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Reading 01

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<http://documents.worldbank.org/curated/en/322361469672160172/pdf/123510v20PUB0r00Box371943B00PUBLIC0.pdf>

A World Bank Policy Research Report

The East Asian Miracle

Economic Growth
and Public Policy

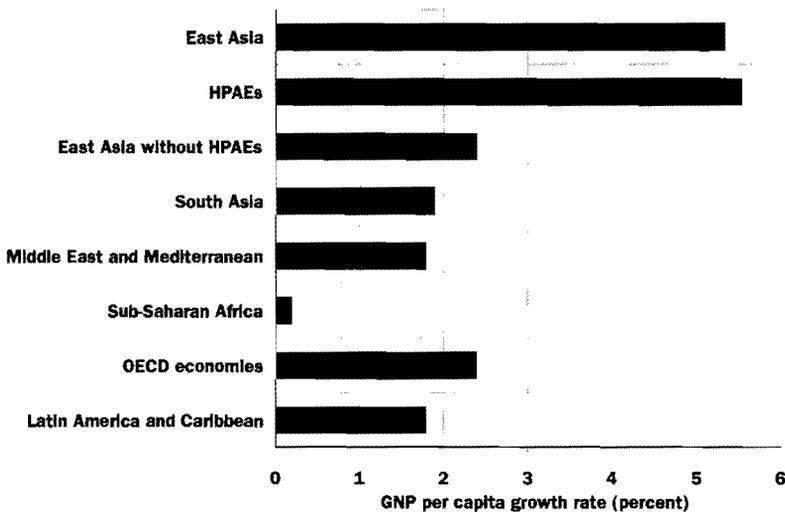
SUMMARY

The World Bank
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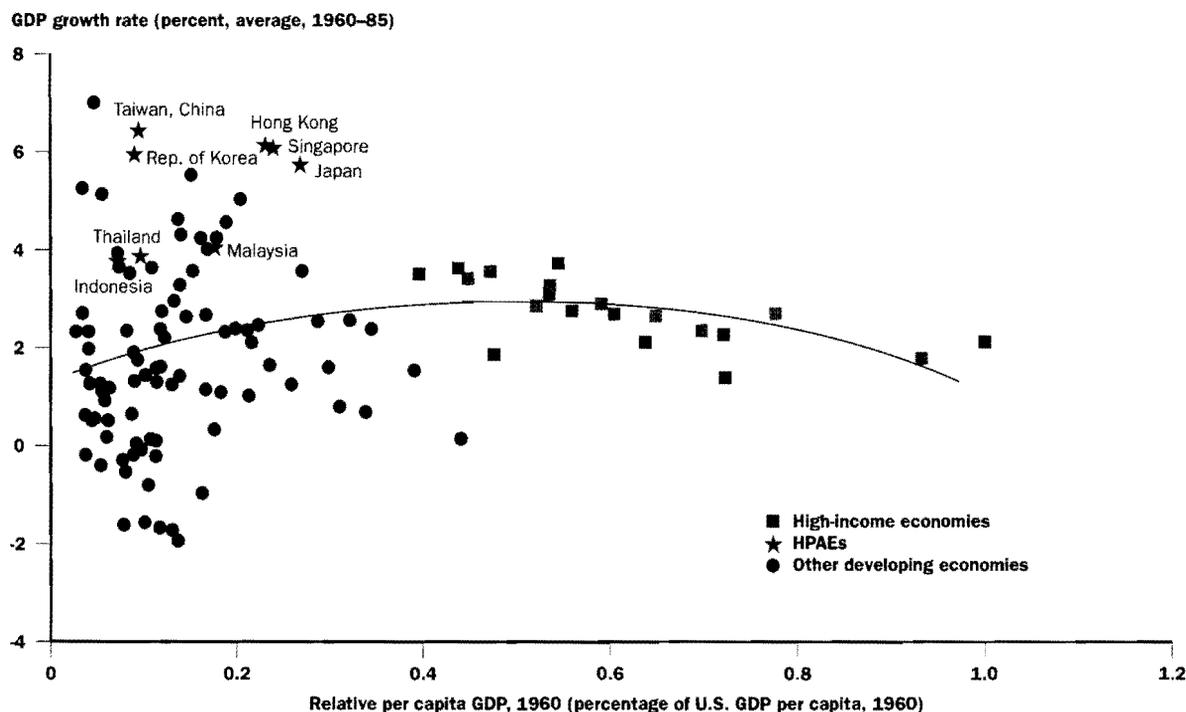
EAST ASIA HAS A REMARKABLE RECORD OF HIGH AND SUSTAINED economic growth. From 1965 to 1990 the twenty-three economies of East Asia grew faster than all other regions (see figure 1). Most of this achievement is attributable to seemingly miraculous growth in just eight economies: Japan; the "Four Tigers," Hong Kong, the Republic of Korea, Singapore, and Taiwan, China; and the three newly industrializing economies (NIEs) of Southeast Asia, Indonesia, Malaysia, and Thailand. Moreover, these eight economies have been unusually successful at sharing the fruits of growth. Compared with other developing economies, they have had lower and declining levels of inequality. Rapid growth and improving equity are the defining characteristics of the East Asian miracle and the eight high-performing East Asian economies (HPAEs) that are the subject of our study.*

The unusual nature of the HPAEs' rapid per capita income growth is strikingly evident in figure 2. While there is tremendous variation in the economies plotted, on the whole developing economies have not been

Figure 1 Average Growth of GNP per Capita, 1965-90



*Recently China, particularly southern China, has recorded remarkably high growth rates using policies that in some ways resemble the HPAEs. This very significant development is beyond the scope of our study, mainly because China's ownership structure, methods of corporate and civil governance and reliance on markets are so different from the HPAEs, and in such rapid flux, that cross-economy comparison is problematic. We touch on China's recent development in Chapter 3 of *The East Asian Miracle*.

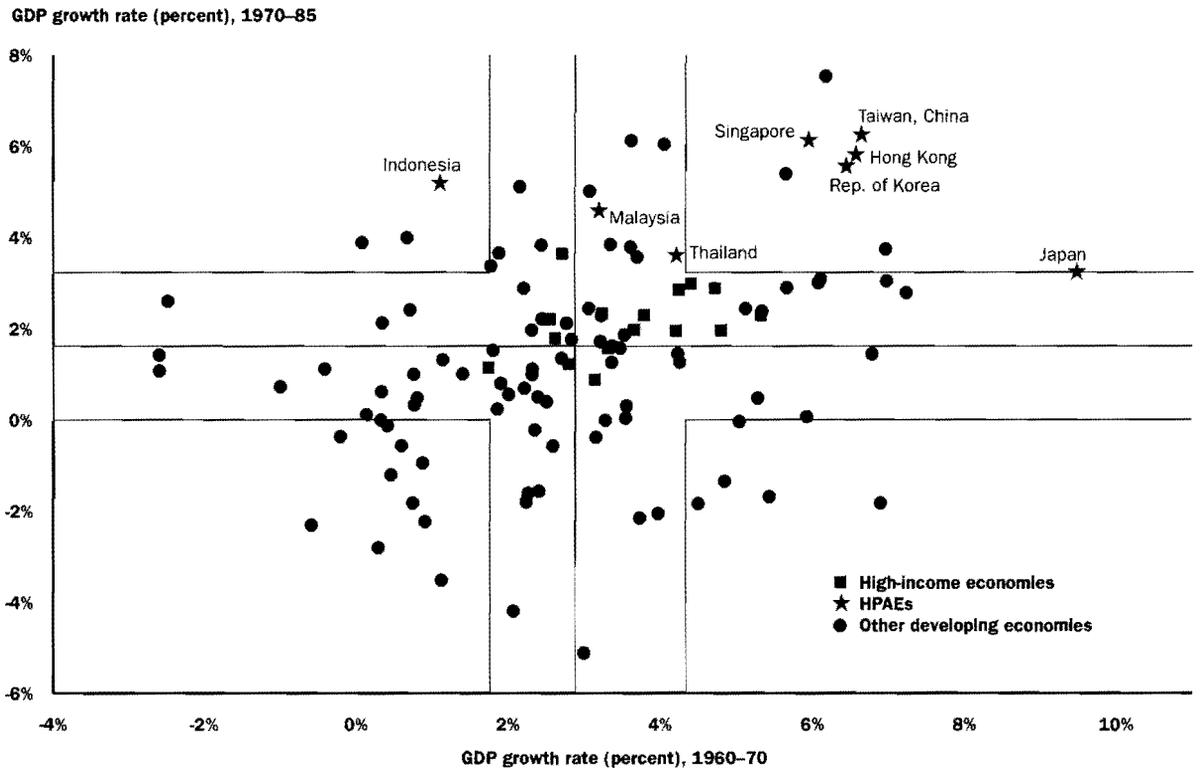
Figure 2 GDP Growth Rate, 1960–85, and GDP Per Capita Level, 1960

Note: This figure plots this regression equation: $GDPG = 0.013 + 0.062RGDP60 - 0.061RGDP60^2$. $N = 119$; $\bar{R}^2 = 0.036$
 (0.004) (0.027) (0.033)

catching up with the advanced economies since 1960; more than 70 percent of them grew more slowly than the average for the economies that belong to the Organization for Economic Cooperation and Development (OECD). More disturbingly, in thirteen developing economies, per capita income actually fell. Growth among the eight HPAEs is quite different. Their growth rates are significantly above the OECD average. Unlike most of the rest of the developing world, the developing HPAEs have been catching up to the advanced economies.

Other developing economies have grown fast for a few years, particularly before the 1980s, but few others have sustained high growth rates over three decades. Figure 3 shows the growth rates in per capita income for 118 economies in two periods, 1960–70 and 1970–85. The eleven that achieved rapid growth during both periods are in the northeast corner. Of these, five are East Asian success stories—Hong Kong, Japan, Korea, Singapore, and Taiwan, China. The other three HPAEs—Indonesia, Malaysia, and Thailand—all show accelerating growth, with higher growth rates in the second period than in the first. If growth were ran-

Figure 3 Growth Rate Persistence



Note: Boxes are seventy-fifth percentile of growth rates in each period.

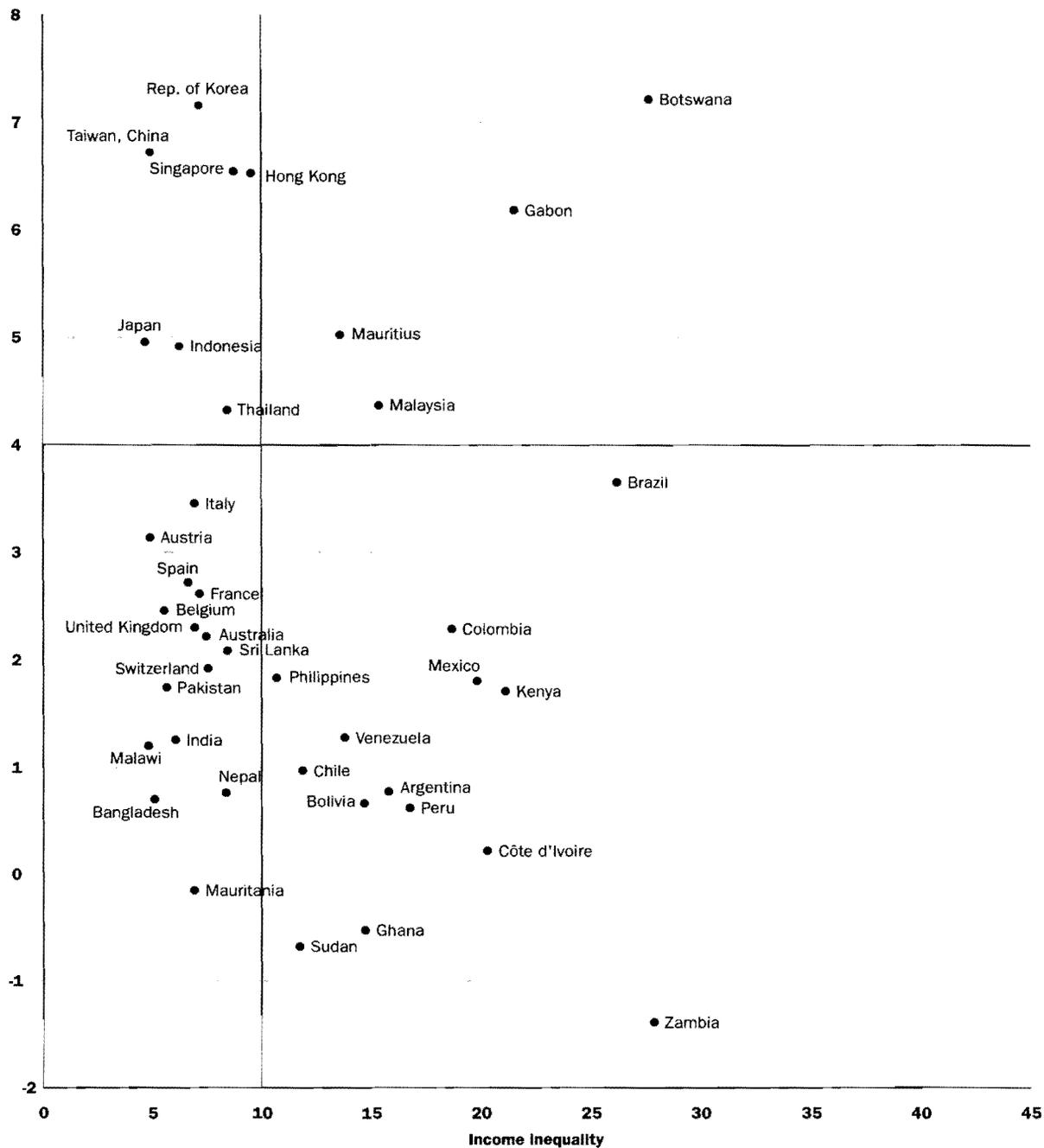
domly distributed, there is roughly one chance in 10,000 that success would be so regionally concentrated.

The HPAEs' low and declining levels of inequality are also a remarkable exception to historical experience and contemporary evidence in other regions. The positive association between growth and improving equity in the HPAEs, and the contrast with other economies, is illustrated in figure 4. Forty economies are ranked by the ratio of the income share of the richest fifth of the population to the income share of the poorest fifth and per capita real GDP growth during 1965-90. The northwest corner of the figure identifies economies with high growth (GDP per capita greater than 4.0 percent) and low relative inequality (ratio of the income share of the top quintile to that of the bottom quintile less than 10). All of the high growth, low inequality economies are in East Asia. Seven are HPAEs; only Malaysia, which has an index of inequality above 15, is excluded, while China enters. For the eight HPAEs, rapid growth and declining inequality have been shared virtues.

As the result of rapid shared growth, human welfare has improved dramatically (see table 1). In the HPAEs, the proportion of people living in

Figure 4 Income Inequality and Growth of GDP, 1965–89

GDP growth per capita (percent)



Note: Income inequality is measured by the ratio of the income shares of the richest 20 percent and the poorest 20 percent of the population.

poverty dropped sharply—for example, from 58 percent in 1972 to 17 percent in 1982 in Indonesia, and from 37 percent in 1973 to less than 15 percent in Malaysia in 1987. Absolute poverty also declined in other developing economies since the early 1970s, but much less steeply, from 54 to 43 percent in India and from 50 to 21 percent in Brazil. A host of other social and economic indicators, from education to appliance ownership, have also improved rapidly in the HPAEs, and now are at levels that sometimes surpass those in industrial economies.

Understanding East Asia's Success

WHAT CAUSED EAST ASIA'S SUCCESS? SUPERIOR ACCUMULATION accounted for most of the growth in the HPAEs. Private domestic investment, combined with rapidly growing human capital, were the principal engines of growth. High levels of domestic finan-

Table 1 Changes in Selected Indicators of Poverty

<i>Economy</i>	<i>Year</i>	<i>Percentage of population below the poverty line</i>			<i>Number of poor (millions)</i>		
		<i>First year</i>	<i>Last year</i>	<i>Change</i>	<i>First year</i>	<i>Last year</i>	<i>Percent change</i>
<i>HPAEs</i>							
Indonesia	1972–82	58	17	-41	67.9	30.0	-56
Malaysia ^a	1973–87	37	14	-23	4.1	2.2	-46
Singapore	1972–82	31	10	-21	0.7	0.2	-71
Thailand ^{a,b}	1962–86	59	26	-30	16.7	13.6	-18
<i>Others</i>							
Brazil ^{a,b}	1960–80	50	21	-29	36.1	25.4	29.6
Colombia	1971–88	41	25	-16	8.9	7.5	-15.7
Costa Rica ^a	1971–86	45	24	-19	0.8	0.6	-25
Côte d'Ivoire	1985–86	30	31	1	3.1	3.3	6.4
India	1972–83	54	43	-9	311.4	315.0	1
Morocco	1970–84	43	34	-9	6.6	7.4	12
Pakistan	1962–84	54	23	-31	26.5	21.3	-19
Sri Lanka ^a	1963–82	37	27	-10	3.9	4.1	5

Note: This table uses economy-specific poverty lines. Official or commonly used poverty lines have been used when available. In other cases the poverty line has been set at 30 percent of mean income or expenditure. The range of poverty lines, expressed in terms of expenditure per household member and in terms of purchasing power parity (PPP) dollars, is approximately \$300–\$700 a year in 1985 except for Costa Rica (\$960), Malaysia (\$1,420), and Singapore (\$860). Unless otherwise indicated, the table is based on expenditure per household member.

a. Measures for these entries use income rather than expenditure.

b. Measures for these entries are by household rather than by household member.

cial savings sustained the HPAEs' high investment levels. Agriculture, while declining in relative importance, nonetheless experienced rapid growth. Manufactured exports grew extremely rapidly, facilitating the absorption of foreign technology. Population growth rates declined more rapidly in the HPAEs than in other parts of the developing world, leading to more rapid growth in per capita consumption and larger surpluses for reinvestment. In addition, and partly because of these factors, the HPAEs may have been better at allocating resources to high-return activities. Finally, the HPAEs have had unusually high productivity growth; change in total factor productivity, a key measure of productivity, is higher in the HPAEs than in most other developing economies.

While some of the HPAEs benefited from a head start in terms of the education and public administration systems, most of their growth resulted from getting the policy basics right. Macroeconomic management was unusually good, providing the stable environment essential for private investment. Policies to increase the integrity of the banking system, and to make it more accessible to nontraditional savers, increased the levels of financial savings. Education policies that focused on primary and secondary schooling generated rapid increases in labor force skills. Agricultural policies stressed productivity change and did not tax the rural economy excessively. Governments either actively encouraged family planning or, at the minimum, did not restrict family planning choices. Finally, all the HPAEs kept price distortions within reasonable bounds and were open to foreign ideas and technology, policies that, along with other fundamentals, facilitated efficient allocation and helped to set the stage for high productivity growth.

But these fundamental policies do not tell the entire story. In each of these economies the government also intervened to foster development, often systematically and through multiple channels. Policy interventions took many forms: targeted and subsidized credit to selected industries, low deposit rates and ceilings on borrowing rates to increase profits and retained earnings, protection of domestic import substitutes, subsidies to declining industries, the establishment and financial support of government banks, public investments in applied research, firm- and industry-specific export targets, development of export marketing institutions, and wide sharing of information between public and private sectors.

At least some of these interventions violate the dictum of establishing for the private sector a level playing field, a neutral incentives regime. Yet these strategies of selective promotion were closely associated with high rates of accumulation, generally efficient allocation and, in the fastest-growing economies, high rates of productivity growth. Were some selective interventions, in fact, good for growth?

In addressing this question we face a central methodological problem. Since we chose the HPAEs for their unusually rapid growth, we know before we begin analysis that their interventions did not inhibit growth. But it is very hard to establish statistical links between growth and a specific intervention, and even more difficult to establish causality. Because we cannot know what would have happened in the absence of a specific policy, we cannot prove conclusively whether interventions increased growth rates. Moreover, because the HPAEs differed from less successful economies both in their closer adherence to policy fundamentals and in the manner in which they implemented interventions, separating the relative impact of fundamentals and interventions is virtually impossible. Thus, in attempting to distinguish interventions that contributed to growth from those that were either growth neutral or harmful to growth we cannot offer a rigorous counterfactual scenario. Instead, we have had to rely on analytical and empirical tools to produce what Keynes would have called an "essay in persuasion."

Our judgment is that in a few economies, mainly in Northeast Asia, government interventions appear in some instances to have resulted in higher and more equal growth than otherwise would have occurred. However, the prerequisites for success were so rigorous that policymakers seeking to follow similar paths in other East Asian economies met with failure. Thus, the problem is not only to try to understand which policies contributed to growth with equity, but also to understand the institutional and economic circumstances which made them viable.

Circumstances, Public Policy, and Growth

GEOGRAPHY AND CULTURE CLEARLY HAVE BEEN IMPORTANT factors in East Asia's rapid growth. Ready access to common sea lanes and relative geographical proximity are the most obvious shared characteristics of the successful Asian economies. Intraregional economic relationships date back many centuries to China's relations with tribute states—the kingdoms that became Cambodia, Japan, Korea, Laos, Myanmar, and Viet Nam. To the south, Muslim traders sailed from India to Java, trading at points in between, for hundreds of years before the arrival of European ships. These traditional ties, reinforced in the nineteenth and twentieth centuries by surges of emigration, have fostered elements of a common trading culture, including two lingua francas, Bahasa and Hokein Chinese, that continue to be felt in the region today.

In our own century, cheap ocean transport and shared historical experiences further knit together a far-flung, culturally disparate region. Throughout Southeast Asia, ethnic Chinese with links to Hong Kong and Taiwan, China, and drawing on a common cultural heritage have been more and more active in intraregional trade and investment. Such links and geographical proximity probably facilitated attempts to emulate Japan's success: Korea borrowed Japanese techniques for building large trading companies and directing the structure of industry; Malaysia focused first on developing heavy industry and more recently on building business-government relationships; and Singapore used Japanese experience in penetrating foreign markets and shifting industry to knowledge-intensive branches. More broadly, Japan's example undoubtedly inspired policymakers throughout East Asia.

Finally, geographical proximity facilitated capital flows, particularly in the last decade, as Northeast Asian manufacturers of labor-intensive exports moved their factories south to take advantage of lower wages. Successive waves of investment, first from Japan and later from Hong Kong, Korea, Singapore, and Taiwan, China, have washed over Indonesia, Malaysia, and Thailand. The appreciation of the Japanese yen and U.S. restrictions on Japanese imports created rare opportunities for other East Asian producers to enter international markets. Producers of garments, shoes, television sets, automobiles and other products, first in Korea and Taiwan, China, and later in Southeast Asia, took advantage of these episodes to establish lucrative market positions. These capital flows were mostly encouraged by generally liberal treatment of foreign investment; where investment has been restricted, informal credit and information networks have helped investors to move capital relatively freely.

If geography, history, and culture were an adequate explanation for the HPAEs' success, other economies would have little to learn from East Asia's success stories. Fortunately, evidence suggests that this is not the case. Many HPAEs passed through periods of macroeconomic instability and low growth before making policy changes that launched them on a high-growth trajectory. Moreover, economies that are part of the same matrix of geography, culture, and history as the HPAEs but continue to follow different economic policies—the Democratic People's Republic of Korea and the Philippines are two widely divergent examples—have yet to share in the East Asian miracle. These facts suggest that policies rather than circumstances have been decisive.

Policy Explanations for Rapid Growth

Among the variety of policy explanations, two broad views have emerged. Adherents of the neoclassical view have stressed East Asia's suc-

cess in getting the basics right. Its proponents argue that the successful Asian economies have been better than others at providing a stable macroeconomic environment and a reliable legal framework to promote domestic and international competition. They also stress that the orientation of the HPAES toward international trade and the absence of price controls and other distortionary policies have led to low relative price distortions. Investments in people, education, and health are legitimate roles for government in the neoclassical framework, and its adherents stress the importance of human capital in the HPAES' success.

Adherents of the revisionist view have successfully shown that East Asia does not wholly conform to the neoclassical model. Industrial policy and interventions in financial markets, common in East Asia, are not easily reconciled with the neoclassical framework. Some policies in some economies are much more in accord with models of state-led development. Moreover, while the neoclassical model would explain growth with a standard set of relatively constant policies, the policy mixes used by East Asian economies were diverse and flexible. Revisionists argue that East Asian governments "led the market" in critical ways. In contrast to the neoclassical view, which acknowledges relatively few cases of market failure, revisionists contend that markets consistently fail to guide investment to industries that would generate the highest growth for the overall economy. In East Asia, the revisionists argue, governments remedied this by deliberately "getting the prices wrong," using incentives and subsidies to boost industries that would not otherwise have thrived.

While the revisionist school has provided valuable insights into the history, role, and extent of East Asian interventions, demonstrating convincingly the scope of government actions to promote industrial development in Japan, Korea, Singapore, and Taiwan, China, its proponents have not established that interventions, per se, accelerated growth. Moreover, some important government interventions in East Asia, such as Korea's promotion of heavy and chemical industries, have had little apparent impact on industrial structure. In other instances, such as Singapore's effort to squeeze out labor-intensive industries by boosting wages and Malaysia's heavy industry push, policies have clearly backfired. Thus neither view fully accounts for East Asia's phenomenal growth.

The market-friendly view set forth in *World Development Report 1991* expanded on the neoclassical view, describing how rapid growth has been associated with effective but carefully delimited government activism. According to the market-friendly view, governments should perform four functions of growth: ensure adequate investments in people, provide a competitive climate for private enterprise, keep the economy open to international trade, and maintain a stable macroeconomy. Beyond these

roles, governments are likely to do more harm than good. Based on an exhaustive review of the experience of developing economies during the past thirty years, *World Development Report 1991* concluded that governments generally have failed to improve economic performance by guiding resource allocations through means other than market mechanisms.

The market-friendly approach captures important aspects of East Asia's success. These economies are stable macroeconomically, have high shares of international trade in GDP, invest heavily in people, and have strong competition among firms. But these characteristics represent the outcomes of many different policy instruments. And the instruments chosen, particularly in the northeastern HPAES, Japan, Korea and Taiwan, China, sometimes involved governments in guiding resource allocation by the private sector. The successes of these economies, moreover, stand up well to the less interventionist paths taken by Hong Kong, Malaysia, and more recently Indonesia and Thailand.

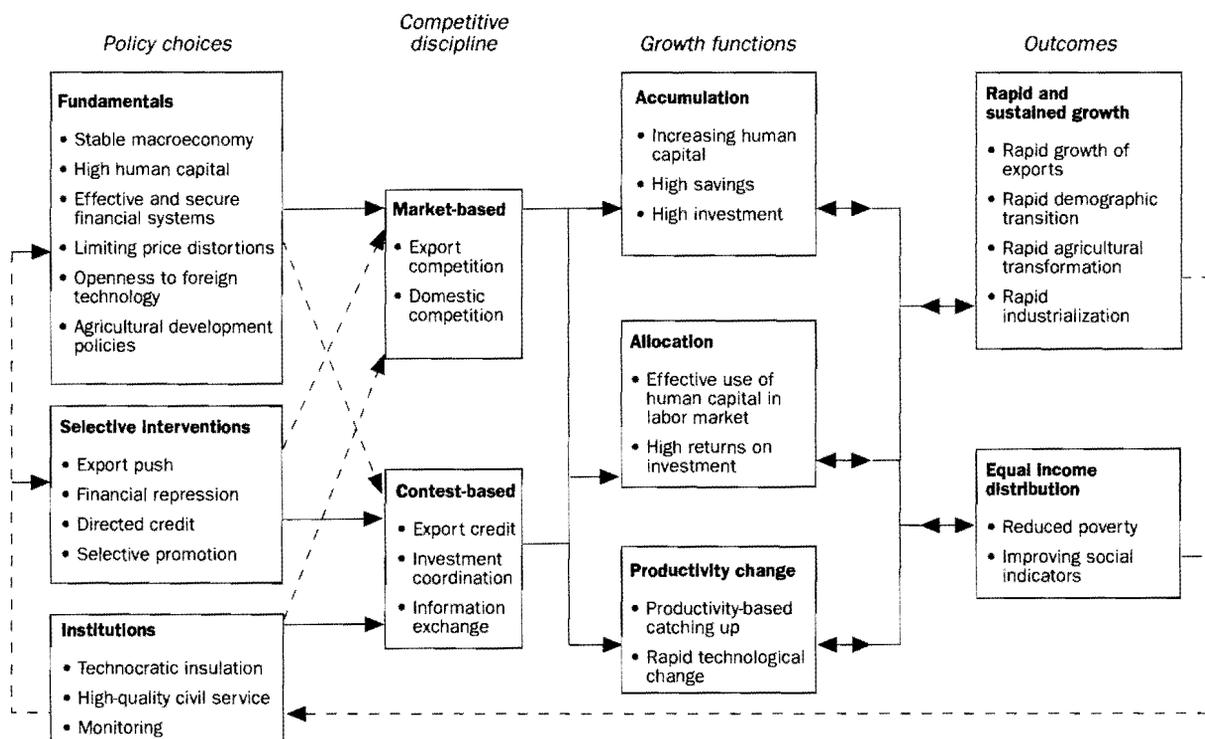
A Functional Approach to Understanding Growth

To accommodate this shifting diversity of policies, we have developed a framework which links rapid growth to the attainment of three functions. In this view, each of the HPAES maintained macroeconomic stability and accomplished three functions of growth: accumulation, efficient allocation, and rapid technological catching up. They did this with shifting combinations of policies, ranging from market-oriented to state-led, both across economies and over time.

Figure 5 gives a schematic view of the functional approach to understanding East Asia's success. We classify policy choices (first column) into two broad groups, fundamentals and selective interventions. Among the most important fundamental policies are macroeconomic stability, high investments in human capital, stable and secure financial systems, limited price distortions, and openness to foreign technology. Selective interventions include mild financial repression (keeping interest rates positive, but low), directed credit, selective industrial promotion, and export-push trade policies. Using this framework, we have tried to understand how government policies, both fundamental and interventionist, may have contributed to accumulation, more efficient allocation, or productivity growth.

To be successful, an intervention must address one or more market failures; for if such failures do not exist, markets by definition will perform the allocation function more efficiently than any intervention. Coordination problems, such as lack of information or lack of risk markets, are a frequent cause of market failure and are particularly common in the early stages of development. Some of East Asia's most successful interventions

Figure 5 A Functional Approach to Growth



can be seen as government-initiated responses to these coordination problems—responses which emphasize cooperative behavior among private firms and clear performance-based standards of success.

Competitive discipline (second column of figure 5) is crucial to efficient investment. Most economies employ only market-based competition. We argue that some HPAEs have gone a step further by creating contests that combine competition with the benefits of cooperation, among firms and between government and the private sector. Such contests range from very simple nonmarket allocation rules such as access to rationed credit for exporters, to very complex coordination of private investment in the government-business deliberation councils of Japan and Korea. The key feature of each contest, however, is that the government distributes rewards—for example, access to credit or foreign exchange—based on performance, which the government and competing firms monitor. To succeed, selective interventions must be disciplined by competition, via either markets or contests.

Economic contests, like all others, require competent and impartial referees—that is, strong institutions. Thus, a high-quality civil service with the capacity to monitor performance, and which is insulated from

political interference, is an essential element of contest-based competition. Of course, a high-quality civil service also augments a government's ability to design and implement non-contest-based policies.

Our framework is only an effort to order and interpret information. No HPAE government set out to achieve the functions of growth. Rather they used multiple, shifting policy instruments in pursuit of more immediate economic objectives. Pragmatic flexibility—the capacity and willingness to change policies—is as much a hallmark of the HPAEs as any single policy instrument. This is well illustrated by the great variety of ways in which the HPAEs achieved two important objectives: macroeconomic stability and rapid export growth.

Achieving Macroeconomic Stability and Export Growth

RESPONSIBLE MACROECONOMIC MANAGEMENT ENCOURAGED long-term planning and investment and was partly responsible as well for exceptional savings rates. Over the past thirty years, annual inflation averaged approximately 9 percent in the HPAEs, compared with 18 percent in other low- and middle-income economies (LMIEs) (see table 2). The HPAEs also adjusted their macroeconomic policies to terms of trade shocks more quickly and effectively than other low- and middle-income economies. As a result, they have enjoyed more robust recoveries of private investment. The broad impact of low inflation and manageable fiscal deficits is evident in three striking pairs of figures contrasting the performances of selected HPAEs and selected comparators in three areas: revenue from money creation as a percentage of GDP, real interest rates, and real exchange rates (see figures 6, 7, and 8).

Macroeconomic Stability, Fiscal Prudence, and Debt

Fiscal prudence was the key to macroeconomic stability. While some HPAEs ran substantial fiscal deficits, their high savings and rapid growth enabled them to avoid inflationary financing of the deficit. Fiscal prudence also helped to reduce the need for foreign borrowing, and the favorable feedback from other policies enabled the four HPAEs that did borrow abroad—Indonesia, Korea, Malaysia, and Thailand—to sustain debt better than other developing economies. In some instances—Korea in 1980–1985, Malaysia in 1982–88, and Indonesia since 1987—debt to GNP ratios were quite high compared with other indebted economies (see

Table 2 Inflation Rates

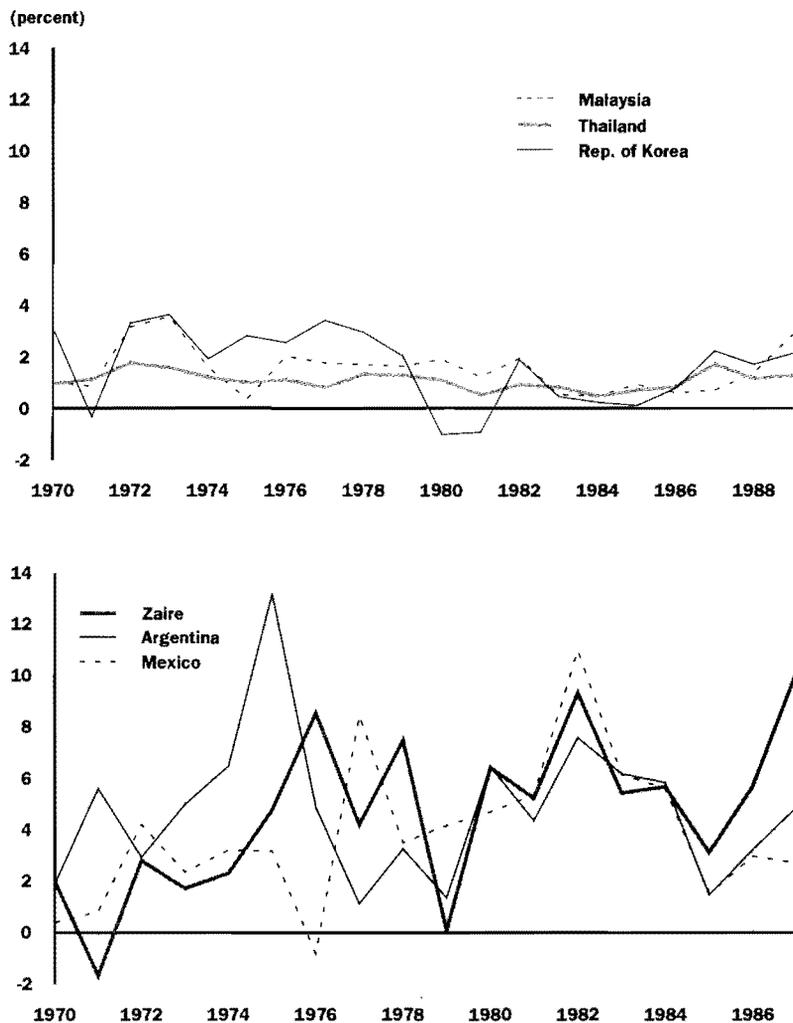
<i>Economy/region</i>	<i>Average CPI, 1961–91</i>
<i>HPAEs^a</i>	7.5
Hong Kong ^b	8.8
Indonesia ^c	12.4
Korea, Rep. of	12.2
Malaysia	3.4
Singapore	3.6
Taiwan, China	6.2
Thailand	5.6
<i>All low- and middle- income economies</i>	61.8
<i>South Asia</i>	8.0
<i>Sub-Saharan Africa</i>	20.0
<i>Latin America and Caribbean</i>	192.1

a. Averages are unweighted.

b. 1972–91 only.

c. 1969–91 only.

**Figure 6 Revenues from Money Creation as a Percentage of GDP:
Examples from East Asia and Other Selected Economies**

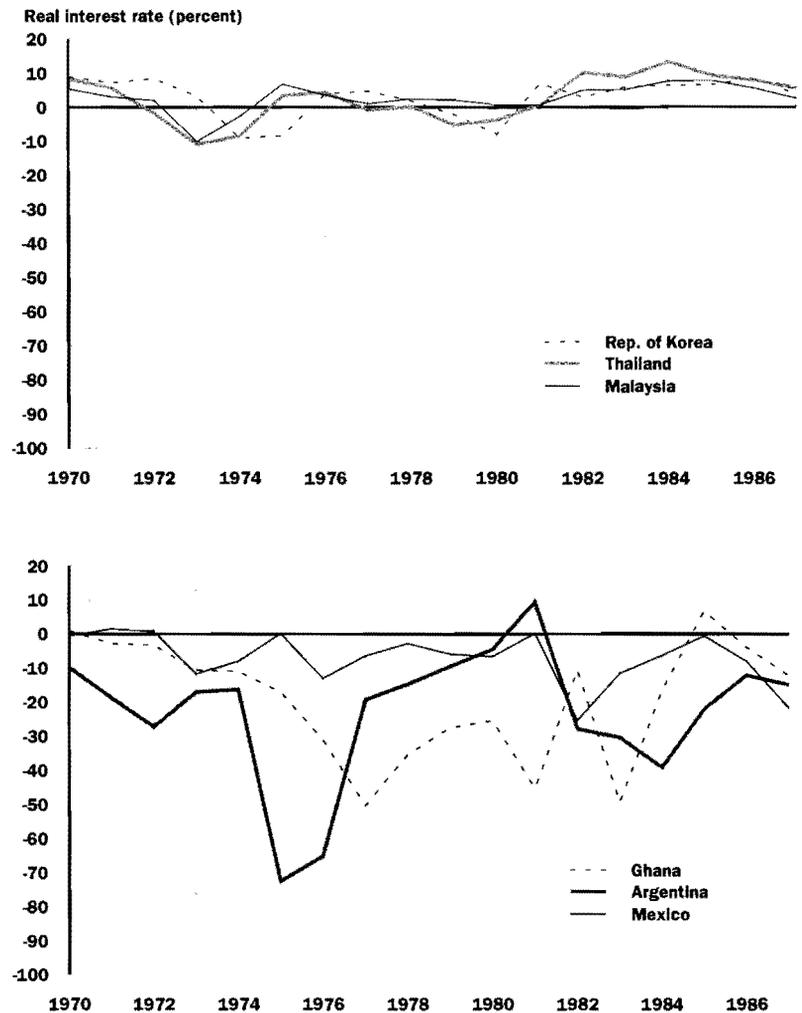


Note: Revenues from money creation as a percentage of GDP is defined as ratio of nominal change in high-powered money to nominal GDP.

table 3), yet none faced a debt crisis in the sense of being forced to reschedule. High levels of exports meant that foreign exchange was readily available to service the foreign debt. Similarly, high growth implied that returns on borrowed capital were sufficient to pay the interest.

Korea's successful handling of a very high foreign debt illustrates these trends. Beginning in the early 1970s, Korea borrowed heavily to finance private sector investment and build up foreign exchange reserves. By 1984

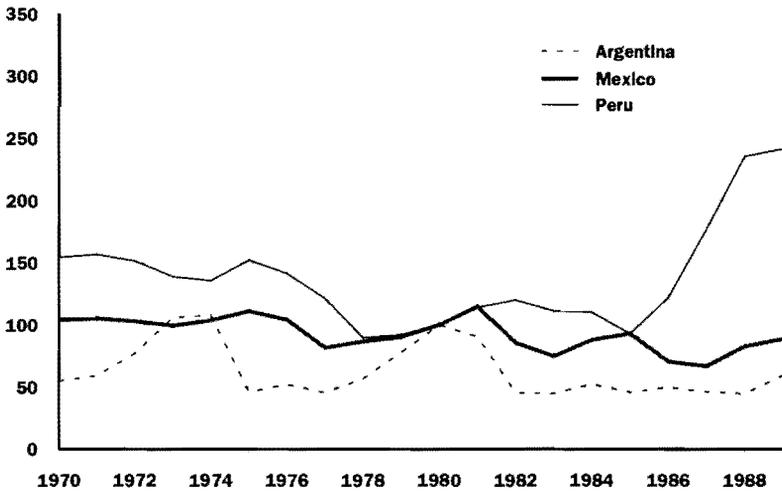
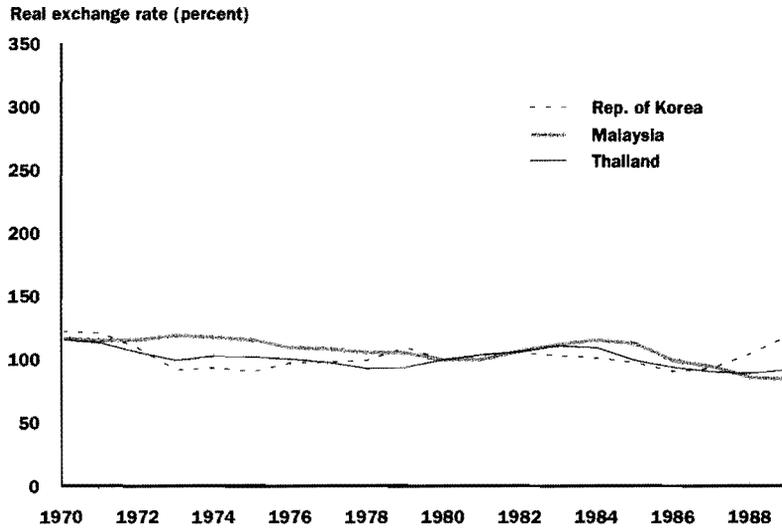
Figure 7 Real Interest Rates: Examples from East Asia and Other Selected Economies



Note: Real interest rates are defined as the deposit rate deflated by the consumer price index.

Korea's foreign debt was fourth largest in the world and equalled more than half of its GNP in 1985. Yet, because of its high export-GNP ratio and rapid overall growth, Korea never lost creditworthiness. From 1986 the government pursued an active debt-reduction policy, drawing on burgeoning international reserves generated by exports to make payments ahead of schedule; by 1990 the debt-GNP ratio was down to 14 percent. (In contrast, when Mexico faced severe problems with its creditors in 1982, it had a much lower debt-GNP ratio than Korea in 1984 but a much higher debt-export ratio.)

Figure 8 Examples of Real Exchange Rate Variability in East Asia and Other Selected Economies



Note: Index of real exchange rate: 1980=100; real depreciation is down.

Creating an Export Push

Many of the policies that fostered macroeconomic stability also contributed to rapid export growth. Fiscal discipline and high public savings allowed Japan and Taiwan, China, to undertake extended periods of exchange rate protection. Adjustments to exchange rates in other HPAEs—

Table 3 International Indebtedness

<i>Economy/region</i>	<i>Ratio of total debt to GNP</i>		<i>Ratio of total debt to exported goods and services</i>	
	<i>Peak year^a</i>	<i>1991</i>	<i>Peak year^a</i>	<i>1991</i>
<i>HPAEs</i>				
Indonesia	69.0	66.4	263.5	225.6
Korea, Rep. of	52.5	15.0	142.4	45.2
Malaysia	86.5	47.6	138.4	54.2
Thailand	47.8	39.0	171.7	94.8
<i>All low- and middle-income economies</i>				
		38.4		176.2
<i>South Asia</i>		29.6		293.3
<i>Sub-Saharan Africa</i>		106.1		340.8
<i>Latin America and Caribbean</i>		37.4		268.0

a. 1987 for Indonesia, and 1985 or 1986 for the other three countries.

validated by expenditure reducing policies—kept them competitive, despite differential inflation with trading partners.

In addition to macroeconomic factors, the HPAEs used a variety of approaches to promoting exports. All except Hong Kong began with a period of import substitution and a strong bias against exports. But each moved to establish a pro-export regime more quickly than other developing economies. First, Japan in the 1950s and early 1960s and then the Four Tigers in the late 1960s, shifted trade policies to encourage manufacturing exports. In Japan, Korea, and Taiwan, China, governments established a pro-export incentive structure that coexisted with moderate but highly variable protection of the domestic market. A wide variety of instruments was used, including export credit, duty-free imports for exporters and their suppliers, export targets, and tax incentives. In the Southeast Asian NIEs, the export push came later, in the early 1980s, and the instruments were different. Reductions in import protection were more generalized and were accompanied by export credit and supporting institutions. Export development has relied much less on highly selective interventions and more on broadly based market incentives and direct foreign investment.

Building the Institutional Basis for Growth

SOME ECONOMISTS AND POLITICAL SCIENTISTS HAVE ARGUED that the East Asian miracle is due to the high quality and authoritarian nature of the region's institutions. They describe East Asian

political regimes as “developmental states” in which powerful technocratic bureaucracies, shielded from political pressure, devise and implement well-honed interventions. We believe developmental state models overlook the central role of government–private sector cooperation. While leaders of the HPAEs have tended to be either authoritarian or paternalistic, they have also been willing to grant a voice and genuine authority to a technocratic elite and key elements in the private sector. Unlike authoritarian leaders in many other economies, leaders in the HPAEs realized that economic development was impossible without cooperation.

The Principle of Shared Growth

To establish their legitimacy and win the support of the society at large, East Asian leaders established the principle of shared growth, promising in effect that as the economy expanded all groups would benefit. But sharing growth raised complex coordination problems. First, leaders had to convince economic elites to support pro-growth policies. Then they had to persuade the elites to share the benefits of growth with the middle-class and poor. Finally, to win the cooperation of the middle-class and the poor, leaders had to show them that they would indeed benefit from future growth.

Very explicit mechanisms were used to demonstrate the intent that all would have a share of future wealth. Korea and Taiwan, China, carried out comprehensive land reform programs; Indonesia used rice and fertilizer price policies to raise rural incomes; Malaysia introduced explicit wealth-sharing programs to improve the lot of ethnic Malays vis-à-vis the better-off ethnic Chinese; Hong Kong and Singapore undertook massive public housing programs; in several economies, governments assisted workers’ cooperatives and established programs to encourage small and medium-size enterprises. Whatever the form, these programs demonstrated that the government intended for all to share in the benefits of growth.

Fostering an Effective Bureaucracy

To tackle coordination problems, leaders needed institutions and mechanisms to reassure competing groups that each would benefit from growth. The first step was to recruit a competent and relatively honest technocratic cadre and insulate it from day-to-day political interference. The power of these technocracies has varied greatly. In Japan, Korea, Singapore, and Taiwan, China, well-organized bureaucracies wield substantial power. Other HPAEs have had small, general-purpose planning agencies. But in each economy, economic technocrats helped leaders to devise a credible economic strategy.

How did the northeastern Asian economies foster effective bureaucracies? In addition to tapping the prestige traditionally accorded civil servants, these governments have employed numerous mechanisms to increase the appeal of a public service career, thereby heightening competition and improving the pool of applicants. The overall principles of these mechanisms, readily applicable to any society, are:

- Total compensation, including pay, perks, and prestige, must be competitive with the private sector.
- Recruitment and promotion must be merit-based and highly competitive.
- Those who make it to the top should be amply rewarded.

In bureaucracies, as in nearly everything else, you get what you pay for. Relative civil service pay is significantly better in the Four Tigers than in other economies. Relative pay in Malaysia and Thailand is about the same as the average for other low- and middle-income economies but is still significantly higher than in the Philippines, the laggard among the East Asian economies. In general, the more favorably the total public sector compensation package compares to compensation in the private sector, the better the quality of the bureaucracy. Not surprisingly, Singapore, which is widely perceived to have the region's most competent and upright bureaucracy, pays its bureaucrats best.

In economies where public sector wages are good, if not equal to the private sector, prestige will persuade some talented individuals to forgo higher earnings in the private sector. Prestige is enhanced by highly competitive, merit-based recruitment and promotion. If civil service exams are highly competitive, individuals who pass them will be relatively rare, raising the status of public employment. Job security can also offset slightly lower pay. In most HPAE bureaucracies, dismissal is unlikely unless the bureaucrat commits a serious mistake. Security translates into lower income variability, which in turn provides incentives for public employees to accept a lower salary.

In many HPAEs a public employee can look forward to a retirement pension, a benefit not normally available in the private sector except in large corporations. In Japan and some other HPAEs, retirement comes early and the rewards to a successful bureaucrat are substantial, extending beyond the pay, perks, and prestige to include a lucrative job in a public or private corporation, or occasionally election to political office. The trick for governments is to hit on a combination that will attract competent individuals to the civil service.

Creating a Business-Friendly Environment

Effective bureaucracies enabled leaders in the HPAEs to establish legal and regulatory structures that were generally hospitable to private investment. Beyond this, the HPAEs have with varying degrees of formality and success enhanced communications between business and government. Japan, Korea, Malaysia, and Singapore have established forums, which we call deliberation councils, to encourage government-business collaboration. In contrast to lobbying, where rules are murky and groups seek secret advantage over one another, the deliberation councils made the rules clearer to all participants.

In Japan and Korea, technocrats used deliberation councils to establish contests among firms. Because the private sector participated in drafting the rules, and because the process was transparent to all participants, private sector groups became more willing participants in the leadership's development efforts. One by-product of these contests was a tendency to minimize private resources devoted to wasteful rent-seeking activities rather than productive endeavors. Deliberation councils also facilitated information exchanges between the private sector and government, among firms, and between management and labor. The councils thus supplemented the market's information transmission function, enabling the HPAEs to respond more quickly than other economies to changing markets.

Institutions of business-government communication have not been static in the HPAEs. The role of the deliberation council is changing in Japan and Korea to a more indicative and consensus-building role, along functional as opposed to industry-specific lines. In Malaysia the councils appear to be increasing in importance and scope. In Thailand the formal mechanisms of communication have generally been used to present businesses' positions to government and reduce suspicion of the private sector. In the case of institutional development, just as in economic policymaking, East Asian governments have changed with changing circumstances.

Accumulating Human and Physical Capital

EAST ASIAN ECONOMIES USED A COMBINATION OF FUNDAMENTAL and interventionist policies to achieve rapid accumulation of physical and human resources. Fundamentals included such traditional government obligations as providing adequate infrastructure and education, and secure financial institutions. Interventions included mild

repression of interest rates, state capitalism, mandatory savings mechanisms, and socialization of risk.

Building Human Capital

Levels of human capital were higher in the HPAES in the 1960s than in other low- and middle-income economies. Educational investments resulted in universal primary education and in widely available secondary education. In addition, the quality of schooling has improved more rapidly in the HPAES than in other middle-income economies; as fertility rates fell in the 1970s, education spending per child rose sharply even as education expenditure as a percentage of GNP remained constant or, in some cases, declined. Table 4 shows changes in the size of school-age populations due to shifting fertility rates for the HPAES and several other economies. In Hong Kong, Korea, and Singapore, the school-age percentage of the population dropped by nearly half from 1965 to 1989. Malaysia and Thailand also achieved substantial, if less dramatic declines, similar to those for Brazil and Colombia. In Bangladesh, Kenya, Nigeria, and Pakistan, conversely, high fertility has meant that the school-age percentage of the population has remained very high and in several cases actually increased.

Rapid human capital accumulation was fostered by two additional factors. First, many HPAES had a head start on a virtuous circle: initial low in-

Table 4 Size and Growth of School-Age Population

<i>Economy/region</i>	<i>School-age (0–14) population as percentage of total population</i>		<i>Growth rate of primary school-age (6–11) population (percent)</i>	
	<i>1965</i>	<i>1989</i>	<i>1965–75</i>	<i>1980–85</i>
<i>HPAES</i>				
Hong Kong	40	22	-1.1	0.3
Korea, Rep. of	43	26	0.7	-0.3
Malaysia	46	37	1.9	0.2
Singapore	44	24	-1.2	-2.2
Thailand	46	34	2.9	-0.1
<i>Other selected economies</i>				
Bangladesh	43	44	3.3	2.9
Brazil	44	35	2.0	1.7
Colombia	47	35	2.3	0.9
Kenya	47	51	3.8	4.7
Nigeria	46	48	3.8	3.4
Pakistan	46	45	2.9	1.8

equality of income and education led to educational expansion, which reinforced low inequality. Second, in contrast to other regions, public spending has been concentrated on primary and secondary education. Demand for tertiary education was largely absorbed by a self-financed private system. At the post-secondary level, public spending has focused on scientific and technological education (including engineering) while demand for university education in humanities and social sciences has been handled through the self-financed private system.

As a result, the broad base and technical bias of human capital in the HPAEs has been particularly noteworthy. Average educational attainment in the low-wage end of the labor force is higher in HPAEs than in other middle-income economies. The HPAEs have also promoted enterprise training programs, including many subsidized by government. Post-secondary education has focused on technical skills more than in other middle-income economies. Some HPAEs also actively recruited foreign teachers and sent large numbers of students abroad, particularly in vocationally and technologically sophisticated disciplines. Overall, educational investments seem particularly well focused on the acquisition and mastery of technology.

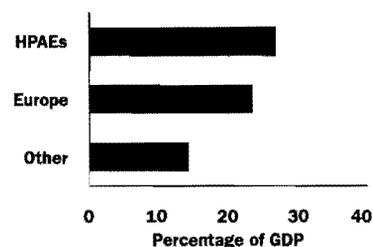
Increasing Savings and Investment

The HPAEs' performance in two fundamental policy areas increased savings. First, by avoiding inflation, they avoided volatility of real interest rates on deposits and ensured that rates were largely positive. Table 5 contrasts real interest rates in the HPAEs with the highly negative real rates in other developing economies; for example, average rates were -44 percent in Argentina, -15 percent in Turkey, and -28 percent in Zambia. The stability of interest rates in the HPAEs is shown in an average standard deviation of 3.5, close to the OECD average of 2.8, while the average standard deviation was 40 in Latin America and 14 in Sub-Saharan Africa.

Second, HPAE governments ensured the security of banks and made them more convenient to small and rural savers. The major instruments used to build a bank-based financial system were strong prudential regulation and supervision, limitations on competition and institutional reforms. In addition, Japan, Korea, Malaysia, Singapore, and Taiwan, China, established postal savings systems which lowered the transaction costs and increased the safety of saving while making substantial resources available to government. These initiatives promoted rapid growth of deposits in financial institutions (see figure 9).

Some governments also used a variety of more interventionist mechanisms to increase savings. Public sector savings were high in Singapore and

Figure 9 Savings Rates of HPAEs and Selected Economies, 1970-88



Note: Europe includes Austria, Belgium, Denmark, Finland, France, the Federal Republic of Germany before reunification, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. "Other" includes these developing economies: Argentina, Brazil, Chile, Colombia, Côte d' Ivoire, Egypt, Ghana, India, Mexico, Morocco, Nigeria, Pakistan, Peru, Sri Lanka, Turkey, Uruguay, Venezuela, the former Yugoslavia, and Zaire.

Table 5 Average Real Interest Rates on Deposits, Selected Economies

Region/ economy	Period	Real interest rates:		Region/ economy	Period	Real interest rates:	
		Average (percent)	Standard deviation (percent)			Average (percent)	Standard deviation (percent)
<i>HPAEs</i>				<i>Europe and Middle East</i>			
Hong Kong	1973-91	-1.81	3.16	Egypt	1976-90	-6.32	3.52
Indonesia	1970-90	0.26	11.33	Greece	1976-92	-3.07	4.64
Japan	1953-91	-1.12	3.89	Portugal	1976-92	-0.24	5.38
Korea, Rep. of	1971-90	1.88	5.86	Tunisia	1977-88	-3.30	3.05
Malaysia	1976-91	2.77	2.47	Turkey	1976-91	-15.60	28.32
Singapore	1977-91	2.48	1.71				
Taiwan, China	1974-91	3.86	7.92	Average		-5.71	8.94
Thailand	1977-90	4.41	5.32				
Average		1.59	3.47	<i>Sub-Saharan Africa</i>			
<i>Other Asia</i>				Ghana	1978-88	-28.31	36.62
Bangladesh	1976-92	0.96	3.59	Kenya	1967-90	-2.33	5.91
Nepal	1976-89	-3.69	5.00	Nigeria	1970-91	-9.62	10.35
Philippines	1976-91	0.45	9.97	South Africa	1977-92	-1.58	4.64
Sri Lanka	1978-92	2.38	6.01	Zambia	1978-90	-28.03	31.50
Average		0.03	6.14	Zimbabwe	1978-90	-4.73	4.94
				Average		-11.13	13.86
<i>Latin America and Caribbean</i>				<i>OECD economies</i>			
Bolivia	1979-91	44.33	81.46	France	1970-91	-1.83	3.32
Chile ^a	1965-91	31.84	96.49	Germany	1978-91	2.42	1.05
Ecuador	1983-91	-6.57	18.76	Sweden	1962-91	0.69	2.53
Jamaica	1976-91	-3.95	11.33	Switzerland	1981-91	-1.69	1.62
Mexico	1977-92	11.42	17.97	United Kingdom	1963-91	-0.80	5.33
Uruguay	1976-92	-1.89	15.62	United States	1965-91	2.22	2.38
Average		16.67	40.27	Average		0.16	2.78

Note: Real interest rates = nominal interest rates adjusted for inflation, using the CPI.

a. If 1974 and 1975 are omitted from the calculation, then the average for Chile is -13.3 and the standard deviation is 65.38.

Taiwan, China. Malaysia and Singapore guaranteed high minimum private savings rates through mandatory provident fund contributions. Japan, Korea, and Taiwan, China, all imposed stringent controls and high interest rates on loans for consumer items as well as stiff taxes on so-called luxury consumption. Whether the more interventionist measures to increase savings improved welfare is open to debate. On the one hand, making consumers save when they would not otherwise have done so imposes a welfare cost. On the other, because rates of return to investment were consistently

high, there was an economy-wide high return on savings—forced or not. Thus, in contrast to other economies, such as the republics of the former Soviet Union, which used compulsory savings but failed to achieve high rates of return on investment, welfare costs in the HPAEs were clearly low.

The HPAEs encouraged investment by several means. First, they did a better job than most developing economies at creating infrastructure that complemented private investment. Second, they created an investment-friendly environment through a combination of tax policies favoring investment and policies that kept the relative prices of capital goods low, largely by avoiding the effects of high tariffs on imported capital goods. These fundamental policies had an important impact on private investment. Third and more controversial, most HPAE governments controlled deposit and lending rates below market clearing levels, a practice termed “financial repression.”

Japan, Korea, Malaysia, Thailand, and Taiwan, China, had extended periods of mild financial repression. Increasing interest rates from negative to zero or mildly positive real rates and avoiding fluctuations (by avoiding unstable inflation) encouraged financial savings. But because savings are not very responsive to marginally higher real interest rates, governments were able to mildly repress interest rates on deposits with a minimal impact on saving and pass the lower rates to final borrowers, thus subsidizing corporations. This transfer of income from households to firms changed not only the volume of savings, but also the form in which savings were held, from debt to corporate equity.

Financial repression requires credit rationing, with attendant risks of misallocation of capital. Thus there is a trade-off between the possible increase in savings and investment and the risk that the increased capital will be badly invested. There is some evidence that in Japan, Korea, and Taiwan, China, governments allocated credit to activities with high social returns, especially to exports. If this were the case, there may have been allocative benefits from credit rationing, and microeconomic evidence from Japan supports the view that access to government credit increased investment. Tests of the relationship between interest rates and growth suggest that in the cases of Japan, Korea, and Taiwan, China, the negative relationship between interest rate repression and growth found in cross-economy analyses is not present. Mild repression of interest rates at positive real levels apparently did not inhibit growth, and may have enhanced it.

Finally some governments, especially in the northeastern Asian tier, spread private investment risks to the public. In some economies the government owned or controlled the institutions providing investment funds, in others it offered explicit credit guarantees, and in still others it implicitly guaranteed the financial viability of promoted projects. Rela-

relationship banking by a variety of public and private banking institutions in Hong Kong, Japan, Korea, Malaysia, Singapore, Thailand, and Taiwan, China, involved the banking sector in the management of troubled enterprises, increasing the likelihood of creditor workouts. Directed-credit programs in Japan, Korea, and Taiwan, China, signaled directions of government policy and provided implicit insurance to private banks.

Achieving Efficient Allocation and Productivity Change

SOME OF THE INTERVENTIONS IN MARKETS TO SUPPORT ACCUMULATION in the HPAEs, including financial repression and the socialization and bounding of risk, could have adversely affected the allocation of resources. Similarly, industrial targeting could have resulted in extensive rent-seeking and great inefficiency. Apparently they did not. The allocational rules followed by HPAE governments—particularly the interventions aimed at individual enterprises—are therefore among the most controversial aspects of the East Asian success story. Despite these interventions, however, relative prices in the HPAEs generally reflected economic costs and benefits more closely than relative prices in most other developing economies.

Like policies related to accumulation, policies affecting allocation and productivity change fall into fundamental and interventionist categories. Labor market policies tended to rely on fundamentals, using the market and reinforcing its flexibility. In capital markets, governments intervened systematically, both to control interest rates and to direct credit, but acted within a framework of careful monitoring and generally low subsidies to borrowers. Trade policies have included substantial protection of local manufacturers, but less than in most other developing countries; in addition, HPAE governments offset some disadvantages of protection by actively supporting exports. Finally, while interventions to support specific industries have generally not been successful, the export-push strategy, the complex of fundamental and interventionist policies to encourage rapid export growth, has resulted in numerous benefits, including more efficient allocation, the acquisition of foreign technology, and rapid productivity growth.

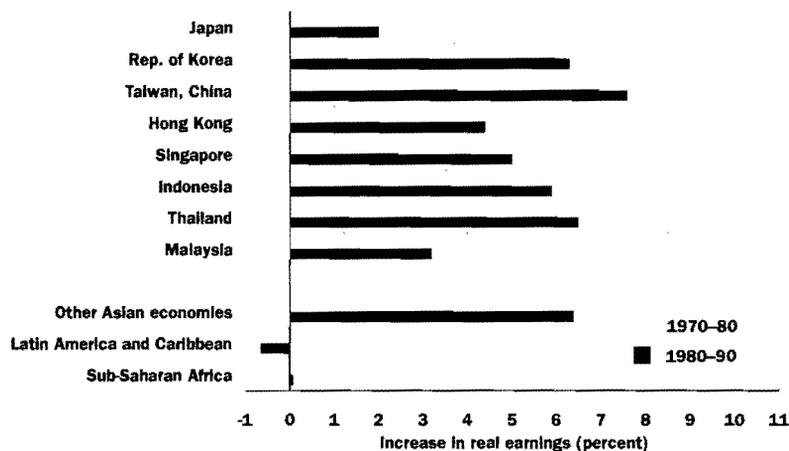
Flexible Labor Markets

Government roles in labor markets in the successful Asian economies contrast sharply with the situation in most other developing economies.

HPAE governments have generally been less vulnerable than other developing-economy governments to organized labor's demands to legislate a minimum wage. Rather, they have focused their efforts on job generation, effectively boosting the demand for workers. As a result, employment levels have risen first, followed by market- and productivity-driven increases in wage levels. Because wages or at least wage rate increases have been downwardly flexible in response to changes in the demand for labor, adjustment to macroeconomic shocks has generally been quicker and less painful in East Asia than in other developing regions. More rapid adjustments contributed to the HPAEs' sustained economic growth, which in turn made possible much more rapid wage growth than in other regions (see figure 10).

High productivity and income growth in agriculture contributed to labor market flexibility by helping to keep East Asian urban wages close to the supply price of labor. In contrast to many other developing economies, where the gap between urban and rural incomes has been large and growing, in the HPAEs the incomes of urban and rural workers with similar skill levels have risen at roughly the same pace; moreover, the overall gap between urban and rural incomes is smaller in the HPAEs than in other developing economies. In Sub-Saharan Africa, Latin America, and South Asia, where wages in the urban formal sector are often pushed up by legislated minimum wages and other nonmarket forces, urban wage earners often have incomes twice their counterparts' in informal sectors.

Figure 10 Increase in Real Earnings



Note: Index for Taiwan, China: 1979 = 100. Other Asian economies are Bangladesh, India, Pakistan, and the Philippines.

In contrast, the gap between the formal and informal sectors in East Asia is only about 20 percent.

East Asia's more rapid wage increases are also partly the result of a slower growth of supply and more rapid growth of demand for labor. Slower growth in supply has been largely a function of declining fertility rates. When the currently high-income economies were industrializing during the nineteenth century, their populations grew at an average annual rate of only 0.8 percent. Today, Sub-Saharan Africa's population is growing at roughly four times that rate; the populations of Latin America and South Asia are growing at roughly three times that rate. Only in East Asia have population growth rates declined to levels approaching those which prevailed in the high-income economies.

We have already seen how early demographic transitions markedly reduced the rate of growth of the school-age population, thereby easing the financial burden of maintaining education enrollment rates. Similarly, early demographic transitions also reduced, with a lag, the rate of growth of new entrants into the East Asian labor force. The annual rate of labor force growth during the 1980s was 2.6 percent in Sub-Saharan Africa and Latin America and 2.2 percent in South Asia. In East Asia, despite increases in the participation rates of women, the rate was 1.8 percent (see table 6).

At the same time, labor demand has been growing faster among the HPAEs than in other regions. For the period 1960–90, the rates of growth of wage employment in manufacturing, construction, and services have tended to be substantially higher in East Asia than in Sub-Saharan Africa, Latin America, or South Asia. Moreover, as labor demand grew, it also became more and more skill-intensive. Because educated workers were readily available, East Asian exporters have been able to shift to production of tech-

Table 6 Labor Force Growth Rates

<i>Economy/region</i>	<i>1980–85</i>	<i>1985–2000</i>
<i>HPAEs</i>	2.5	1.8
Indonesia	2.4	2.2
Korea, Rep. of	2.7	1.9
Malaysia	2.9	2.6
Singapore	1.9	0.8
Thailand	2.5	1.7
<i>South Asia</i>	2.2	2.2
<i>Latin America and Caribbean</i>	2.8	2.6
<i>Sub-Saharan Africa</i>	2.3	2.6

nologically sophisticated goods when rising wages eroded international competitiveness in labor-intensive manufactured goods.

Capital Markets and Allocation

The HPAEs influenced credit allocation in three ways: enforcing regulations to improve private banks' project selection; creating financial institutions, especially long-term credit (development) banks; and directing credit to specific sectors and firms through public and private banks. All three approaches can be justified in theory and each has worked in some HPAEs, yet each involves progressively more government intervention in credit markets and so carries a higher risk.

Government relationships with banks in the HPAEs have varied widely. In Hong Kong banks are private and regulated primarily to ensure their solvency. In Indonesia, Malaysia, Singapore, and Thailand, banks are privately owned and exercise independent authority over lending. While governments have broadly guided credit allocations through regulations and moral suasion, project selection is generally left to bankers. In other HPAEs, banks have been subject to direct state control or stringent credit allocation guidelines. For example, Indonesia, Korea, and Taiwan, China, tightly controlled the allocation of credit by public commercial banks.

Each of the HPAEs made some attempts to direct credit to priority activities. All East Asian economies except Hong Kong give automatic access to credit for exporters. Housing was a priority in Hong Kong and Singapore, while agriculture and small and medium-size enterprises were targeted sectors in Indonesia, Malaysia, and Thailand. Taiwan, China, has recently targeted technological development. Japan and Korea have used credit as a tool of industrial policy, organizing contests through deliberative councils to promote at various times the shipbuilding, chemical, and automobile industries.

The implicit subsidy of directed-credit programs in the HPAEs was generally small, especially in comparison with other developing economies (see table 7), but access to credit and the signal of government support to favored sectors or enterprises were important. In Korea, the subsidy from preferential credit was large during the 1970s, resulting in a big gap between bank and curb market interest rates. This gap has declined sharply in recent years, as Korea has shifted away from heavy credit subsidies to selected sectors. In Japan, implicit subsidies were small and the direction of credit may have been more important as a signaling and insurance mechanism than as an incentive.

Although East Asia's directed-credit programs were designed to achieve policy objectives, they nevertheless included strict performance criteria. In

Trade Policies and Patterns of Protection

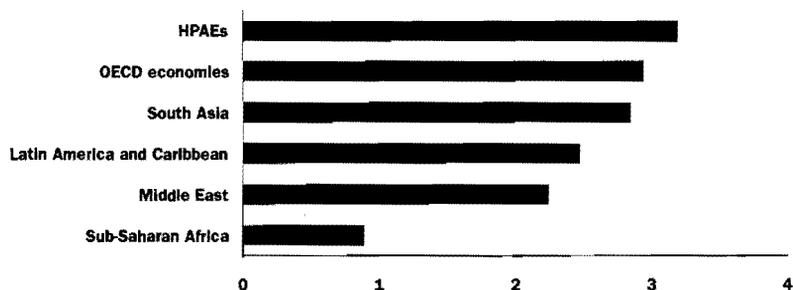
Most HPAEs began industrialization with a protectionist orientation and gradually moved toward increasingly free trade. Along the way they often tapped some of the efficiency-generating benefits of international competition through mixed trade regimes: they granted exporters duty-free imports of capital and intermediate goods while continuing to protect consumer goods. Export prices were set in the international market and were often substantially less than current marginal or average cost. Profits in protected domestic markets offset export losses, while competition in the international market pushed firms to maximize efficiency.

Despite the protection of domestic manufacturers evident in all the HPAEs except Hong Kong and Singapore, domestic prices in these economies are more closely aligned to international prices than in other developing regions. Two bodies of evidence support this conclusion. First, nominal tariff rates adjusted for nontariff barriers are lower in the HPAEs than in most other developing economies. Second, comparisons of real GNP across economies indicate that domestic relative prices for tradable goods in the HPAEs are more closely aligned to international prices than in other regions.

One of the few systematic attempts to compare nominal tariff rates across a broad range of developing economies concludes that they were lower in the HPAEs than in any other group of developing economies except the island economies of the Caribbean and the oil states of West Asia. The difference between Latin America (albeit before its recent trade liberalizations) and the HPAEs is striking. Thus while the HPAEs favored import substitutes, they did so less than most other developing economies.

This is borne out by comparisons of international and domestic prices. Figure 11 shows an index of outward orientation based on international comparisons of price levels and price variability for the HPAEs compared with other regional groupings. The HPAEs as a group are more outward oriented than other regions; their relative prices are closer to and more consistently related to international prices. While any large, multi-economy effort at real price comparisons is subject to methodological and empirical criticism, the results are broadly indicative and consistent with other evidence: East Asia's relative prices of traded goods were closer on average to international prices than those of other developing areas.

The HPAEs have maximized the benefits of an outward orientation by actively seeking foreign technology through a variety of mechanisms. All welcomed technology transfers in the form of licenses, capital goods imports, and foreign training. Openness to foreign direct investment has speeded technology acquisition in Hong Kong, Malaysia, Singapore, and, more recently, Indonesia and Thailand. Japan, Korea, and, to a lesser ex-

Figure 11 Index of Outward Orientation

tent, Taiwan, China, restricted foreign direct investment but offset this disadvantage by aggressively acquiring foreign knowledge through licenses and other means.

In contrast, other low- and middle-income economies such as Argentina and India, besides being less outwardly oriented than the HPAEs, have adopted policies that actively hindered the acquisition of foreign knowledge. Often they have been preoccupied with supposedly excessive prices for licenses; they have refused to provide foreign exchange for trips to acquire knowledge, been restrictive of foreign direct investment, and have attempted prematurely to build up their machine-producing sectors, thus forgoing the knowledge embodied in imported equipment.

Promoting Specific Industries

Most East Asian governments have attempted to promote specific industries or industrial sectors to some degree. The best-known instances are Japan's heavy industry promotion policies of the 1950s and the subsequent imitation of these policies in Korea. These policies included import protection as well as subsidies for capital and other imported inputs. Malaysia, Singapore, Taiwan, China—and even Hong Kong—have also established programs, typically with more moderate incentives, to accelerate development of advanced industries. We find very little evidence that industrial policies have affected either the sectoral structure of industry or rates of productivity change. Indeed industrial structures in Japan, Korea, and Taiwan, China, have evolved during the past thirty years as we would expect on the basis of factor-based comparative advantage and changing factor endowments.

It is not altogether surprising that industrial policy in Japan, Korea, and Taiwan, China, produced mainly market conforming results. While selectively promoting capital- and knowledge-intensive industries, these governments also took steps to ensure that they were fostering profitable, internationally competitive firms. Moreover, the way in which they formu-

lated industrial policies introduced a large amount of market information, and used performance, usually export performance, as a yardstick. In other HPAEs, such international market links were not used and industrial policies were unsuccessful, as in the cases of the heavy industry push in Malaysia and the state-supported effort to build an aerospace industry in Indonesia.

Achieving Productivity Growth through an Export Push

One combination of fundamental and interventionist policies practiced in the HPAEs has been a significant source of rapid productivity change: their promotion of manufactured exports. Although all HPAEs except for Hong Kong passed through an import-substitution phase, these ended earlier than in other economies, typically because of a pressing need for foreign exchange. In contrast to many other economies, which tried to preserve foreign exchange by tightening import controls, the HPAEs set out to earn additional foreign exchange by increasing exports. Malaysia and Singapore adopted trade regimes that were close to free trade; Japan, Korea, and Taiwan, China, adopted mixed regimes that were largely free for export industries. Indonesia and Thailand, beginning later, adopted export incentives and moved gradually to reduce domestic protection. In each of the HPAEs, exchange rate policies were liberalized and, often, currencies were devalued. Overall, these policies exposed much of the industrial sector to international competition which increased productivity growth.

The northern-tier economies—Japan, Korea, and Taiwan, China—stalled the process of import liberalization, often for extended periods, and heavily promoted exports. Thus while incentives were largely equal, they were the result of countervailing subsidies rather than trade neutrality; promotion of exports coexisted together with protection of the domestic market. In the Southeast Asian HPAEs, conversely, governments created an export push through a gradual but continuous liberalization of the trade regime, supplemented by institutional support for exporters. In both cases, governments were credibly committed to the export-push strategy, and producers, even those in the protected domestic market, knew that sooner or later their time to export would come. These experiences suggest that economies making the transition from import substitution regimes to more balanced incentives would benefit from actively promoting exports, especially in cases where import liberalization is moving slowly.

Manufactured export growth provided a powerful mechanism for technological upgrading. Because firms which export have greater access to best-practice technology, there are both benefits to the enterprise and spillovers to the rest of the economy which are not reflected in market transactions. These information related externalities are an important source of rapid

productivity growth. Both cross-economy evidence and more detailed studies of the industrial productivity performance of Japan, Korea, and Taiwan, China, confirm the significance of exports to rapid productivity growth.

Lessons for Other Developing Economies

WHAT LESSONS CAN OTHER DEVELOPING ECONOMIES learn from East Asia's experience? First, getting the fundamentals right was essential. Without high levels of domestic saving, broadly based human capital, good macroeconomic management, and limited price distortions, there would have been no basis for growth and no means by which the gains of rapid productivity change could be realized. Policies to assist the financial sector's capture of nonfinancial savings and to increase household and corporate savings were central. Acquisition of technology through openness to direct foreign investment and licensing were crucial to rapid productivity growth. Public investment complemented private investment and increased its orientation to exports. Education policies stressed universal primary education and improvements in educational quality at primary and secondary levels.

Second, very rapid growth of the type experienced by Japan, the Four Tigers, and more recently the East Asian NIEs has also benefited from careful policy interventions to accelerate growth. All interventions carry with them costs, either in the form of direct fiscal costs of subsidies or foregone revenues, or in the form of implicit taxation of households and firms, for example, through the structure of protection or interest rate controls. One of the defining characteristics of interventions in the HPAEs is that in general they have been carried out within well defined bounds limiting the implicit or explicit costs. Thus, price distortions were present but not excessive; interest rate controls generally had as benchmarks international interest rates; and explicit subsidies were kept within bounds. Given the overriding importance that each of the HPAEs ascribed to macroeconomic stability, interventions which threatened to undermine that policy fundamental were modified or abandoned—for example, the heavy and chemical industries drive in Korea or the heavy industry push in Malaysia. These limits to intervention stand in sharp contrast to many other developing economies where interventions have not been consistent with macroeconomic discipline.

Whether these interventions built on the rapid growth made possible by good fundamentals or detracted from it is the most difficult question

we have tried to answer. It is much easier to show that the HPAEs limited the costs and duration of inappropriately chosen interventions—itsself an impressive achievement—than to demonstrate conclusively that those interventions that were maintained over a long period accelerated growth. Our assessment is that promotion of specific industries generally did not work and therefore holds little promise for other developing economies. Directed credit has worked in certain situations but carries high risk. The export-push strategy has been by far the most successful set of policy intervention and holds the most promise for other developing economies. But the efficacy of institutionally demanding strategies—including some of the more narrowly targeted aspects of the export-push strategy—is uncertain in other settings, and they are clearly difficult to imitate when strong institutions are not securely in place. Moreover, many HPAE interventions carry high risks that probably make them unsuitable for adaptation in parts of Sub-Saharan Africa and Latin America, and elsewhere in Asia, where activist government involvement in the economy has often gone awry. Promoting specific industries or attempting to leap stages of technological development has often been a costly failure; strongly negative real interest rates and large subsidies to borrowers debilitate the financial system; and directing credit without adequate monitoring and selection of borrowers distorts allocation. Thus, the fact that interventions were an element of some East Asia economic success stories should not become a reason to resist needed market-oriented reform.

Even so, an export-push strategy appears to hold great promise for other developing economies. Exports are a powerful mechanism to acquire and master foreign technology. Moreover, the most important export promotion measures remain viable in today's global economy, despite increasing pressure on developing economies to refrain from interventions that violate international trading rules such as the General Agreement on Tariffs and Trade. Key pro-export policies, such as creating a free trade environment for exporters, providing support services for small and medium-size exporters, improving business-government communications, and easing the decline of uncompetitive industries are unlikely to provoke opposition from trading partners. However, more highly targeted interventionist measures, such as export subsidies and directed credits linked to exports—precisely those that are difficult for many developing economies to manage—are incompatible with a changing world trading environment.

East Asia's own responses to changing domestic and international circumstances put these lessons in perspective. The HPAEs are themselves involved in a continuing process of reform, adapting policy instruments and institutions to achieve the objectives of continued growth with equity. In

many cases these reforms involve reducing, modifying, or abandoning policy instruments which were judged to have succeeded in the past. Korea's financial sector reform, Indonesia's trade reforms, Thailand's promotion of foreign investment, and Malaysia's privatization programs are cases in point. The outcome of these initiatives will provide further valuable lessons on how successful policy instruments shift over time, as the relative roles of markets, the public administration, and the private sector change in response to economic and social development.

The experience of the HPAES broadens our understanding of the range of policies that contribute to rapid growth. It also teaches us that willingness to experiment and to adapt policies to changing circumstances is a key element in economic success. What we have not discovered fully is why the governments in these economies have been more willing and better able than others to experiment and adapt; answers go beyond economics to include the study of institutions, and the related issues of politics, history and culture. Taking such questions into account complicates rather than simplifies the task of development. In every economy, however, governments face a two-pronged task: they must select and adapt policies, both fundamentals and interventions, according to their institutional circumstances, and at the same time strive to upgrade institutional capability to make policy implementation more effective and to increase the number of available policy options.