number of competitive agencies, then decentralization and the presence of multiple agencies would reduce corruption.

extra element of distortion. If corruption is centralized, the high-ranking official internalizes all the costs of distortion at a much lower cost to the importer and to the economy.

5.4.4. Accountability

Democracy has its own accountability mechanism that limits the abuse of executive power. This accountability works through a system of periodic elections that reward and punish elected officials for their successes and failures in managing the economy. While elections can be a potentially powerful incentive mechanism for development, the success of democracy in fostering rapid development is at best mixed. In poorer countries, this incentive has been more potent in averting major economic disasters than in addressing the continuing problem of persistent poverty. This problem has been eloquently expressed by Bardhan (1999), who noted that “in a democracy it seems easier to focus political attention to dramatic disturbances in a low-level equilibrium, than to the lowness of the level itself.” Comparing the PRC and India, Sen (1983) concludes that democratic India, with its free press and vigorous opposition parties, has been more successful than the PRC in averting sporadic threats of famine and consequent deaths from starvation, but less successful in addressing endemic hunger and malnutrition.

No strict functional relationship exists between local-level accountability and the nature of the political regime at the national level. While some democracies have done a poor job of fostering local-level participation and ensuring local accountability, some authoritarian regimes have fared well in creating participatory institutions at the local level. In this connection, Wade (1997) highlighted some interesting contrasts between authoritarian Korea and democratic India in the modes of operation of their irrigation systems. He found Korea to be more locally decentralized and effective than India in responding to farmers’ needs. In India the irrigation system is large and the bureaucracy is overly centralized and operates according to rules that minimize identification between irrigation officials and local farmers. By contrast, Korea’s bureaucracy is largely decentralized, with operations and maintenance activities essentially delegated to local farmers’ associations, which are knowledgeable about local conditions and responsive to local needs.

Similarly, a comparative study of the primary education system in the PRC and India (Dreze and Saran 1997), which focused on the experiences of two villages, found that the PRC is more successful than India in the provision of primary education because the PRC has better institutions of local accountability than India. The Indian village had no village government that could supervise the district administration. Moreover, the village’s caste-ridden politics precluded any possibility of collective action to improve the school. In contrast, the Chinese village had an effective village government as well as a party organization that monitored the functioning of the school.

5.5. Concluding Remarks

The discussion in this chapter highlights a critical factor behind the economic and social transformation of the miracle economies, that is, their good economic governance, an

outcome of a number of favorable legal and political institutions. An interesting puzzle in this context is how these countries could foster such favorable institutions while other countries in similar circumstances could not. The answer to this puzzle belongs to the domain of political economy. The political-economic factors were so important that Stiglitz (1996) went so far as to state:

The real miracle of East Asia may be political rather than economic: why did governments undertake these policies? Why did politicians or bureaucrats not subvert them for their own self-interest? Even here, the East Asian experience has many lessons, particularly the use of incentives and organizational design within the public sector to enhance efficiency and to reduce the likelihood of corruption. The recognition of institutional and individual fallibility gave rise to a flexibility and responsiveness that, in the end, must lie at the root of the sustained success (pp. 174).

We know relatively little about the political-economic determinants of good governance, nor is the existing literature much help in providing useful policy. La Porta and others (1999) considered the determinants of the quality of governance, including the protection of property rights, the quality of public goods provision, the efficiency of the public sector, the size of the government, and the extent of political freedom. They regressed each of these determinants using cross-country data on several historical, geographic, and cultural characteristics of these selected countries. The resulting message was highly pessimistic: “Countries that are poor, close to the equator, ethno linguistically heterogeneous, use French or socialist laws or have high proportions of Catholics or Muslims exhibit inferior government performance” (p. 2). Given that most of the characteristics that lead to poor governance are not amenable to manipulation by reformers, a vicious circle of poverty and poor governance may emerge.⁸¹

6. India: Data Conundrum and Conflicting Trends in Poverty Reduction

Can we learn any special lesson from India’s experience of poverty when compared with the experience of the miracle economies?⁸² The answer to this question requires a closer look at the Indian picture.

Two sets of private consumption data are available for India: one from household surveys and the other from national accounts. These two sets of data diverged marginally from each other in the 1950s and 1960s, rarely by more than 5 percent, but now diverge enormously. The ratio of per capita consumption expenditure from India’s national sample survey (NSS) and national accounts (NAS) fell from 75 percent in 1974 to 50 percent in 1998 (figure 6-1). This divergence can be traced to such factors as the limited survey coverage, a deterioration in the methods of data collection, and a lack of responsiveness on the part of those surveyed.

Whatever the underlying reason for this divergence, it has serious implications for poverty estimates. As figure 6-2 shows, the trends in estimated poverty differ radically depending on whether NSS or NAS estimates are used.⁸³ The NSS estimates

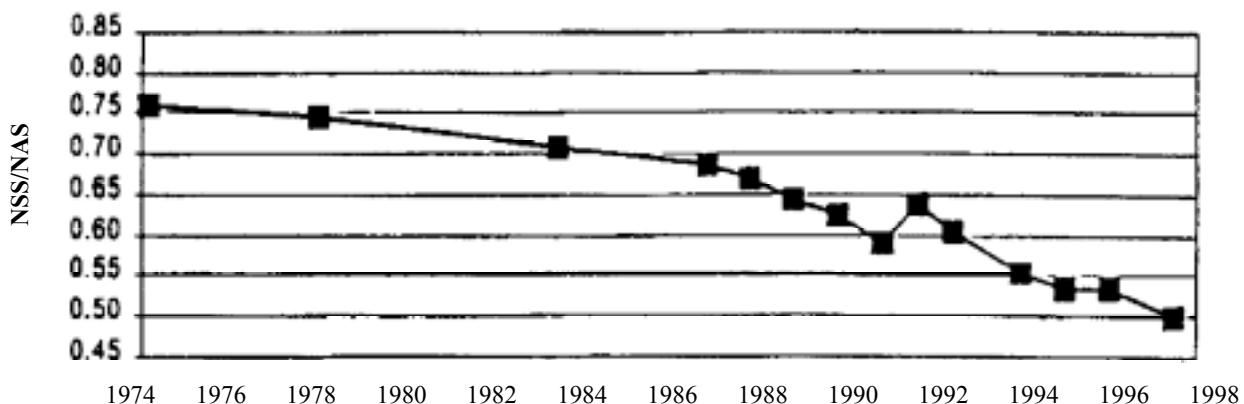
⁸¹ Similarly, Banerjee (1997) found that the problem of misgovernance is exacerbated at low levels of development and in bureaucracies that deal with the poor.

⁸² This chapter draws on Srinivasan (2001) available on: www.adbi.org/PDF/wp/WP17.pdf

⁸³ The difference in mechanics between the two estimates is as follows. The NSS poverty estimates use NSS data for both the mean and distribution of consumption expenditure, while the NAS estimates use

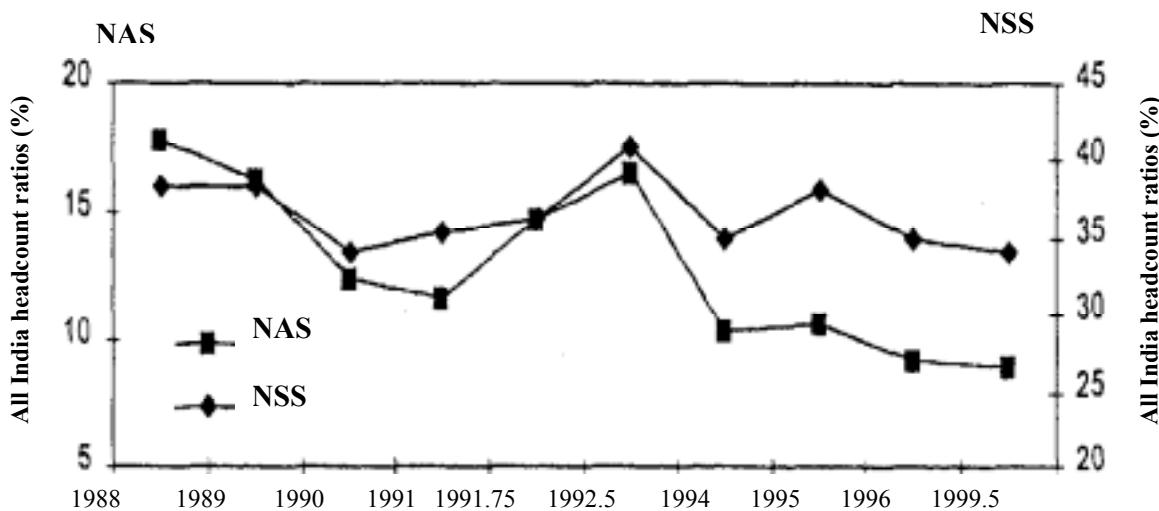
show no change in poverty as a result of the reforms in the 1990s, while the NAS estimates show that poverty declined.⁸⁴

Figure 6-1. Ratio of NSS to NAS Per Capita Consumption, India, 1974–98



Source: World Bank (2000c).

Figure 6-2. Poverty in India Stagnated, or Did It?



Source: World Bank (2000c).

Some authors have rejected the lack of trend in poverty according to the NSS estimates by claiming that this is due largely to an underestimation of consumption by

the NSS mean and distribution, but adjust the survey consumption figure by the ratio of NAS to NSS mean consumption.

⁸⁴ Estimates by the Planning Commission of India (2001) suggested that with rapid growth, the decline in poverty accelerated during 1994–2000. The data from the most recent round of the NSS indicated that poverty in India has declined to about 26 percent.

the poor—and hence of poverty—in the surveys (Bhalla 2001). Others have expressed concerns about the accuracy of price deflators for rural areas, which do not reflect changing consumer preferences and the increasing monetization of the rural economy. As a consequence, they claim that rural poverty has been overestimated. Deaton and Tarozzi (1999) attempted to address this price deflator problem. They came up with an independent set of calculations for rural and urban price indexes using NSS data on expenditure patterns and unit values for commodities for 1987–88 and 1993–94 for India as a whole, for 17 of the largest states, and for the Union territory of Delhi. Based on their calculations, they suggested a working hypothesis that between 1987–88 and 1993–94 there was no significant difference in the rate of decline of urban and rural poverty, at least as far as the headcount measure was concerned.

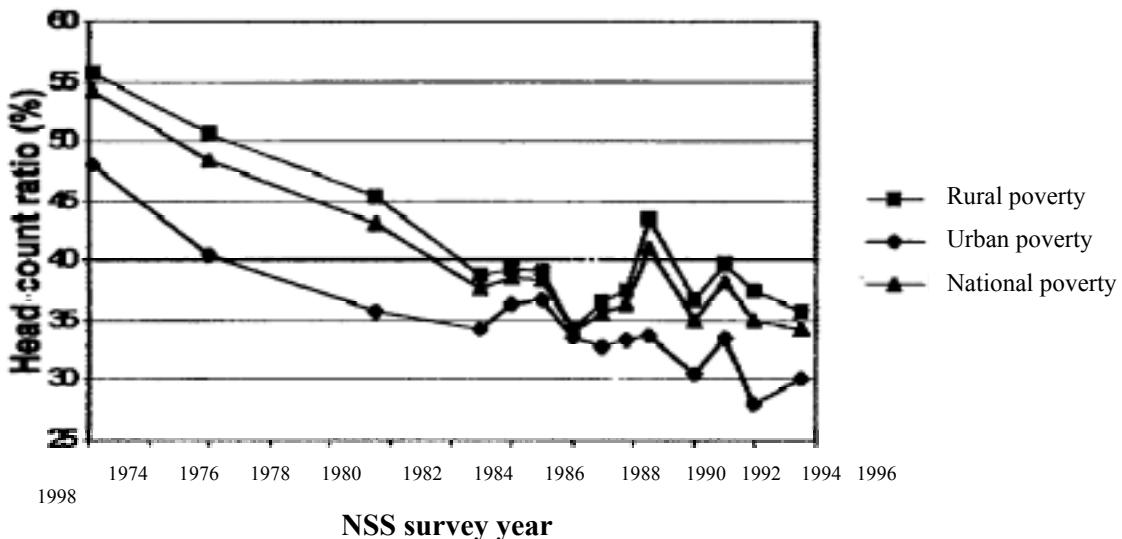
According to Srinivasan (2001):

The Indian data strongly support the association between growth and poverty reduction. If we ignore the growing divergence between estimates of aggregate consumption expenditure between national accounts and national sample survey, and use only the data from the sample survey, it is found that until the late seventies, the proportion of the country's population deemed poor did not show a declining trend. It fluctuated between a low of 43 percent in 1952 to a high of 62 percent in 1966-67. Then between 1977-1978 and 1990-1991, just prior to the introduction of systemic reforms of the economy following a severe economic crisis, the national poverty ratio declined significantly from 48 percent to 35 percent (pp. 17–18).

Between 1950 and 1985, India's GDP grew slowly at 3.5 percent per year, while the population grew by about 2.2 percent per year. Given this slow rate of growth in per capita income, the rate of decline in the incidence of poverty was also slow. During the later part of the 1980s, however, GDP growth accelerated to 5.8 percent and was accompanied by a sharp reduction in poverty. In 1991 the country undertook a set of reforms, including macroeconomic stabilization measures. At the same time, because of poor weather conditions, agricultural output fell. This combination of stabilization measures and bad weather led to a stagnation of growth in 1991–92, and the incidence of poverty rose to 41 percent. Since then agricultural output has resumed, and growth during the 1990s averaged more than 6 percent per year, one of the highest levels among the developing countries. Yet despite the systemic reforms and accelerated income growth, no further significant decline in the headcount ratio is discernible. The apparent lack of trend in poverty largely reflects the absence of such a trend in rural poverty (most of India's population is rural) (figure 6-3).⁸⁵

⁸⁵ Given the almost universal association between growth and poverty reduction, one has to explain the failure of poverty as measured by the NSS to decline in the mid-1990s (as well as in the 1980s). As the World Bank (2000b) has rightly emphasized, the important conclusion one can draw from these discrepancies is that “India’s statistical architecture, once a model for other developing countries, needs more consistency checks” (p. 16).

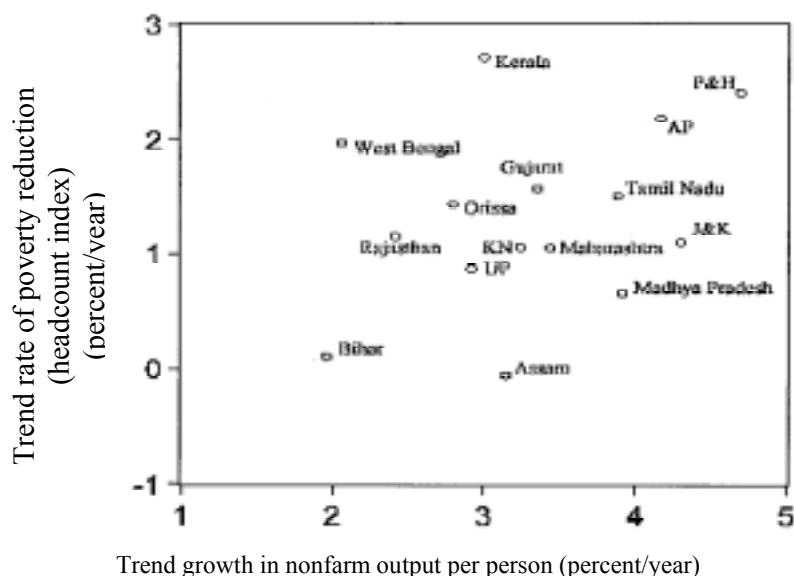
Figure 6-3. National, Rural, and Urban Poverty, India, 1973–97



Note: The markers along the three lines correspond to the mid-points of the survey periods, while the years on the horizontal axis are calendar years.

Source: Datt (1999).

Figure 6-4. Trend Rates of Poverty Reduction and Nonfarm Output Economic Growth, Selected Indian States, 1960–94



AP Andhra Pradesh.
KN Karnataka.
J&K Jammu and Kashmir.
P&H Punjab and Haryana.
UP Uttar Pradesh.

Note: Trend rates of growth estimated by ordinary least squares regression of the logarithms on time.
Source: Ravallion and Datt (1999).

A distinct divergence is apparent in the trends in rural poverty between two groups of states in the postreform period (figure 6-4). One group includes the states of Andhra Pradesh, Gujarat, Karnataka, Kerala, Maharashtra, West Bengal, and Punjab, and the other includes the states of Bihar, Madhya Pradesh, Orissa, Rajasthan, and Uttar Pradesh. In the first group, poverty continued to decline in the postreform period, although at a slower pace than earlier, but no such decline was evident in the second group. In addition to its greater poverty, the second group of states has higher illiteracy rates, particularly among females; higher infant mortality rates; larger school dropout rates, and so on. These states are also more rural and agricultural. In the first group, all the states except Punjab are coastal, while in the second all the states are inland. All these factors seem to suggest that the second group is relatively disadvantaged in exploiting the opportunities created by the reforms.

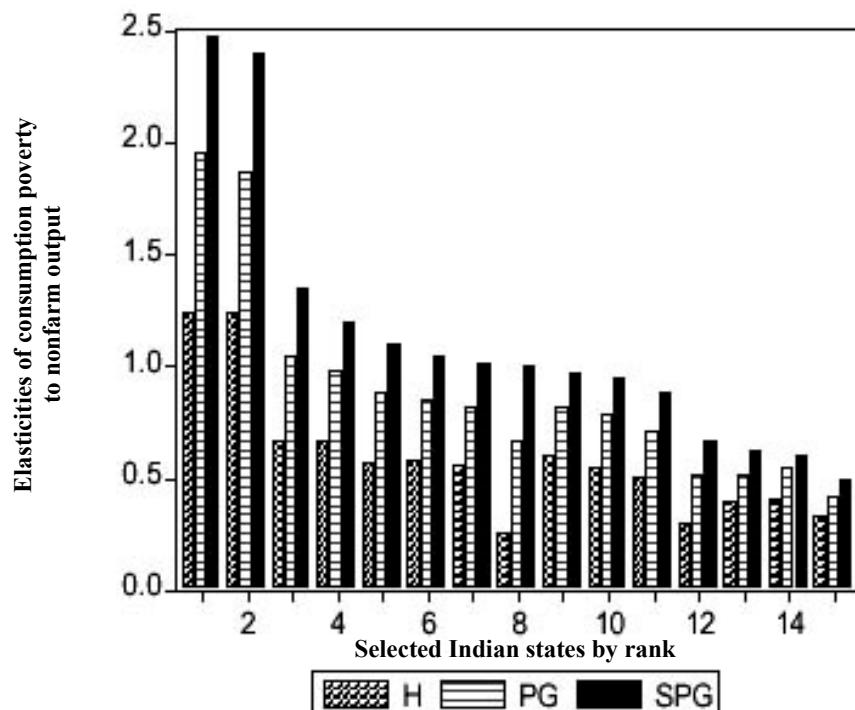
In a series of papers, Datt (1999), Datt and Ravallion (1992, 1997, 1998a, b), and Ravallion and Datt (1996a,b; 1999) have analyzed the trends and determinants of poverty. A number of conclusions seem to emerge from these studies. First, a close relationship exists between growth and poverty reduction: a 1 percent increase in net domestic product is accompanied by a 1 percent decrease in poverty.⁸⁶ Second, the sectoral composition of growth matters. The aggregate measure of poverty responds more favorably to rural economic growth than to urban economic growth.⁸⁷ Third, the decomposition of changes in the poverty ratio into a growth component and a redistribution component shows that the largest segment (nearly 87 percent) is explained by growth. Fourth, long-run differences between states in the rates of poverty reduction can be largely accounted for by differences in initial conditions related to rural development and human resources.

In their most recent paper, Ravallion and Datt (1999) allow for mutual interactions of the sectoral composition of growth with initial conditions when determining the evolution of state-level poverty. While they found that growth was generally important for poverty reduction, nonfarm economic growth was less effective in reducing poverty in states with poor initial conditions in terms of rural development and human resources. They found that the prospects of the poor participating in nonfarm growth are dimmed by such factors as low farm productivity, low rural living standards relative to urban areas, and poor basic education. Rural and human resource development are strongly correlated with poverty reduction though an expanding nonfarm economy. Among the initial conditions that affect poverty significantly, initial literacy is particularly notable. For example, more than 50 percent of the differences in the elasticity of the headcount index of poverty to nonfarm output for Bihar (the state with the lowest elasticity) and Kerala (the state with the highest elasticity) can be traced to the latter's substantially higher initial literacy rate (figure 6-5).

⁸⁶ This relationship has been further confirmed by the 2000 NSS data, which show a rapid decline in the poverty rate since 1997.

⁸⁷ This result is likely to be highly specific to India. As the authors concentrated on one country, they could not explore the impact of trade and industrial policies, which generally have significant implications for employment and poverty reduction. Moreover, as the experience of the miracle economies suggests, light manufacturing industries were the main engine of growth and poverty reduction (ADB 1997).

Figure 6-5. Elasticities of Consumption Poverty to Nonfarm Output, India 1960-94



H Headcount index.

PG Poverty gap index.

SPG Squared poverty gap index.

Note: States ranked by elasticity for the squared poverty gap index: 1 = Kerala, 2 = West Bengal 3 = Orissa, 4 = Rajasthan, 5 = Gujarat, 6 = Andhra Pradesh, 7 = Karnataka, 8 = Bihar, 9 = Punjab and Haryana, 10 = Tamil Nadu, 11 = Uttar Pradesh, 12 = Madhya Pradesh, 13 = Assam, 14 = Maharashtra, 15 = Jammu and Kashmir.

Source: Ravallion and Datt (1999).

Despite the data conundrum, India's experience seems to confirm the primacy of growth as an instrument of poverty reduction, a fact borne out by the experiences of other developing countries. Growth, irrespective of its source, helps the poor.⁸⁸ However, poverty in India seems to respond more to rural growth than to urban growth, perhaps because most poor people are located in rural areas and many might not have the minimum education or skills required for urban manufacturing jobs. Alternatively, and perhaps more plausibly, it may reflect the adverse effects of trade, industry, and labor market policies that continued to constrict vigorous expansion of manufacturing

⁸⁸ The microeconomic studies from India confirm this. In their study of the north Indian village of Palanpur, Lanjouw and Stern (1998) found that the poverty situation improved with growth that created increased employment opportunities for the villagers. Some of these opportunities stemmed from agriculture, brought about by the advent of new seed and fertilizer technology, and some from nonagricultural sources in neighboring towns that became accessible with improved rural infrastructure for commuting.

employment, which was the main engine of growth and poverty reduction in the miracle economies.

7. Concluding Remarks

Presenting the findings and arguments in the preceding sections in the form of a short summary is difficult. However, at the cost of some oversimplification, the following empirical regularities as well as salient lessons for poverty reduction and social transformation have been culled from this review of the miracle economies.

First, there is a robust association between sustained growth and poverty reduction, an association that seems to have a much wider validity beyond this small set of economies. The main instrument of poverty reduction in the miracle economies was robust growth and not efforts at income or asset distribution, including land reform. Such efforts might have helped, but did not play a central role in the economic transformation process.

Second, there is no robust correlation between inequality and aggregate growth. Inequality, which is often ingrained in the structure of an economy, has remained largely invariant to the process of economic growth. Indeed, some of the miracle economies have even suffered some deterioration in income distribution.

Third, the most important proximate cause of the miraculous transformation of the East Asian economies was rapid capital accumulation, a process that was nurtured and sustained by a combination of market-oriented policies and institutions. This combination of policies and institutions emphasized, on the one hand, the openness of these economies to the external world, and on the other hand, a domestic economic environment conducive to production. Their openness allowed these economies to tap into the virtually unlimited international trading opportunities in the world economy and to access new technology. The domestic economic environment, which was underpinned by a combination of macroeconomic stability, labor market flexibility, and good economic governance, harnessed by conducive legal and political institutions, encouraged production (over rent-seeking), high investment, and efficient use of investible resources. Rapid growth, which was nurtured by a commensurate increase in employment, led to quick dissolution of the poverty problem.

Fourth, initial conditions, such as low initial inequality of income and assets, high initial educational attainment, and dynamic agriculture sectors, were not common to all the miracle economies. To the extent these factors existed, they may have helped growth and poverty reduction, but they were not the forces that unleashed the economic dynamism of these economies.

Fifth, whether politically autocratic or not, the miracle economies provided an economic framework that allowed critical economic freedoms and a structure of market-supporting institutions needed for the economy to blossom. Without this framework, which this paper has termed constitutional liberalism—reflected in the enlightened policy instincts of the autocrats and the operational insulation of the bureaucracies—the economic miracle would not have been possible. The policy lesson from this, however, is not to make a transition from a democratic polity to an autocratic regime, but to create

an institutional framework for greater constitutional liberalism in otherwise illiberal democracies.⁸⁹

While these lessons are useful, one should keep in mind that policies and institutions cannot just be “cherry-picked” from one empirical context to another. Policies and institutions evolve and flourish in the context of societies, which have their own dynamics. The important thing to explore is the feasibility—economic, social, and political—of these policy and institutional changes and examine how much can be implemented and how much needs to be adjusted to respond to changed circumstances.

The future is not going to be a replay of the past. The internal and external environments within which the miracle economies operated and achieved their economic breakthrough have changed significantly in recent years. On the one hand, the policy autonomy the miracle economies enjoyed in their heyday is no longer available to aspiring miracle economies. An important instrument in this respect was the so-called industrial policy, which allowed a whole variety of incentives for industrial development and export promotion. However, the new World Trade Organization regime has significantly tightened multilateral rules on subsidies and related industrial policies for the developing countries. Export subsidies are largely prohibited, and trade-related investment measures that discriminate against imports have been outlawed (Hartel, Hoekman, and Martin 2000). Similarly, the advent of democracy and political pluralism constricts many programs and policies that were feasible under authoritarian regimes. For example, compared with most developing countries under democratic regimes today, the miracle economies had fewer labor market regulations and more flexibility. In addition, in a democracy the process of policy consultation, adoption, and execution involves many procedural formalities—and is therefore more time-consuming—than in an authoritarian regime. Given these and other changes, the developing countries have much less flexibility in policy formulation than before.

However, the revolutionary changes in information and communications technology have opened up new economic opportunities for developing countries (Quibria and Tschang 2001). This technology has the potential of integrating world labor markets more smoothly and more rapidly than was thought possible in the past. This undoubtedly expands the range of economic options for poor countries to improve their economies and reduce poverty.

⁸⁹ The dilemma involved here has been lucidly expressed by Dasgupta (2000), who noted: “Good authoritarianism can’t be willed by citizens, bad authoritarianism regimes are hard to get rid of. A central problem with authoritarianism is lack of incentives for error-correction” (p. 32).

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