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Explaining the Growth Performances of Asian Developing Economies*

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I. Development Performance of Developing Countries

No matter how it is measured, the growth performance of the newly industrializing economies (NIEs) stands out. That of the Southeast Asian group, with the exception of the Philippines, and that of China is also impressive. The South Asian countries have done much less well, with countries in sub-Saharan Africa, the Caribbean, and Latin America even further behind. The NIEs have also done well in two other crucial indicators of development: income distribution and the quality of life. In a study of 34 developing countries, J. Riedel found that Taiwan has the best income distribution, surpassing even that of Sri Lanka, while Singapore, South Korea, and Hong Kong are placed in the top third of the sample.¹ The NIEs also did extremely well in two measures of the quality of life: the percentage of the age group enrolled in secondary education and the life expectancy at birth, where they are well ahead of the other groups.

Thus the NIEs have not only grown much faster than other economies, but have also done better in bringing about a more equitable distribution of income and a better quality of life. Other measures of economic performance (e.g., employment and wages growth), equity performance (e.g., reduction in the absolute level of poverty), and quality-of-life performance (e.g., the number of doctors per capita) could have been used, but they would have shown the same thing. This finding is generally accepted. However, there is no generally accepted explanation for the different development performances. This article will examine the claims of the major explanations and then propose a new way of looking at them. In order to make the task manageable, it will be limited to the developing countries of Asia.

II. Why Development Performances Differ: Existing Explanations

The first explanation is the very recent and rather ingenious one which argues that the NIEs do not possess abundant natural resources and

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therefore do not have to contend with the debilitating Dutch disease. This refers to the phenomenon where the existence of a buoyant primary export sector is a bane rather than a boon in the long run. The massive inflow of foreign exchange increases the value of the local currency and reduces the international competitiveness of its traditional exports. This compounds the problem faced by a sector that has already lost resources to the booming sector.² The government may also spend and tax inefficiently because of the abundance of resources.³ As the NIEs do not have abundant natural resources, they have been spared these afflictions.

There is not much to this argument. Resource-poor countries have fewer policy options than resource-rich ones, unless it is argued that having less choice is better. Also, the East Asian countries do have booming manufacturing export sectors but do not suffer from the Dutch disease in the way that Ghana, Nigeria, Venezuela, Mexico, and other natural resource-rich countries did. The theoretical and empirical literature on this is quite clear. It is not the size and the type of the booming sector that matters. It depends more importantly on the macroeconomic policies pursued.

If nature cannot be blamed, then surely politics can—so runs the second explanation. South Korea and Taiwan were lucky enough to receive massive foreign aid from the United States and other friendly and rich anticommunist countries and this must have helped to increase investment and economic growth. Detailed case studies of South Korea and Taiwan show that the aid was used mainly to control inflation, which helped significantly to produce the economic and political stability that is essential and that led to economic growth.⁴ This finding was then twisted around to argue that South Korea and Taiwan were just plain lucky to be situated where they were in geography and history as they would not otherwise have received the aid which made possible the political and economic stability essential for generating rapid economic growth.

Unfortunately, this argument raises more questions than it answers. There is no guarantee that foreign aid will be used to fight inflation. There is also no shortage of theoretical and empirical literature to show that foreign aid can reduce domestic savings and economic growth. There are countries that receive significant foreign aid but grow slowly, if at all (e.g., Cuba and Papua New Guinea), and countries that receive little aid but grow rapidly (e.g., Malaysia and Singapore). The conclusion that should be drawn from the available evidence is that, while foreign aid is indeed determined exogenously, its use is determined very much by the governments of the recipient countries themselves.

The third explanation holds that the NIEs have done well because of their common Confucian heritage which gives them a labor force

that is hard-working, loyal, and thrifty and that values education, which in turn gives them a huge advantage over other countries. This cultural hypothesis has also been used to explain the economic success of Malaysia, Thailand, and Indonesia, where the Chinese influence is significant.

This hypothesis is not particularly convincing. It conveniently ignores the fact that in the 1950s Confucian values were blamed for the lack of economic progress in Taiwan and South Korea and for the economic decline of China in the past.⁵ It clearly cannot explain the economic success of those developing countries without the Confucian touch. It either does not believe or ignores the fact that people do respond rationally to changes in the economic environment. Probably the workers in the NIEs work hard because they get paid well, remain loyal because they are treated fairly, value education because of the mobility it gives them, and save substantially because of high real interest rates. Surely the argument cannot be that Confucian values require the need to pay well in order to encourage hard work. That would be carrying it too far. In any case, it is not necessary to resort to the teachings of Confucius to arrive at this. The first chapter of any first-year textbook in economics will do. Also, the cultural explanation is one of despair, as it will take a very long time for the necessary values to be inculcated and it is not possible to import large enough numbers of South Koreans, Taiwanese, and so on to make a difference. This could then encourage countries to believe that they are doomed to poverty because they cannot introduce the necessary cultural values in time.

There is ample evidence to show that attitudes to work can be changed by the provision of incentives and by giving people room to move. Thus farmers in developing countries increase their output once agricultural pricing policies reward rather than punish their efforts. Hypotheses that parade cultural determinism explain everything and nothing at the same time. The values attributed to the possession of a Confucian heritage are values that are determined endogenously.

The fourth hypothesis is that countries which allow their governments and markets to work together to produce international competitiveness will grow much faster than those which persist with confrontation and the belief that they can operate outside the international economic system. In other words, countries which pursue a more market-friendly and internationally competitive approach to development will grow faster. The first phrase, "market-friendly," describes an approach where the government and the market each has an important role to play but with each recognizing its comparative advantage. Thus "if markets can work well and are allowed to, there can be a substantial economic gain. If markets fail, and governments intervene cautiously and judiciously in response, there is a further gain. But if the

two are brought together, the evidence suggests that the whole is greater than the sum. When markets and governments have worked in harness, the results have been spectacular, but when they have worked in opposition, the results have been disastrous."⁶

The second phrase, "internationally competitive," refers to the need for market-government cooperation to produce goods and services at internationally competitive prices. For example, it is generally accepted that countries cannot produce manufactured goods successfully without some form of protection to begin with. Governments usually provide this protection. The trick, of course, is to make the protection transparent and to reduce the level of protection as the industries move from infancy to adolescence and pick up skills and experience as they grow older. By the time the import-substituting market has been saturated, adulthood would have been reached and the industries would be able to compete internationally without any more help. Macroeconomic industry and trade policies must be introduced to ensure such a transition and to prevent the formation of a system that encourages industries never to grow up and to require increasingly more protection as they become increasingly more inefficient. In other words, the policies should not encourage industries to go from infancy straightaway to second childhood, becoming senile before their time.

This hypothesis is different from the first three in that it identifies the reason behind better development performances as the implementation of policies by the countries themselves. The other hypotheses emphasize the role played by nature, history, chance, or friendly powers, by factors which are outside the control of the countries themselves. In other words, it is an endogenous explanation, whereas the others are exogenous ones.

There is strong empirical support for the endogenous hypothesis, and there is also evidence to show that the NIEs provide a more market-friendly and internationally competitive approach to development than other developing countries in Asia. First, they intervene less. For example, their effective rates of protection on manufacturing are significantly lower. Second, they are more concerned that intervention does not unduly distort prices down the line. For example, the anti-export bias created by protecting domestic producers was neutralized more quickly in the NIEs than elsewhere. Third, they subject their intervention to the discipline of international and domestic competition. For example, in the 1970s South Korea increased the level of protection to encourage the development of the heavy chemicals industry. It also supplied the industry with subsidized credit and tax rebates. When the industry performed badly the government withdrew its support and liberalized imports. In many other countries the response would have been the opposite. What South Korea and the other

NIEs did in such situations was to undo the harm quickly once they realized that their plans had been a mistake. The first two examples illustrate the concern for being market-friendly, the third the concern for international competitiveness.

The analysis suggests that more credence should be placed on those explanations of economic growth that emphasize the policies pursued by the developing countries themselves. The choice of an economic system that is market-friendly and internationally competitive is especially important. This does not mean that *laissez-faire* must be adopted or that there cannot be any protection. In some areas government should intervene, as in the provision of public and merit goods and in the protection of the poor and the environment. In other areas where intervention is less justified, as in protecting the domestic production of goods that can be imported more cheaply, the intervention must be carried out openly and with checks and balances firmly in place.

III. Why Development Performances Differ: A Stepwise and Backtracking Approach

While the market-friendly and internationally competitive hypothesis appears to be more acceptable than the others in explaining differences in development performances between Asian countries, it does suffer, together with the others, from an important weakness. This is that it is often presented at a very aggregative level and with little attempt to identify, in a stepwise fashion, the sources of output growth, the factors behind the sources of output growth, and the economic policies needed to bring about the factors behind the sources of output growth.

A stepwise and backtracking approach to explaining differences in growth performances and in presenting the market-friendly and internationally competitive hypothesis is suggested. It has three basic steps. The first is to estimate the production functions of developing countries in order to identify the sources of output growth and the contribution of each of these to the measured growth rate of output. The second is to identify the factors responsible for these sources of output growth. The third is to identify the economic policies needed to bring about these factors and to ensure their efficient use.

Step 1: Production-function analysis. The output of an economy depends on the factors of production available. The general form of this relationship can be written as:

$$Q = f(R, K, L, T), \quad (1)$$

where Q is aggregate output; R , K , and L the total supply of land, capital, and labor, respectively; and T the level of technology.

Equation (1) can be used to identify three sources of growth in aggregate output. The first is increases in the supply of the factors

of production. The second is technical progress, which increases the productivity of the factors of production. The third is increasing returns to scale, where output rises more than proportionately to the increase in the factors of production.

The most popular specific form of equation (1) is the unconstrained Cobb-Douglas production function:

$$Q_t = T_t K_t^\alpha L_t^\beta, \quad (2)$$

where Q is real output, T an index of technology or total factor productivity, K an index of real capital which includes land, and L an index of labor-time. Changes in technology are assumed to be exogenous and independent of changes in factor inputs and do not affect the factor-intensity of production.

Equation (2) can be rewritten to show the sources of output growth:

$$r_Q = r_T + \alpha r_K + \beta r_L, \quad (3)$$

where r_Q is the growth rate of output, r_T the growth rate of total factor productivity or technical progress, r_K the growth rate of capital, and r_L the growth rate of labor. The equation simply says that the growth rate of output is equal to the sum of the growth rate of total factor productivity, the growth rate of capital weighted by α , and the growth rate of labor weighted by β . Increasing returns to scale occur if the sum of α and β exceeds one. It should be noted that by definition technical progress is that part of output growth which is not due to increases in capital and labor. It can therefore also capture errors in measuring the factor inputs.

Equation (3) and other specific forms of the production function have been estimated for developed and developing countries in a large number of studies. The results of the latest large-scale study by the World Bank are given in table 1. These results are consistent with those obtained by the earlier studies. They show that by far the most important source of output growth in developing countries is increases in the capital stock. For the group as a whole capital's contribution was 65%. Next came labor, a long way behind at 23%, and technical progress further back at 14%. These findings contrast sharply with those obtained for developed countries where technical progress is much more important and where growth in output is largely accounted for by the growing efficiency in the use of inputs rather than by their accumulation. Within the developing world the results for East Asia conform more to the pattern in the developed world, with the contribution of technical progress being more significant. In neither group of

TABLE 1

CONTRIBUTIONS OF CAPITAL, LABOR, AND TECHNICAL PROGRESS TO OUTPUT GROWTH (%)

Region	Capital	Labor	Technical Progress
Developing countries, 1960-87	65	23	14
Africa	73	28	0
East Asia	57	16	28
Europe, Middle East, and North Africa	58	14	28
Latin America	67	30	0
South Asia	67	20	14
Selected developed countries, 1960-85:			
France	27	-5	78
West Germany	23	-10	87
Japan	36	5	59
United Kingdom	27	-5	78
United States	23	27	50

SOURCE.—World Bank, *World Development Report, 1991* (New York: Oxford University Press, 1991), p. 45.

countries was increasing returns a source of output growth as the sum of α and β was less than one.

Steps 2 and 3: Factors and economic policies behind sources of output growth. Once step 1 has established that capital accumulation is very important to output growth, step 2 has to identify the factors that increase the supply of capital. Step 3 has then to identify the economic policies that bring about the factors themselves. At the end of this, it should be possible to see if the different economic policies pursued by developing economies can explain differences in their growth performance. The same process can be adopted for the role played by increases in labor and technical progress.

Supply of Capital

The size of the capital stock is determined by the investment level over a long period of time. Table 2 shows that the gross domestic investment to GDP ratios of the NIEs and of the Southeast Asian economies, with the exception of the Philippines, have been significantly higher than those of the South Asian ones since 1950. This difference has been due to two factors. The first is that the East Asian economies save significantly more than do the South Asian economies (table 2). The second is that East Asian economies have been more successful in attracting direct foreign investment. Japan has traditionally been the main source of direct foreign investment in the developing economies of Asia. Table 3 shows that the largest share of this investment has gone to the NIEs, followed closely by the Southeast Asian group, where the performance of Indonesia is particularly striking.

TABLE 2

GROSS DOMESTIC INVESTMENT AND SAVING AS PERCENTAGE SHARES OF GDP, 1960-90 (%)

	GROSS DOMESTIC INVESTMENT/ GDP			GROSS DOMESTIC SAVING/ GDP		
	1960-70	1971-80	1981-90	1960-70	1971-80	1981-90
Newly industrial- izing econ- omies:						
Hong Kong	21.7	26.5	27.5	20.6	27.5	30.5
Singapore	24.0	41.1	42.0	14.9	30.0	42.3
South Korea	17.6	28.9	30.5	13.7	22.3	31.8
Taiwan	N.A.	30.6	22.6	19.8	32.2	32.9
Southeast Asia:						
Indonesia	9.4	24.8	30.2	4.9	22.6	31.8
Malaysia	17.7	20.5	30.8	20.6	30.4	33.2
Philippines	19.3	26.7	20.0	18.2	23.4	19.0
Thailand	20.7	25.9	26.6	19.9	21.5	24.5
South Asia:						
Bangladesh	9.9	7.3	11.4	7.8	2.2	2.6
India	17.6	20.8	23.9	15.3	20.5	20.3
Myanmar	15.0	13.9	15.6	11.4	12.3	12.4
Nepal	6.0	16.2	19.9	2.9	5.7	10.4
Pakistan	16.3	16.4	18.7	8.9	10.1	10.3
Sri Lanka	14.9	19.4	24.8	11.8	13.8	13.3
China	N.A.	34.2	34.6	N.A.	32.5	33.7

SOURCES.—World Bank, *World Tables*, 3d ed. (Baltimore: Johns Hopkins University Press, 1983), pp. 504, 553; and Asian Development Bank, *Asian Development Outlook, 1991* (Manila: Asian Development Bank, 1991), pp. 284-85.

NOTE.—N.A. = not available.

The South Asian economies have been able to attract only 1% of this investment.

The East Asian economies have been more successful in introducing policies that encourage domestic savings and direct foreign investment. The empirical literature shows that the national saving ratios of developing Asian economies are increased by improvements in the overall government budget balance and by increases in the real interest rate but are reduced by higher population dependency ratios, inflation rates, and foreign debt.⁷ Table 4 shows that East Asian economies, especially the NIEs, possess significantly more of the characteristics that encourage domestic savings. They pursue more responsible fiscal policies by keeping a tighter reign over the government budget. Their monetary policies keep the inflation rate low and the real interest rate high. They resort to foreign borrowing but do so judiciously. Their effective family planning programs lower their population growth rate and dependency ratio. As the process of economic growth itself decreases the population growth rate, they are rewarded for it.

Countries that succeed in attracting direct foreign investment are

TABLE 3
 JAPANESE FOREIGN DIRECT INVESTMENT IN ASIA,
 1951-88

Region	Amount (US\$ Millions)	Percentage Distribution (%)
Newly industrializing economies	15,018	46.8
Hong Kong	6,167	19.2
Singapore	3,812	11.9
South Korea	3,248	10.1
Taiwan	1,791	5.6
Southeast Asia	14,750	46.0
Indonesia	9,804	30.6
Malaysia	1,834	5.7
Philippines	1,120	3.5
Thailand	1,992	6.2
South Asia	270	0.9
Bangladesh	11	0
India	148	0.5
Pakistan	18	0.1
Sri Lanka	93	0.3
China	2,036	6.3

SOURCE.—J. Riedel, "Intra-Asian Trade and Foreign Direct Investment," *Asian Development Review* 9 (1991): 140.

not those that offer fiscal incentives only. Empirical studies show that there is no support for the belief of the governments of most developing countries that the provision of fiscal incentives is necessary to attract direct foreign investment.⁸ Nor is there support for the belief that the greater the generosity of the incentive programs, the greater will be the level of such investment. What matters are the presence of natural resources and the pursuit of sound economic policies. The latter would include the type of fiscal, monetary, and budgetary policies that lead to high savings. These policies the NIEs have in abundance over other developing economies of Asia, enough to compensate for their lack of natural resources and make them very attractive destinations for direct foreign investment. The empirical evidence suggests that countries that cannot boast of such policies tend to compensate for this weakness by offering more and more generous incentives. This strategy can be self-defeating, for extreme generosity in giving incentives can be read as a danger signal and not as a lure.

Supply of Labor

On the surface there is no difference in the ability of Asian developing economies to supply labor. All of them, especially the South Asian ones, have experienced rapid population growth, often in excess of

TABLE 4

GOVERNMENT BUDGET BALANCE, REAL INTEREST RATE, INFLATION RATE, EXTERNAL DEBT SERVICE RATIO, AND DEPENDENCY RATIO OF ASIAN DEVELOPING COUNTRIES (%)

Region	Budget Surplus or Deficit/GDP, 1985-89	Real Deposit Rate of Interest, 1982-88	Average Annual Changes in Consumer Prices, 1981-90	Total Debt Service/Exports of Goods and Services, 1990	Population between 0-14 Years/Total Population, 1989
Newly industrializing economies:					
Hong Kong	2.5	N.A.	8.2	N.A.	21.6
Singapore	1.3	N.A.	2.3	1.4	23.7
South Korea	-.3	5.1	6.5	11.0	18.0
Taiwan	.1	5.5	3.1	.9	N.A.
Southeast Asia:					
Indonesia	-5.7	7.6	8.8	30.7	36.8
Malaysia	-7.8	5.4	3.3	11.4	37.8
Philippines	-2.7	-.3	14.6	30.3	40.1
Thailand	-1.1	7.7	4.4	15.4	33.4
South Asia:					
Bangladesh	-6.2	2.3	10.7	19.0	44.6
India	-5.3	1.1	9.1	26.4	37.1
Myanmar	N.A.	N.A.	11.7	26.0	37.5
Nepal	-9.5	N.A.	10.5	19.1	43.0
Pakistan	-7.0	3.0	7.5	21.8	45.3
Sri Lanka	-11.4	4.1	12.3	19.6	32.5
China	-1.8	N.A.	7.7	9.2	27.2

SOURCES.—Asian Development Bank, *Asian Development Outlook, 1991* (Manila: Asian Development Bank, 1991), pp. 286, 301, and 306; M. J. Fry, "Domestic Resource Mobilization in Developing Asia: Four Policy Issues," *Asian Development Review* 9 (1991): 18-19; World Bank, *World Development Report, 1991* (New York: Oxford University Press, 1991), pp. 254-56.

NOTE.—N.A. = not available.

2.5% per annum, to ensure that there is no shortage of workers. This statement must, of course, be qualified by the fact that abundant labor supply does not necessarily mean greater labor input. Labor unions, labor codes and legislation, and the pay policy of the public sector can raise wages above market-clearing levels and reduce the demand for labor.⁹

However, rapid population growth has its negative side. It diverts scarce resources from programs on education, health, and nutrition to improve the quality of the labor force. In the extreme case of poor medical and nutrition facilities resulting in a reduction in the number of able-bodied workers, the adverse effect will be captured by a drop in the size of the labor force. In the more likely case of rapid population growth reducing the quality of labor, the adverse effect will be reflected in a smaller value for the contribution of technical progress to output

growth. In either case, the more rapid population growth rates of the South Asian countries will have reduced the impact of labor's contribution to economic growth.

Promotion of Technical Progress

The first requirement for having technical progress as a source of output growth is an educational level that is high and that has a correct mixture of skills. The educational attainment of the NIEs is much higher than that of other countries, with the exception of the Philippines and Sri Lanka.¹⁰ Moreover, there is a much greater emphasis on vocational and technical as opposed to general education.¹¹ This is particularly important because of the widespread introduction of the computer in the workplace, even in jobs usually regarded as requiring fewer skills.

This has been achieved by expanding and improving the quality of primary and secondary education and by providing incentives to increase the supply of and demand for vocational and technical training. In providing for universal primary education the NIEs pursued innovative and cost-effective measures. An important one was to run two school shifts rather than use scarce resources to build more schools. This then released funds for the construction of other important infrastructural facilities such as roads and irrigation schemes.

The provision of specialized technical skills has also been innovative. While it is widely accepted that such skills are best obtained by on-the-job training in private enterprises, it is difficult to persuade firms to invest in it because employees who benefit from it leave before the training costs are recovered through productivity gains. This was the situation faced by the NIEs in the late 1960s, and their response to it was typified by the action taken by Singapore. A number of vocational training programs was established under the Vocational Training and Industrial Training Board. When such programs failed to provide enough skilled workers the board encouraged enterprises to set up their own programs. Workers were required to contribute 4% of their monthly pay to a fund against which employers could draw for reimbursements. The next stage was the establishment of public training centers when it was found that on-the-job training programs run by the private sector could not supply enough skilled workers. Such centers were funded by a levy on business organizations equivalent to 1% of their wages bill.

The NIEs have also been more successful in introducing more efficient techniques of production. Data to substantiate this are difficult to obtain, but the value added per worker in manufacturing can be used as a proxy, and figures on this show that the NIEs are considerably ahead of the other developing nations of Asia.¹² Another proxy is the presence of foreign firms, as these tend to adopt the technologies

they are used to at home and they constantly seek to increase productivity to offset wage increases. As is evident in table 3, the NIEs are much preferred to South Asian economies as destinations for Japanese direct foreign investment. The policies that encourage such a preference and rapid technical progress have already been described.

Not only have the NIEs increased the quality of their labor and technology more quickly, they have tended to use capital more effectively as well. The empirical evidence shows that countries in East Asia tend to utilize capital in manufacturing longer and more intensively than countries in South Asia.¹³ Having a large capital stock is not enough. It has to be used efficiently. Some South Asian countries, such as India and Sri Lanka, have high rates of investment but have relatively little to show for it.

The main determinants of capital utilization in manufacturing are capital intensity, relative factor prices, and the scale of operation. The more capital intensive the operation the higher capital utilization is because there are more capital costs to be paid and the incentive is greater to economize on them by operating the machinery longer. The higher the relative cost of capital, the higher the capital utilization, again to economize on its use. The larger the firm, the more it enjoys technological and management economies of scale and the easier it is to operate at higher levels of utilization. Empirical studies show that the scale factor is far more important than the relative factor price in determining the level of capital utilization.¹⁴ Thus large firms will utilize their capital more even though they face lower relative capital costs.

The NIEs are more advanced than the other developing economies of Asia and can therefore be expected to have more capital-intensive activities and higher levels of capital utilization. Moreover, their prices of key economic variables are generally less distorted and they export more. A lower degree of price distortion produces relatively higher prices for capital, while more exports produce a larger scale of operation, both effects encouraging a higher level of capital utilization.

Price distortions arise when the prices of goods and services, capital and labor, do not correctly reflect their scarcity. They are caused by government intervention in the economy to pursue social or economic objectives or by the presence of monopoly in the market. R. Agarwala presents distortion indices (low, medium, or high) for foreign exchange pricing, factor pricing, and product pricing for 31 developing countries in the 1970s.¹⁵ The results for Asian developing countries, given in table 5, show that the South Korean and Southeast Asian economies are less distorted than the South Asian economies, with the difference being most noticeable in factor pricing. While a more recent study, by D. Dollar, shows that there is no such difference in the real exchange rate distortions over the 1976–85 period, it does not contradict Agar-

TABLE 5
DISTORTION INDEXES FOR SELECTED ASIAN DEVELOPING ECONOMIES IN THE 1970s
(1 = Low, 2 = Medium, 3 = High)

REGION	FOREIGN EXCHANGE PRICING			FACTOR PRICING		PRODUCT PRICING		COMPOSITE DISTORTION INDEX
	EX	PM	DA	RI	RW	IN	PT	
Newly industrial- izing econ- omies:								
South Korea	1	1	3	2	1	2	1	1.57
Southeast Asia:								
Indonesia	2	2	1	2	1	2	3	1.86
Malaysia	1	1	2	2	2	1	2	1.57
Philippines	1	2	2	2	1	1	2	1.57
Thailand	1	2	1	1	1	1	3	1.43
South Asia:								
Bangladesh	1	3	2	3	3	3	3	2.57
India	1	3	2	2	2	1	2	1.86
Pakistan	2	3	2	2	3	2	2	2.29
Sri Lanka	1	2	1	2	3	2	2	1.86

SOURCE.—R. Agarwala, "Price Distortions and Growth in Developing Countries," World Bank Staff Working Papers, no. 575 (World Bank, Washington, D.C., 1983), p. 49.

NOTE.—EX = distortion level in exchange rate, PM = protection level for manufacturing, DA = distortion level in agricultural pricing, RI = distortion level for interest rates, RW = distortion level for wages, IN = distortion level for overall price level, and PT = distortion level for infrastructure pricing indicated by pricing of power utilities.

wala's finding that factor pricing is more distorted in South Asian countries.¹⁶ This greater distortion will have been a significant factor in giving them a lower level of capital utilization.

The evidence on the greater export orientation of the NIEs, as given in table 6, is much more clear-cut. The indexes used are the country's merchandise exports to GDP ratio and its share of world exports. As these economies produce a great deal more for the export market, their scale of operation tends to be larger, which would encourage a higher level of capital utilization. The use of these indexes to show export orientation is weakened by the fact that the importance of trade is inversely related to the size of the country. However, they have been used only to show that producing more for the export market and less for the domestic market has increased the scale of operation in the NIEs.

The ability to combine the factors of production in a more economically efficient way and thereby to increase total factor productivity is also helped by having less price distortion. Labor-abundant and capital-scarce developing countries have a comparative advantage in producing labor-intensive and low-technology manufactured goods. They would produce such goods only if capital costs have not been

TABLE 6

MERCHANDISE EXPORTS/GDP AND SHARE OF WORLD EXPORTS, 1981 AND 1990 (%)

REGION	MERCHANDISE EXPORTS/GDP		SHARE OF WORLD EXPORTS	
	1981	1990	1981	1990
Newly industrializing economies:				
Hong Kong	73.9	116.3	1.18	2.47
Singapore	141.6	144.4	1.13	1.52
South Korea	29.6	27.3	1.15	1.92
Taiwan	46.5	41.9	1.21	1.97
Southeast Asia:				
Indonesia	27.3	22.9	1.28	.73
Malaysia	46.7	67.6	.63	.86
Philippines	14.8	17.6	.31	.24
Thailand	19.8	28.6	.38	.70
South Asia:				
Bangladesh	6.1	6.6	.04	.04
India	4.6	6.6	.04	.55
Myanmar	9.1	4.1	.02	.01
Nepal	6.5	6.0	0	.01
Pakistan	9.7	12.2	.15	.15
Sri Lanka	24.2	24.0	.05	.05
China	8.1	10.3	1.16	1.78

SOURCE.—Asian Development Bank, *Asian Development Outlook, 1990* (Manila: Asian Development Bank, 1990), pp. 235–36, and *Asian Development Outlook, 1991* (Manila: Asian Development Bank, 1991), pp. 291–92.

reduced artificially by the provision of fiscal incentives and labor costs increased by the imposition of minimum wage and other legislation. Table 5 shows that capital and labor costs are less distorted in East Asian countries.

The economically efficient combination of factors of production is also encouraged by the adoption of export-oriented policies. Countries have to be competitive to succeed in the export market, and this forces them to combine and use their resources efficiently. It is therefore not surprising that countries that are export-oriented tend to grow faster than those that are inward-looking. The reason is the economic efficiency that exporting promotes and demands.

IV. Concluding Remarks

By using a stepwise and backtracking approach to explaining differences in growth performances, it has been possible to identify the sources of output growth, the factors behind these sources, and the economic policies behind the factors themselves. Its use suggests that most of the economic policies needed to bring about output growth in the NIEs come from the adoption of a market-friendly and internation-

ally competitive approach to growth. Thus the approach should be seen more as a more methodical way to present the market-friendly and internationally competitive hypothesis and less as a hypothesis itself.

The advantage in using this approach is its ability to identify logically each step in the chain of events. In this sense, it is preferred to approaches that attempt to show the relationship between economic growth and their *primum mobile* by the use of an estimating equation at a highly aggregative level without specifying the underlying causal relationships between the two variables. It is also preferred to those that specify the underlying causal relationships but do not estimate the structural equations.

The suggested approach has also the advantage of being able to incorporate the influence of noneconomic factors at the appropriate level. For example, the debate on what influence a political system can have on economic growth can be introduced as the fourth step in the stepwise and backtracking approach.¹⁷ The question will be whether an authoritarian system is more effective than a democratic one in introducing the economic policies required for greater economic growth. Cultural hypotheses can be introduced in the same way, for example, by asking whether the presence of Confucian or Protestant values will ease the introduction and implementation of the required economic policies. Noneconomic hypotheses of economic performances tend to be derided by economists when presented on their own as all-embracing explanations. However, when introduced and argued as suggested in this study, they become more effective.

Notes

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