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Labor Markets and Adjustment in Open Asian Economies: The Republic of Korea and Malaysia

Dipak Mazumdar

This article deals with the adjustment following external shocks in two open Asian economies: the Republic of Korea and Malaysia. There were important differences in the economic structure of the two countries as well as significant differences in the way external events produced "crises" that interrupted their dynamic economic growth. Detailed analyses of economic cycles in the two decades preceding 1987-88 show that the behavior of factor markets, particularly the markets for labor and foreign exchange, helped Korea to adjust quickly to the shocks but in Malaysia actually caused the crisis to deepen.

For economies heavily dependent on exports, the unit cost of labor in dollars is of central importance as an index of the competitiveness of exports and hence of their ability to mount a sustained recovery after a difficult period. Accordingly, the heart of the analysis is the determination of the unit cost of labor and the factors affecting its change throughout the cycles. Concentration on this critical variable helps to spotlight the crucial differences in the factor markets of the two economies.

Many developing countries experienced serious problems of adjustment following "shocks" originating in the international economy in the 1970s and the 1980s. The problems were naturally more severe the more open was the economy concerned. The shocks transmitted by the world economy included large fluctuations in the prices of primary commodities and of oil; sharp increases in interest rates in the early 1980s; and disruption in financial markets, which made access to foreign borrowing difficult for many countries. Countries differed greatly in how well they adjusted. The most important variables were, first, the fiscal-monetary policies that enabled the countries to try to reestablish balance in their aggregate income-expenditure accounts for internal and external stability and, second, the flexibility in the factor market, which helped to preserve, and perhaps augment, international competitiveness in a volatile world market. This article analyzes the factors affecting the latter by comparing the experiences of two open Asian economies: the Republic of Korea and Malaysia.

Dipak Mazumdar is with the Africa Regional Office at the World Bank.

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In the two decades ending in the mid-1980s both Korea and Malaysia had high rates of growth based on a sharp expansion of exports. Both had their growth interrupted twice by events associated with the two oil price hikes, although the interruptions occurred through different mechanisms, and both bounded back very quickly after a short-lived depression. There were important differences, however, in the structure of the two economies. Korea's export economy was based much more on manufactured goods, and, whereas Korea was an oil importer, export of mineral fuel was an important (but not a dominant) element of Malaysia's trade account. Apart from such structural differences there were important institutional differences in factors affecting the unit cost of labor, and it is these that the analysis here seeks to highlight.

For economies so heavily dependent on exports, the unit labor cost in dollars needs to decline in times of economic depression to restore the country's competitiveness in the world market, and it needs to stabilize to sustain its growth when the world economy revives. The unit cost of labor is defined precisely in section II. Its determinants and course in the two economies are the central topic of this article. Events in the labor market, which determine the ratio of wages to labor productivity, as well as in the foreign exchange market, which determine the nominal exchange rate, are equally important in defining the course of the unit cost of labor, together with the ratio of producer to consumer prices. But there are differences in the institutional structures and policies affecting behavior in the labor and foreign exchange markets in the two economies. Microeconomic events in their markets, in particular, affect the course of macroeconomic adjustments in economies responding to external shocks.

This discussion analyzes the course of the unit cost of labor in only the manufacturing sectors of the two economies. Korea was already established as a newly industrialized country in the period under consideration. Its competitiveness in the world market of manufactured export goods was critical to its continued growth. Malaysia's exports were, by contrast, still dominated by primary commodities and fuels, with manufactured goods accounting for 20 percent of total exports in 1980. But manufactured goods were rapidly increasing their share of exports. More important, primary commodities and fuel were subject to major fluctuations in prices. When world prices for primary commodities and fuel plunged more or less simultaneously in 1981-82, Malaysia had to look to its exports of manufactures and their continued growth to provide stability to its external accounts. Thus, maintaining international competitiveness in manufacturing was of critical importance to Malaysia's adjustment in the 1980s.

Section I briefly sketches economic events, with particular reference to economic cycles in the two countries in the two decades before 1986-87. Section II derives the components of the unit cost of labor. The changes in these components during the cycles in the two economies are analyzed empirically in section III. Section IV, the heart of the analysis, contrasts the critical elements in the labor and foreign exchange markets in Korea and Malaysia with reference to the determinants of international competitiveness. Section V concludes.

I. GROWTH AND CYCLES IN KOREA AND MALAYSIA

The major phases of the economic history of the two countries are shown in figure 1.

Korea

In the decade before the first oil crisis, Korea had an uninterrupted period of growth in gross domestic product (GDP), which averaged 9.7 percent a year in real terms. During this period Korea's role as an exporter of manufactures was firmly established. The share of manufactured goods in total exports increased from 17.6 percent in 1962 to 76.1 percent in 1970 (Dornbusch and Park 1987: 394). The barter terms of trade were more or less stable, but the strong export growth is revealed in the growth of the income terms of trade at an annual rate of about 40 percent a year (Mazumdar 1990: figure 2). The growth stopped following the oil price hike of 1973. As an oil importer Korea suffered directly, and the slowdown in the world economy dampened the export sector. The rate of growth of the income terms of trade fell from its high level to 10 percent in 1975. Although it bounced back to a positive value the next year, it was at a much lower level than the average in the period of growth. The real GDP growth rate in 1974 and 1975 was around 6 percent a year, 50 percent below the average attained in the previous five or six years.

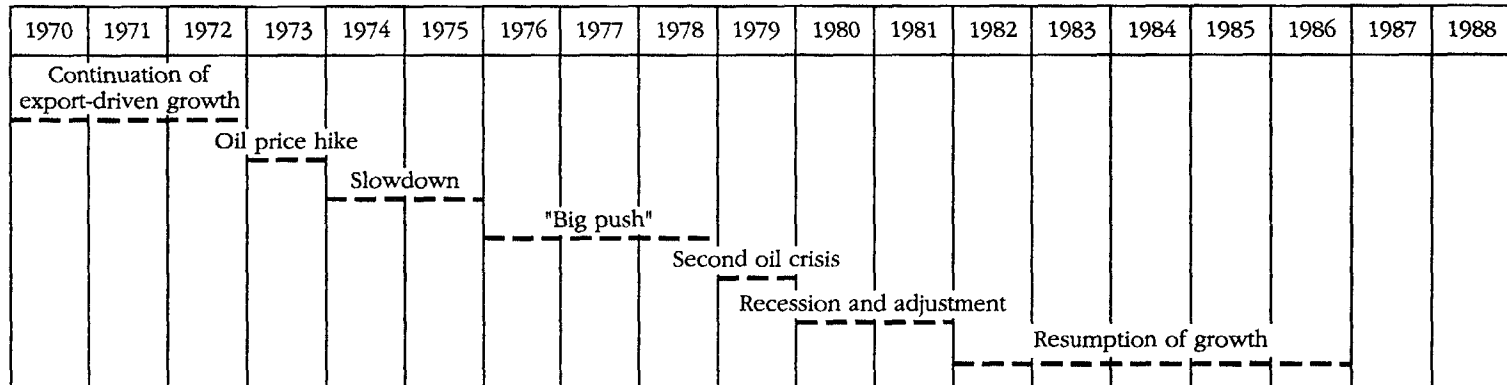
Korea's response to the crisis was to embark on a "big push" in its investment program in the heavy and chemical industries. The policymakers elected to borrow through the crisis and let the foreign debt ratio increase to maintain the planned investment rate. For the first time, the exchange rate was fixed in spite of rising inflationary pressure. This phase of Korean economic policy has been the subject of controversy. Although the budget deficit widened and the associated increase in the real exchange rate eroded external competitiveness in the short run, some analysts have maintained that laying the foundations for heavy industry helped to diversify industry and exports in the long run. Real growth during the period of the big push was moderate by Korean standards.

Although Korea benefited from the export of skilled labor to the Middle East, the crisis generated by the events during the big push led to a major depression at the end of the decade following the second oil price hike. Both the barter and the income terms of trade turned negative. The GDP growth rate fell and for the first time was negative in 1980. As domestic savings plunged, the current account deficit mushroomed, leading to the largest accumulation of foreign debt in Korea's history.

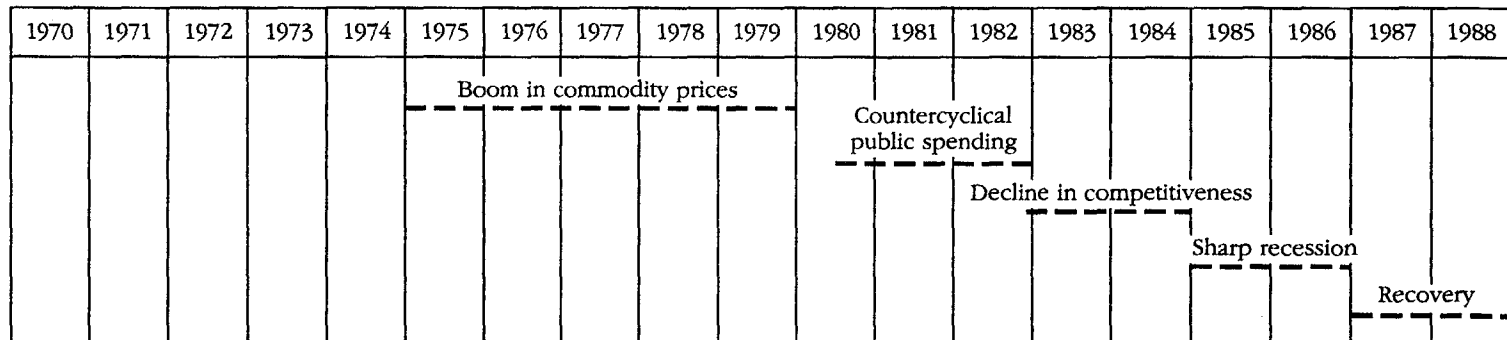
The depression was short lived. Economic policies adopted during the period prepared Korea for a strong positive response when world trade rebounded in 1983-84 and helped the economy to override another dip in the world growth rate in 1985. Section II will focus on the nexus of policies that enabled Korea to reduce the unit cost of labor (in dollars) during the crisis and prepared the way for the recovery.

Figure 1. *Economic Cycles in the Republic of Korea and Malaysia, 1970–88*

Republic of Korea



Malaysia



But other, more important, factors made the Korean economy vulnerable to external shocks and made its success in controlling the impact all the more remarkable.

First, there was high dependence on exports at the same time that Korea was dependent on crucial imports, including oil.

Second, and less well known, was Korea's persistent balance of payments deficit in the current account, a deficit that continued until the mid-1980s and increased during the oil price shocks. The deficit was used to bridge the gap between domestic savings and investment and thus to maintain a rate of investment higher than would have been possible from strictly domestic savings. In the crisis years the normal deficit expanded greatly as Korea tried to spend its way out of the recession. But a critical part of the economic management was the strict control over foreign borrowing. Both short- and long-term borrowing required government approval (see Dornbusch and Park 1987: 417-19 and the references cited therein).

Third, the continued deficits led to a high ratio of debt to gross national product (GNP), a ratio that increased from around 25 percent at the beginning of the 1970s to more than 50 percent in the early 1980s. In fact, the debt ratio was as high as in some Latin American countries during the acute debt crisis. However, because of the success in export growth, the debt-export ratio was way below Latin American levels and facilitated its servicing (Sachs 1985).

Finally, because investment was always outrunning domestic savings, Korea walked the tightrope of inflation for most of the period under consideration. The inflation rate exploded to 30 percent or more during the periods of shock. But the inflation rate never reached the level of Latin America.

In sum, the Korean pattern of growth made it very sensitive to instabilities, particularly those originating in the international economy. Careful and strict management of key policies affecting the unit cost of labor were required.

Malaysia

Malaysia is one of the most open economies of Asia. Exports as a proportion of GDP hovered around 50 percent in the 1970s and increased through the 1980s, reaching 72 percent in 1988. Unlike Korea, Malaysia is an oil exporter. But although it benefited from the oil price hikes in 1973 and 1979, it showed severe problems of adjustment when oil prices declined in the 1980s. Also unlike Korea, commodities accounted for a major portion of the exports of Malaysia during the period of this study. The share of manufactured goods in total exports continued to increase, from 26 percent in 1970 to 42 percent in 1987. But fluctuations in commodity prices have dominated the movement of Malaysia's external accounts and the terms of trade and, through it, the cycles in GDP growth. The instability of the economy has been accentuated by the fact that the international prices of Malaysia's main commodity exports have tended to move together. Moreover, some of the emerging lines of manufactured exports, such as electronics, have a highly volatile market.

The cycles in the Malaysian economy in the 1970s and the 1980s consist of two phases. Starting in 1972 the terms of trade had a sustained upswing until 1979, when it was 50 percent higher than when it started. This upswing was interrupted in 1975, but only briefly, because the sharp fall in the terms of trade that year was completely wiped out by a recovery in the following year. The terms of trade began to decline in 1980, and by 1986 it had fallen by as much as it had risen in the 1970s—50 percent, with a short but unsustainable increase in 1984. As is usual in commodity trade, quantity fluctuations accentuated the cycles in the terms of trade. In current values, exports of “inedible crude materials” in 1979 were 3.5 times higher than in 1972, but in 1985–86 they were actually 25 percent below the 1979 level. With the inclusion of mineral fuels, oils, and fats, the value of commodity exports in 1979 was 5.5 times the level of 1972, but in 1986 it was only 20 percent higher than in 1979 (World Bank 1989; Gan and Krause 1989).

The GDP growth rate fluctuated along with the fluctuations in the terms of trade but was also significantly affected by government spending and by the private sector's savings-investment balance. By and large, public and private sector savings behavior has been anticyclical in Malaysia. Insofar as this type of economy depends a great deal for its revenue on taxes on the external sector, the resources for public spending were augmented in the upswing. But the upswing did not trigger public sector overspending. In this phase of the cycle the budget deficit was fairly constant as a percentage of GDP, although it increased in absolute terms. In the private sector, however, savings rose to record heights, exceeding investment by a large margin. Thus real income in the economy increased much more rapidly than expenditure, leading to a current account surplus in the balance of payments that was sustained throughout the upswing.

Malaysia entered a new phase of the cycle at the beginning of the 1980s, when it faced the sharp decline in commodity prices. The average impact of external price developments during 1981–83 was to reduce national income by 4.5 percent (World Bank 1989: 3). The Fourth Malaysia Five-Year Plan for 1981–85 reflected the changed situation. Targets for production were appropriately set below the levels achieved in the 1970s. The growth rate of GDP was projected at 7.6 percent a year in real terms. But the two key elements of this forecast were continued rapid growth of manufactured exports (especially textiles and electronics) and sustained growth in domestic demand (5.9 percent), led by non-oil private investment (11 percent). In other words, the clear expectation was a shift in the sources of growth from the export of commodities to manufacturing based on both the domestic and world markets. The plan envisaged that the projected growth would be almost entirely financed from domestic sources; foreign financing was not expected to exceed 0.2 percent of total investment. But actual developments turned out to be very different, as indicated by the data in table 1.

Private sector investment did not pick up in the way expected. The government policy response was to compensate for the shortfall by launching an accel-

Table 1. *Key Macroeconomic Developments in Malaysia, 1981-87*

Indicator	Fourth Malaysia Five-Year Plan				
	Target, 1981-85	Actual values			
		1981-84	1985	1986	1987
Terms of trade (1980 = 100) ^a	99.5	80.4	79.2	76.0	79.3
Current account surplus (percentage of GNP)	-0.1	-10.2	-2.4	-0.3	8.3
Overall public sector deficit (percentage of GNP)	-6.7	-17.6	-5.7	-10.6	-8.4
Real growth (percent)					
GDP	7.6	6.7	-1.0	1.2	5.2
Agriculture	3.0	2.9	2.5	4.0	7.5
Manufacturing	11.0	8.6	-3.8	7.5	12.7
Construction	9.0	8.1	-8.4	-14.0	-6.0
Government services	9.0	6.5	2.1	4.3	4.0

Note: The Fourth Malaysia Five-Year Plan was for 1981-85.

a. 1970 weights.

Source: World Bank (1989: table 2.1, p. 4).

erated program of public expenditure to sustain real growth in the economy. It is true that there were accumulated reserves earned during the preceding boom in commodity prices. Also, the forecasts for oil prices continued to be optimistic from the Malaysian standpoint. But the high pace of public investment and growth in expenditure could be sustained only by a budget deficit, which turned out to be nearly three times higher as a percentage of GNP than was envisaged in the Fourth Plan.

There are only three ways of financing a budget deficit: inflationary finance through an accommodating monetary policy, a reduction in private domestic absorption through a rise in domestic savings or a fall in investment, and an increase in foreign borrowing. In Malaysia the first option was foreclosed by the monetary authorities. A policy of monetary restraint was adopted explicitly to prevent the budget deficit from spilling over into inflationary pressures and current account deficits in the balance of payments. From 1980 onward the annual rate of growth of the money supply (M1) declined continuously, registering a growth rate of -0.6 percent in 1984.¹ As a consequence, the rate of inflation, averaging 4.2 percent as measured by the GDP deflator, was lower in this period than in the previous phase of the upswing, when it averaged 8.9 percent. This was the case even though the rate of inflation increased in successive years after 1981.

As far as private domestic absorption was concerned, unlike in the preceding boom, private savings fell sharply in the downswing of the cycle. Of course, this

1. This policy was in sharp contrast to the general practice of Latin American monetary authorities, who seem to passively follow the needs of the fiscal authorities for monetary accommodation. The difference between Malaysia (and other East Asian countries), on the one hand, and Latin American countries, on the other, as to institutions involved in economic decisionmaking is an interesting topic for investigation.

was as expected if consumers behaved rationally in attempting to smooth out fluctuations over time. Savings out of transitory income gains increased during an upswing of the terms of trade and decreased when the downswing brought unanticipated loss in income. Private investment did not fall until the recession years of 1985–86, although its composition might have changed. Thus the savings-investment balance in the private sector moved in a way opposite to what was required to offset the government budget deficit.

There was thus only one way left to finance the deficit: borrowing from external sources. As a result of external debt financing, the debt-GNP ratio increased dramatically, from 9.4 percent in 1980 to 39.0 percent in 1984. Furthermore, a great deal of the borrowing was done through commercial banks at variable interest rates. Loans of this type increased from 45 percent of total debt in 1980, to 70 percent in 1984, and to a high of nearly 80 percent in 1985. Because of the high international interest rates of the early 1980s, the average interest cost of external debt increased from 8.1 percent in 1979 to a high of 13.1 percent in 1981 before falling gradually to 9.7 percent in 1984.

Throughout this period the authorities in Malaysia took a passive attitude toward the exchange rate. The capital inflow triggered by the budget deficit was instrumental in causing a significant appreciation of the real exchange rate. As is shown in more detail in section III, this appreciation, together with adverse movements in the labor market, reduced Malaysia's competitiveness in the world market and threatened to create an unsustainable deficit in the current account of the balance of payments. Although the external sector still depended heavily on the export of commodities, manufactured goods were, as already mentioned, emerging as the most dynamic sector. The rising dollar cost of labor in manufacturing was of particular concern.

The management of economic policy in Malaysia became sensitive to the emerging economic problem soon after the explosive budget deficit of 1981–82. Measures to cut government expenditure were initiated in 1983. The ratio of consolidated public deficit to GDP was drastically reduced, from 18 percent in 1982 to 7 percent in 1985. The improvement of the terms of trade in 1984 proved to be temporary, however, and Malaysia was hit by a further drop in this key variable in 1985–86. Without an offsetting rise in public expenditures this time, Malaysia sustained a severe recession, with the rate of growth of GDP actually turning negative for the first time in 1985 and barely positive in 1986.

The recession, short as it was, managed to correct the basic imbalances in the economy fairly quickly. Somewhat to the surprise of observers, the Malaysian economy registered a turnaround, showing a substantial, 5.2 percent rate of growth of GDP in 1987. The performance in 1988 was even better at 7.9 percent, signifying that the recovery was well under way. The upturn was again fueled by the external sector, with the terms of trade improving by 18 percent and the prices of the major non-oil commodities once more increasing in unison. The total value of commodities exports returned very nearly to the prerecession level of 1984. But a major development in the behavior of exports during the

recovery was the leading role taken by manufactured goods, whose share in total exports climbed to 48 percent by the end of 1988. The next section describes how factor market flexibility was restored and how the threat of a loss in competitiveness, a threat that dampened the growth of manufactured exports in 1985–86, proved to be short lived, at least on this occasion.

During this period of recovery, the growth of public expenditure was restrained. With the public sector deficit holding steady in proportion to GNP and the gap between private savings and investment still remaining positive, there was no need for the economy to borrow from abroad. In fact, the accumulation of reserves through the surplus in the current account during these years enabled the government to prepay a substantial amount of the outstanding external debt. The ratio of gross debt to GDP fell from a high of 52 percent in 1985 to 37 percent in 1987 and was as low as 30 percent in 1988.

II. DETERMINANTS OF THE UNIT COST OF LABOR IN DOLLARS

This section sets out the framework within which determinants of the unit cost of labor in dollars can be studied. The aim is to pinpoint the key factors that affected the international competitiveness of the two economies during the periods of crisis and adjustment discussed in section I.

The Components of the Unit Cost of Labor

Define the unit cost of labor in dollars, U_c , as

$$(1) \quad U_c = W/V \cdot 1/e$$

where W denotes wages per worker, V denotes value added per worker, and e denotes the exchange rate (wons per dollar).

The following relation can be derived from equation 1:

$$(2) \quad \begin{aligned} \dot{U}_c &= \dot{W} - \dot{V} - \dot{e} \\ &= (\dot{w} + \dot{P}_c) - (\dot{v} + \dot{P}_p) - \dot{e} \\ &= (\dot{w} - \dot{v}) + (\dot{P}_c - \dot{P}_p) - \dot{e} \end{aligned}$$

where the dots represent proportionate rates of change. The additional variables are defined as follows: w is the real wage (in terms of consumer goods), v is an index of the physical productivity of labor, P_c is an index of the cost of living, and P_p is an index of prices of manufactured goods. Equation 2 decomposes the percentage change in the unit cost of labor into three elements: the wage-productivity gap, the shift in the ratio of consumer to producer prices, and the change in the nominal exchange rate.

The first term depends on the behavior of the labor market. The second is what is sometimes called the domestic real exchange rate (DRER), on the assumption that P_c is the price of nontraded goods and P_p is the price of traded goods. This is by and large true in the economies being examined. A large proportion of the manufactured goods produced in these economies is exported, so the price index for manufactured goods would indeed be the price index for traded goods.

Nontraded services, transport, and housing costs (as determined by the cost of land and buildings) have a dominant place in the consumer budget. The only major item of consumption that is generally a traded good is rice—an important staple in the Asian diet. But Malaysia and Korea, like many other Asian economies, maintain an administered price of rice. The domestic price is insulated from the world trading price by a public marketing agency that is funded to accumulate and sell from its own buffer stock. Thus P_c would be a good proxy for a price index of nontraded goods.

*The Relation between the Domestic Real Exchange Rate
and the Nominal Exchange Rate*

Movements in the second term in the last line of equation 2, the DRER, are likely to be related to changes in the nominal exchange rate, e . Thus, when there is a devaluation of the currency, both P_c and P_p rise in the local currency. But the price of traded goods is anchored in the world market setting, placing a limit on the extent to which P_p can rise in the domestic market. P_c , however, depends much more on domestic fiscal and monetary policies and generally has a tendency to exceed increases in P_p in an inflationary situation fueled by the devaluation.² This is so even when the domestic price of rice is administratively set by the buffer stock scheme. In Korea, for instance, the objective of the food policy is a dual one: supporting a high price for the farmer and enabling consumers to buy at a lower price (although one that is still higher than the world price). The difference between the buying and selling prices creates a deficit for the so-called Grain Management Fund, which is used to administer the policy. Apart from the domestic procurement, the government has had to import a substantial amount of rice and barley to hold down selling prices. Thus with devaluation, the deficit of the fund increases. Although food prices are not directly affected, the inflationary impact of the devaluation through an increase in the fiscal deficit could be significant.

A second channel through which movements in e and the DRER are related is through the familiar story of the “Dutch disease” class of models: within tradable goods, commodities are distinguished from manufactured goods. The improvement of the terms of trade comes through a boom in the price of commodities, but the prices of the other traded goods do not experience a (relative) increase. The improvement in the terms of trade leads to a balance of payments surplus on the current account and, other things remaining unchanged, causes the exchange rate to appreciate. At the same time the “spending effect”—whether in the private sector or public sector, or both—induced by the boom in commodity prices causes a relative increase in the price of nontradable goods, although, with world prices of manufactured goods unchanged, P_p in domestic currency actually falls. Thus the DRER sharply increases together with e . The unit cost of labor increases both because of e and because of appreciation in the DRER, unless it is offset by a

2. In the traditional theoretical literature the object of devaluation is to increase P_p in relation to P_c to help shift resources to the tradable sector. The argument here is that this objective may be thwarted if the secondary effect through inflation is sufficiently strong.

sufficient increase in the wage-productivity gap in the labor market.³ This course of events might be altered by changes in the capital account of the balance of payments, and, as we shall see, this was indeed the case in Malaysia.

A difference between the Korean and Malaysian exchange rate systems is of central importance and should be stressed here. The argument above assumed that the economy followed a freely floating exchange rate system. This was indeed the case in Malaysia with, in addition, no control on the movement of capital. Korea, by contrast, had a managed exchange rate system with strict control on foreign capital flows. This difference is reflected more in the way exchange rate policies have been implemented than in the declared intentions of the economic regimes of the two countries. In September 1975, the ringgit (previously the Malaysian dollar) was pegged to a basket of currencies of its major trading partners. But the central bank has repeatedly declared its intentions that "the Bank's policy to intervene has been, and will continue to be, directed at moderating fluctuations, but not at preventing the exchange rate from reflecting any underlying trend in the balance of market supply and demand" (Malaysia Bank Negara 1979: 311). Similarly Balassa and Williamson state: "The Koreans often describe their exchange rate policy as one of pegging to a basket containing the five currencies that constitute the special drawing right, weighted to reflect the importance to Korea of each of the five currencies. It is mathematically impossible that this is what they have actually done, however, unless at least one of the currencies has a negative weight!" (1987: 45-46). It will be shown below that although Malaysian exchange rate policy has been largely accommodating to international events, Korea has been aggressive in paying close attention to the maintenance of its international competitiveness and has therefore been sensitive to the course of the domestic producers' costs as affected by external shocks. Apart from differences in labor market behavior, it will be suggested that this difference in exchange rate systems played a critical role in the contrasting paths of the unit cost of labor in the periods of crisis and adjustment.

III. THE COMPONENTS OF CHANGES IN THE UNIT COST OF LABOR FOR KOREA AND MALAYSIA

This section analyzes the data in the components of the unit cost of labor for the two countries. The sources of the data are given in the appendix.

3. A point of some importance turns on the distinction between exhaustible and nonexhaustible resources within the category of "commodities." When the unit cost of labor of traded manufactured goods increases through the "Dutch disease" mechanism, the longer-run problem is less serious when the rise in prices affects nonexhaustible resources than when it affects exhaustible resources. In the latter case the adverse impact on the unit cost of labor is accompanied by a decline in the country's assets. Malaysia was an exporter of commodities of both the exhaustible type (oil and gas) and the nonexhaustible type (rubber, palm oil, sawn logs). In 1975 the exhaustible type was only a third of the nonexhaustible type in export value, but by 1981-82 the former had caught up with the latter.

Korea

The Korean data for the manufacturing sector are set out in table 2. Averages for the components of the percentage changes in the unit cost of labor are given for significant groups of years. The trend as well as the course of the variables over the short-run cycles in the economy are of interest. First, the data indicate that there has been a long-term trend in the decline of the nominal exchange rate. As noted in section I, Korea was walking the tightrope of inflation throughout the period of its growth, as domestic investment continuously outstripped domestic savings. The persistent devaluation of the won—except during the big push in the late 1970s—was an attempt to prevent Korea's competitiveness from being eroded.⁴ In many countries such attempts to prevent the erosion of external competitiveness have been thwarted by the feedback effect of the devaluation on the other two terms affecting the unit cost of labor. Devaluation is known to feed the inflationary spiral, causing the DRER to increase and eroding the effect of the devaluation. Second, the objective of policy might be defeated by a wage-price spiral, causing the relative change in real wages to increase faster than the annual percentage increase in labor productivity.

The data in table 2 indicate that, although the DRER increased as expected in response to the devaluations, the offsetting effect was small. The success of Korean macroeconomic policy in preventing a chronic inflationary situation from exploding into destabilizingly high rates of inflation is of relevance here. Unlike many Latin American countries, the tight rein on the magnitude of the government budget deficit in Korea has been remarkable. The ratio of the budget deficit to GNP, although swinging wildly from year to year, never reached 5 percent and was never allowed to stay very high for more than two years at a stretch (Dornbusch and Park 1987: 413–19).

The impact of the persistent devaluation in reducing the unit cost of labor was generally reinforced by a lag of the rate of increase of real wages behind that of labor productivity. The wage-setting institutions in Korea that allowed this result to be achieved are of great interest and will be discussed below. But equally important is that the more or less continuous decline in the share of wages did not imply a fall in real wages. On the contrary, real wage growth

4. The data for Korea presented in the text uses the won-dollar exchange rate. In practice, exchange rate management in Korea seems to have been more concerned with the won's relation to the dollar than to the other major currencies of its trading partners (Balassa and Williamson 1987: 46). For example, during 1975–79, when the won was fixed, it was pegged to the dollar. Balassa and Williamson have calculated nominal exchange rates for Korea from 1970 to 1986 using trading partner weights and also competitor weights. When these series are compared with the series for the won-dollar rate, the major trends and sharp changes are found to be the same. The magnitudes of the depreciation in the different periods, however, are greater for the alternative series (the Balassa and Williamson series). Thus the argument of the text is not affected, but the share of exchange rate depreciation in the reduction of the unit cost of labor cost is somewhat larger if we adopt one or the other of the alternative series for Korea's exchange rate (Balassa and Williamson 1987: 86–87).

Table 2. *The Unit Cost of Labor and Its Components in the Republic of Korea, 1967–86*
(annual percentage change)

<i>Period</i>	<i>Wage-productivity gap</i> (1)	<i>Consumer-producer price differential</i> (2)	<i>Nominal average exchange rate</i> (3)	<i>Unit cost of labor in U.S. dollars</i> (4)=(1)+(2)-(3)
1967–74	-2.16	1.02	6.01	-7.15
1975	-10.45	4.78	19.66	-25.33
1976–78	9.34	0.65	0.00	9.99
1979–81	-12.60	4.90	18.62	-26.32
1981–86	-1.21	0.60	5.28	-5.89

Source: United Nations (various issues); Bank of Korea (various years—b).

averaged more than 5 percent a year throughout the 20-year period and in the mid-1980s was four times what it was in the mid-1960s. This remarkable result was possible because of the sustained rate of growth in total factor productivity (TFP) in Korean development. Although the investment rate in Korea was high, the growth in labor productivity was to a large extent the result of TFP growth. Nishimizu and Robinson (1984) showed that, during the 1960s and 1970s, Korea's TFP grew 3.7 percent a year, by far the highest of the countries covered in their study.⁵

Looking more specifically at the individual cycles in the Korean economy, during the first period of export expansion, 1967–74, the unit cost of labor declined at a substantial annual rate of 7.15 percent a year. The depreciation of the nominal exchange rate as well as the excess of productivity growth over wage growth contributed to the decline in spite of an adverse movement of the DRER. But in quantitative terms the role of exchange rate depreciation was more important.

The crisis after the first oil shock and the recession in the world economy, which led to a fall in Korea's income terms of trade and a slowdown in economic growth, necessitated that a boost be given to Korea's competitiveness. The figures for 1975 given in table 2 show how Korean economic policy was able to cut the unit cost of labor by a massive 25 percent. The data also show how the cut was achieved: a sharp devaluation, offset by a relatively moderate movement of the DRER, accounted for three-fifths of the decline, the other two-fifths coming from a sizable increase in the wage-productivity gap. But even this amount of decline of the real share of labor did not imply a fall in the real wage. Rather, wage increase in 1975 was held down to 1.4 percent compared with the annual average increase in excess of 10 percent in 1966–73. This result was possible because of the high trend increase of TFP growth in the Korean economy.

Much the same story can be told for the years following the second oil price hike in 1979–81. The magnitude of the decline in the unit cost of labor was

5. Annual TFP growth was 1.3 percent in Turkey, 0.5 percent in Yugoslavia, and 2 percent in Japan.

large, continuing for two years. Nominal devaluation, offset only partially by an increase in the DRER, accounted for a somewhat larger share of the decline than the sizable wage-productivity gap. Again the rather large fall in the real share of labor did not lead to a massive decrease in real wages. Real wages did decline in Korean manufacturing during these two years—the only two years that this happened in the 20-year period. But the decline was moderate: 4.6 percent in 1980 and 0.9 percent in 1981. The increase in Korea's competitiveness continued in the difficult years of 1981–86, through a combination of real devaluation and a lag in real wage increases behind the growth of real labor productivity. Real wage growth after 1982 resumed at a somewhat lower rate of 7 percent a year until the change in the system of labor relations toward the end of the decade led to a wage explosion. The story after 1987 is outside the scope of this article, although some reference is made to it in the discussion of Korean labor markets below. But it is clear that the increase in competitiveness achieved by the mid-1980s had left Korea in good shape to take advantage of the recovery in world trade in the second half of the 1980s.

Malaysia

The relevant statistics for Malaysia are given in table 3 for each year of the following periods: the commodity boom of the 1970s; the downswing in export prices, which went hand in hand with the fall in oil prices in the first half of the 1980s; the sharp recession in 1984–85; and the subsequent sharp recovery. The major point of interest is the behavior of the unit cost of labor, which is exactly the opposite of what would be predicted by a standard "Dutch disease" type of

Table 3. *The Unit Cost of Labor and Its Components in the Manufacturing Sector in Malaysia, 1976–87*
(annual percentage change)

Year	Wage- productivity gap (1)	Consumer- producer price differential (2)	Nominal ex- change rate ^a (3)	Unit cost of labor in foreign currency (4)=(1)+(2)-(3)
1976	17.1	-14.8	0.8	1.5
1977	1.2	-5.2	-2.0	-2.0
1978	16.9	-23.6	1.1	-7.8
1979	-19.9	11.9	-3.8	-4.2
1980	-1.4	-2.5	-0.5	-3.4
1981	3.3	5.8	-5.2	14.3
1982	5.3	8.7	-7.2	21.2
1983	0.9	1.2	-6.3	8.4
1984	-0.7	0.2	-6.5	6.0
1985	0.9	3.8	2.1	2.6
1986	-7.3	6.8	17.5	-18.0
1987	-0.5	-2.5	6.0	-9.0

a. The nominal exchange rate is ringgits per unit of foreign currency.

Source: The wage-productivity gap and consumer-producer price differential are from Soon (1990: table C, p. 16). The exchange rate data are from Gan and Krause (1990: table 11).

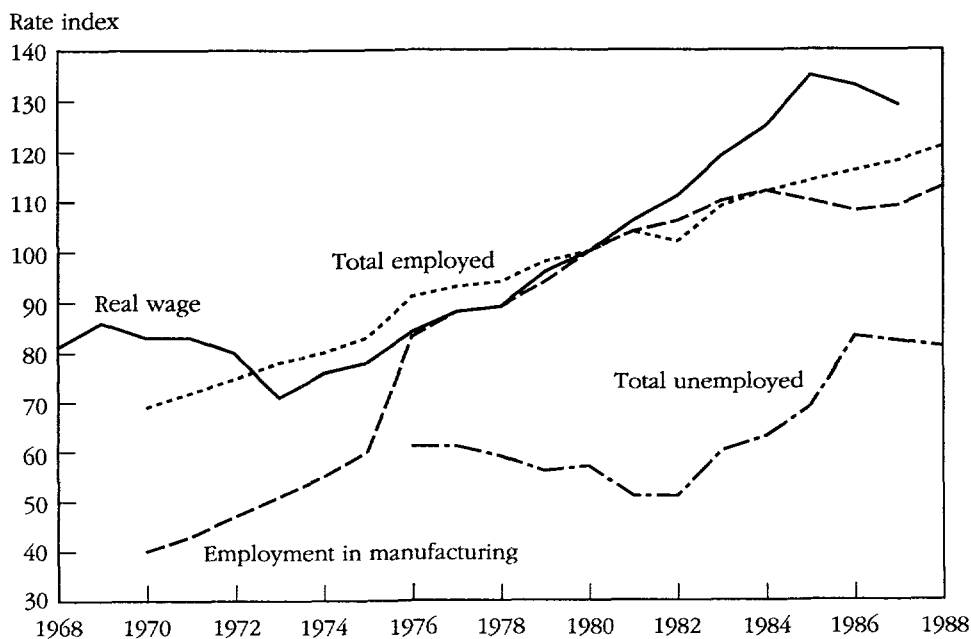
model. During the commodity price boom of the second half of the 1970s, the international competitiveness of Malaysia's manufacturing increased each year as the unit cost of labor fell. From one year to the next, the nominal exchange rate did not change all that much. Instead, contrary to the prediction of the "Dutch disease" model, the DRER actually declined in most years, offsetting any tendency of real wages to outstrip the increase in productivity. In the subsequent phase of the downswing of commodity prices, however, the unit cost of labor increased persistently as all its components moved in a "perverse" way from the predictions of the standard model. The nominal exchange rate, instead of declining with the fall in the terms of trade, actually increased persistently from 1979 through 1984. Partly as a result of the revaluation, the DRER increased each year from 1981 to 1985 as the price of tradable manufactures lagged behind the price of nontradable goods.⁶ At the same time the growth rate of real wages was higher than that of labor productivity in manufacturing, contributing to the increase in the unit cost of labor.

Developments both in the markets for foreign exchange and for labor contributed to the increase in the U_c . The exchange rate fluctuated in the opposite way from what was expected, because movements in capital flows (as induced by changes in the aggregate income-expenditure balance in the economy) overshadowed the normal effects of movements in the terms of trade. In the labor market, as can be seen from figure 2, real wage increases started in the 1970s and continued through the first half of the 1980s, although employment growth had virtually ceased after 1982 and the rate of recorded unemployment had increased sharply. These disequilibrating movements in the factor markets in Malaysia will be contrasted with those in Korea, and the institutional differences that contributed to the contrast will be discussed.

The sharp increase in the unit cost of labor in the first half of the 1980s contributed to the events leading to the painful recession of 1985–86. The fall in the prices of commodities (including oil) was, of course, the immediate cause of the slide into recession. But the most dynamic sector of the export account was manufacturing, and a loss in competitiveness in relation to Malaysia's major competitors threatened to create an unsustainable deficit in the balance of payments. The government policymakers became acutely aware of the impact of the budget deficit on the unit cost of labor and its role in undercutting what was expected to be the most important source of growth. Public deficit spending was cut drastically and, with little help coming from either commodity price increases or strong growth in manufactured exports, Malaysia went into the sharp recession of the mid-1980s.

The recession, however, caused the factor markets to collapse. As can be seen from table 3, the exchange rate declined sharply starting in 1985. Real wages declined in absolute terms and in relation to labor productivity in 1986 and

6. As in Korea, food is effectively a nontradable good in Malaysia because of the administrative maintenance of the price of rice in the domestic market.

Figure 2. *Real Wages and Employment in Manufacturing in Malaysia, 1968–88*

Source: Real wages, Richardson and Ying (1990); employment and unemployment, Malaysia (various years).

1987. In addition, interest rates declined by 50 percent or more. The simultaneous decline in costs in all three factor markets triggered a spectacular and somewhat unexpected recovery starting in 1987.

IV. CONTRASTS BETWEEN KOREAN AND MALAYSIAN FACTOR MARKETS

The contrast in the behavior of the two very open economies of Asia in response to the international economic shocks is striking. As an oil importer, Korea needed to reduce its unit cost of labor drastically after each of the two oil shocks. It did so in a spectacular way. Malaysia, as an oil exporter, was hit by the decline in oil prices in the 1980s—a decline that unfortunately coincided with a decline in the prices of its other commodity exports. The Malaysian response to the crisis seems to have accentuated the problem, partly because of a carryover of policy responses from the preceding boom. Although the factor markets showed remarkable downward flexibility in the second half of the 1980s, Malaysia had to undergo a painful recession before the economy recovered. The two key factor markets in the contrasting responses are the labor and foreign exchange markets. This section looks into the differences between the two countries in the institutions and behavior of these two markets in turn.

Labor Markets

We begin the analysis by looking at the process of wage determination and the factors affecting it in Korea. The contrasting experience of Malaysia is analyzed subsequently.

Wage determination in Korean manufacturing. The increase in productivity made it possible for wages to increase. But why did wages actually increase at the sustained rate that they did? What was the mechanism for determining wages in industry?

For the period covered in this study, before the late 1980s, the influence of unions on wage levels was minimal. The right to strike was banned by presidential decree in 1971. Unions did exist in large firms, particularly in the textile, metalworking, and chemical sectors. But they needed prior permission from the government for collective bargaining. Studies of earnings functions have found no significant effect of unions on relative wages (see, for example, Park 1980: part 3).

Wage guidelines for both white- and blue-collar workers are specified from time to time by the Federation of Korean Industries as well as by the Federation of Korean Trade Unions. The former is dominated by the “chaebol” (the name given to the group that controls Korea’s biggest conglomerates), although the influence of government on the latter has been recognized for some time. The government’s own influence was used to support wage restraint, as during the stabilization period of 1980–81, as well as to ensure that the workers received a share of productivity gains in the years of sustained growth.⁷

In fact, with or without government encouragement, Korean industry showed strong predilections toward a profit-sharing system of remuneration. First, the basic wage constituted no more than 75 percent of total monthly earnings in the early 1970s and seems to have fallen to 70 percent in the 1980s (Park and Castaneda 1987: table 17, p. 38), based on various years of the Ministry of Labor’s Occupational Wage Survey. Overtime pay and annual bonuses—both of which are related to business conditions and profitability—constitute the rest. Second, the industrial firms, particularly the larger ones, seem to have formed the internal labor market structure. The level of starting wages in Korea is predominantly determined by a worker’s formal schooling and sex, regardless of job content (Park 1980: chap. 5). This basic wage rises on an almost regular basis by certain fixed amounts—the “annual base-up.” This “base-up” is directly

7. During 1988–89, the Korean government showed a new commitment to a less interventionist policy with regard to labor markets. The impact on independent wage bargaining was immediate. After these successive years of double-digit nominal wage increases, the government suggested that nominal wage increases should be no higher than real productivity gains. But as shown by continuing labor unrest, including large-scale strikes, this informal incomes policy is experiencing real difficulty in implementation. The drastic change in the labor market scene after the government moved toward a hands-off policy underlines the importance of its effect on wage behavior through the previous periods of Korean development.

related to the length of service in the company and is not necessarily associated with any promotion in job status. Promotion takes the form of skipping several "base-ups." One econometric study found that "in the case of male workers, one year of 'inside' experience (with the same employer) tended to raise wages on average by about 10 percent, whereas one year of outside experience (with a different employer) raised them by an average of only about 3.8 percent" (Amsden 1990: 88, quoting Lee 1983).

With a strong mechanism in place for rewarding firm-specific skills, clearly a major incentive for efficiency would be the sharing of productivity gains with the workers. The question might be asked: what is the exact nature of firm-specific skills being rewarded?

Amsden (1990) makes the point that Korea depended heavily on imported technology and had little experience in these technologies with the possible exception of textiles: "Korean managers could never hope to manage in a tight, 'Taylorist' top-down fashion, at least not initially, because no one at the top knew enough about the process (of production) to do so. Under these conditions, it was imperative to rely upon motivated workers, even if they possessed little more than formal schooling, to exercise the most fundamental skill of all, intelligence" (Amsden 1990: 89). This was particularly so because the demands of an export-oriented strategy were quite severe on the maintenance of product quality.

A profit-sharing model of wage determination could explain the observed increase in the real wage—at a rate a little below productivity growth before 1974 and again after the adjustment of 1980–81. But another significant element in the wage history in the Korean manufacturing sector is the sharp fall in the share of wages in each of the two periods following the external shocks. The successful wage repression of 1975 and 1980–81, which contributed strongly to the stabilization effort, was the hallmark of state paternalism in wage setting. The institution of wage setting, with its corporatist bias, permitted such short-run declines in the share of wages when they were required in the interests of macroeconomic adjustment.

The question still might be asked: why did wages increase significantly faster than productivity during the "big push" in the second half of the 1970s? Probably one of the factors was the high optimism of the state-driven investments toward diversification. The other was the tightness of the labor market, caused not only by the "big push" but also the rather sudden and substantial emigration of Korean workers to the Middle East to help in the post-oil construction boom there. The unemployment rate fell to a historic low in 1978.

The unemployment rate touched this low again in 1986 and fell even lower in 1987 and 1988. The events of the past few years have created a new situation in the Korean labor market. The wage explosion, which is still under way, is as much due to the tightness of the labor market as to the less-paternalistic role of the government in determining wages and the emergence of union activism as a powerful force.

These points were tested with an econometric model of wage determination. The model was the usual augmented Phillips curve, with an element to capture the profit-sharing aspect. It is hypothesized that in any period, workers have a target real wage that is governed by the productivity growth of a previous period. If the percentage increase in real wages falls short of the percentage increase in productivity of the earlier period, then there is additional upward pressure on money wages. The mechanism of the target wage could percolate through the decisions of workers or employers or both. The model would thus look like the following:

$$(3) \quad \dot{W}_t = a + bP_e + cU_{t-x} + d(\dot{v}_{t-y} - \dot{w}_{t-y})$$

where \dot{W}_t denotes the percentage change in money wages in the current period, P_e denotes the expected rate of inflation, U_{t-x} denotes the unemployment rate x periods before, \dot{v}_{t-y} denotes the percentage increase in productivity y periods before, and \dot{w}_{t-y} denotes the percentage increase in real wages y periods before. The values of x and y are found by the best fit of the model to the data.

The model was estimated with quarterly data from the third quarter of 1970 to the third quarter of 1988. The results are given in table 4. The expected inflation rate is approximated by the rate of increase in the consumer price index in the previous period. (It could also be interpreted as representing workers' efforts to recapture lost real wages as a result of fast inflation.) In the first equation in table 4, there is a reasonably good fit, with all the variables having the right sign and strong significance.

The second equation increases the R^2 substantially without reducing the significance of the explanatory variables significantly. The extra term is the percentage change in money wages since four quarters before the present. The inclusion of the variable increases the R^2 by so much because there is a strong seasonal pattern in the money wage series.^{8,9} The use of the dummy corrects for the seasonality.

The footnotes to the table define the variables. The fitted equations support the hypothesis strongly. Both the rate of unemployment and the target real wage based on actual productivity increase enter the process of wage determination. Either factor by itself will explain only a part of the percentage quarterly change in wages. In periods when the unemployment rate is relatively high (before 1976 and again in the early 1980s, following the second oil crisis), the unemployment variable underpredicts the increase in wages. The target wage variable is more important in explaining the growth in real wages at a rate a little less than labor productivity. By contrast, in the late 1970s and again more importantly in the

8. In particular, average earnings in the fourth quarter of each year are bumped up as workers are paid their annual bonus.

9. The variable for growth in productivity minus real wages in table 4 can be broken down into rates of growth of money wages, prices, and productivity, all lagged two periods. Running the regression with productivity only, without the lagged wage and price indexes, the estimated equation performed less well, with a smaller R^2 and greatly reduced significance of the productivity growth variable.

Table 4. *Determinants of Percentage Changes in Nominal Wages in Korean Manufacturing, 1970–88*

<i>Regression</i>	<i>Constant</i>	<i>Inflation rate^a</i>	<i>Unemployment rate</i>	<i>Growth in productivity minus growth in real wages^b</i>	<i>Dependent variable lagged four quarters</i>	<i>Adjusted R²</i>	<i>Durban-Watson statistic</i>	<i>F-statistic</i>
1. Without lagged dependent variable	0.135 (5.87)	0.869 (4.05)	-0.028 (-5.23)	0.214 (4.51)	n.a.	0.519	2.24	25.8
2. With lagged dependent variable	0.070 (3.30)	0.478 (2.62)	-0.016 (-3.39)	0.097 (2.30)	0.59 (6.25)	0.695	2.24	40.3

n.a. Not applicable.

Note: The dependent variable is the percentage change in nominal monthly earnings per regular employee in manufacturing, averaged for each quarter. Results reported are for quarterly data regression analysis (OLS estimates). Periods covered by both regressions go from the second quarter of 1971 to the third quarter of 1988 (70 observations). Figures in parentheses are *t*-statistics.

a. Lagged one quarter.

b. Lagged two quarters.

recent years beginning in 1986, the growth in real wages at rates significantly above productivity growth is explained more satisfactorily by unemployment rates falling below a threshold level and signaling tight labor market conditions.

In the crisis years of 1975 and 1980–81 the equation seriously overpredicts the increase in wages. Thus the drastic reduction in the wage-productivity ratio in these years has to be ascribed to the state paternalistic elements in wage determination.

The end of the period of study ushered in a remarkable change in Korean labor markets. Unemployment rates dropped to hitherto unknown levels of 2.5 percent or lower. Emergence of the scarcity of labor coincided with political liberalization in August 1987, and, for the first time, labor disputes were recognized as legal. Wages began to explode in 1988, exceeding 20 percent a year in 1988–91. The percentage wage increase was double-digit in real terms except in 1991 and exceeded productivity growth by more than 5 percentage points in each of the four years. Part of the explanation for the large wage increase was the tight labor market. But the period also saw an unprecedented outburst of labor unrest and a spectacular increase in labor disputes. It is difficult to believe that labor militancy unleashed by the democratization of the political process did not play a substantial role in the wage explosion.¹⁰ This development naturally created new problems for the international competitiveness of Korea's manufacturing. Fuller analysis of the new situation must await more detailed research.

For now it is sufficient to note that the turmoil in the labor market came after a period of real wage growth of around 6 percent a year, extending over a quarter of a century—a phenomenon without precedent. The obvious conclusion is that keeping real wages rising is not enough in and of itself to prevent disruptions in the labor market.¹¹ There are two possible explanations for the labor market experience. First, wages were repressed throughout the period of Korean growth. The real wage growth was possible because of extraordinarily high TFP growth. The evidence presented above showed a more or less trend decline in the wage-productivity ratio for the 25-year period, with drastic falls in the years of adjustment. The workers were evidently aware of the decline in their share of wages in spite of the real wage increase. Second, the political system, which discouraged collective bargaining and effective workers' organizations, had produced pent-up resentment that burst once the lid was taken off.

Wage-setting institutions and wage determination in Malaysia. What determines changes in real wages in the Malaysian economy? The point made above, that real wage behavior seemed to have little relation to the phases of the cycle, suggests that wages did not respond significantly or quickly to market forces.

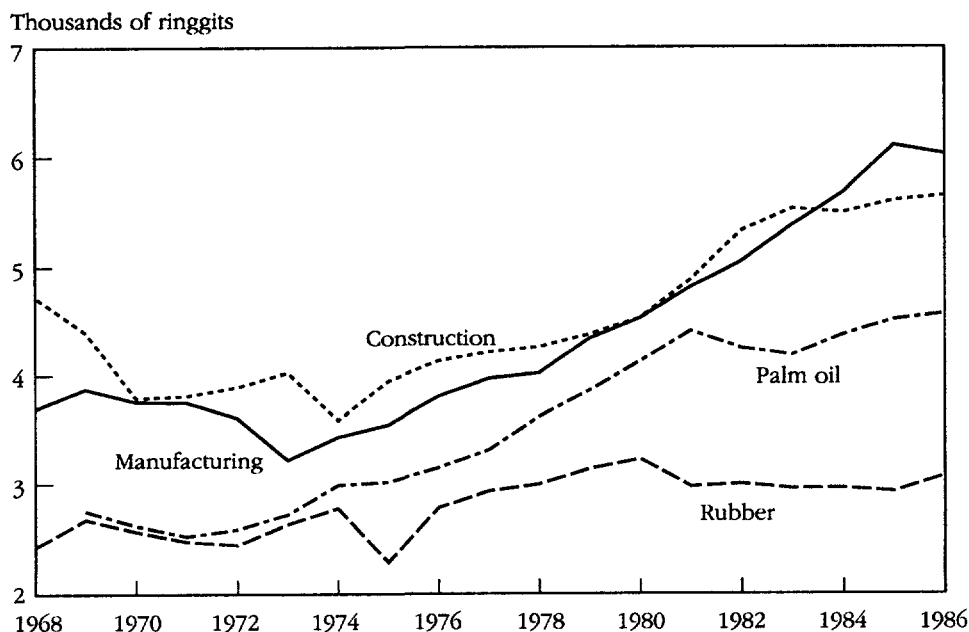
10. When quarterly wage data are available for the more recent period, it would be interesting to see if the model estimated here still applied to the period after the third quarter of 1988, perhaps with changed values of the coefficients.

11. I am indebted to an anonymous referee for driving home this point.

Figure 2 reinforces this point. Between 1969 and 1973, real wages in manufacturing declined, while employment, both in manufacturing and the recorded (formal) sector as a whole, increased at a significant rate every year. Between 1973 and 1981, the relation between employment and real wage growth was "normal"—both were increasing. During these years the rate of unemployment was also falling. But from 1981 to 1985, the rate of unemployment increased every year and the rate of growth of total employment fell—and indeed was stagnant in the manufacturing sector—yet real wages continued to increase almost as fast as in the 1970s.

The puzzle becomes deeper considering the divergence in the trend in wages in manufacturing and construction from the trend in earnings in the plantation sector after 1980. Figure 3 shows that during the boom of the late 1970s, wages in both rubber and palm oil estates rose along with manufacturing wages. (Earnings are only those of wage earners employed in large estates, not those of smallholders.) The absolute gap in earnings in favor of manufacturing was reduced for palm oil and remained the same for rubber so that the relative gap was squeezed because manufacturing wages were higher. But after 1980, while wages in the plantation sector were stagnant, manufacturing and construction wages bounded ahead until 1985. There was indeed a construction boom in 1980–81 associated with heavy public expenditure, and this might explain the

Figure 3. *Real Annual Earnings by Industry in Malaysia, 1968–86*



Note: Earnings are adjusted with the consumer price index at 1980=100.

Source: Richardson and Ying (1990: table 2).

wage increase in this sector in these years. But the wage growth persisted in manufacturing through 1985, even as construction wages leveled off after 1982.

What explains this odd behavior of wages in manufacturing in Malaysia? Part of the explanation could indeed be economic. The wage series available is of average annual earnings. During a downswing, retrenchment of workers affects those at the bottom of the wage ladder proportionately more, and this in itself tends to push up average earnings. This is the normal behavior of firms attaching value to the experience of senior workers. In Malaysia such expected behavior was reinforced by some institutional factors. For example, firms are legally required to pay minimum benefits to workers who are terminated or laid off after serving at least 12 consecutive months, the benefits increasing with the years of service. Lucas and Verry (1989) looked at the characteristics of a sample of workers who were retrenched at some point between 1984 and 1988. Their results confirmed that "it is the young and the oldest, the less well-educated employees from the private sector and (to a weaker extent statistically) those outside of unionized plants, who are most likely to have been retrenched. . . . However, it was certainly not the only factor, for we know that pay of given individuals continued to rise also" (table D.2 and p. 12).

Institutional factors might have been important. Unionism is not a very powerful factor in the Malaysian labor market. By 1985 less than a quarter of the workers in manufacturing had been unionized, and in some subsectors, such as electronics, unionism was forbidden. Paradoxically, plantations, the sector in which real wages had stagnated in the 1980s, had the highest proportion of workers as union members. It is also generally agreed that collective bargaining has been traditionally pursued most vigorously in plantations.

The public sector has played a dominant role in the Malaysian labor market. Could it be that this sector, in which wages are set administratively, played a wage leadership role in the 1980s? Lucas and Verry compared the wage series in the government sector and in manufacturing over a long period (1989: figure 3.20, p. 56). They found that average compensation in government was around 25 percent higher than in manufacturing in the early 1970s, a gap that could probably be explained by the difference in educational compositions of the labor force in the two sectors (Mazumdar 1981: figure 8-1, p. 135). But the differential became very large after the pay reform in 1975.¹² By 1978 the gap had increased to more than 100 percent. After 1978 average wages in the public sector increased less rapidly than those for manufacturing. The differential narrowed persistently through 1985 in spite of another small increase in public sector wages during 1980–81. By 1985 the public sector advantage in average remuneration was no more than 15 percent. Thus, Lucas and Verry (1989) conclude, "It would seem difficult to make a case that public service pay has led

12. In 1975 the findings of the Harun Commission with respect to the pay of all employees in statutory bodies and local authorities was implemented, backdated to 1970. In 1976 the Cabinet Committee Report was implemented, involving the pay of all civil servants.

private pay over the entire period.” It is, of course, possible that private sector wages tried to catch up with the public sector over a long period extending over many years. But the institutional causes of the long lag require explanation. The institutional factors might also have made the private manufacturing wages inflexible in the face of a slowdown of employment growth and rising unemployment.

The contractual forms of wage agreement—both formal and informal—might explain the rising wages of the 1980s. Two different practices in Malaysian wage setting seem to be particularly relevant here.

First, many collective bargaining agreements in Malaysia provide for multi-year coverage. By law, these agreements must cover at least two years. But agreements of three or even four years are common. Even when the plant is not unionized, employers in the formal sector are keen to follow the going practice of wage setting. Clearly, with contracts fixed for a long period, it is not possible for employers to cut the wages of those employees who are not retrenched. In this connection, agreements in the plantation sector included provisions for tying wages to the prices of the plantation’s products through a complicated formula to ensure that to some extent wages fluctuated with product prices when there were severe shocks. The stagnation of real wages in the 1980s in the plantations, after a period of rapid increase, may partly reflect this effect of the agreement working itself out after the decline in commodity prices. But in the manufacturing and construction sectors, where the practice of tying wages to market conditions for the product does not exist, long contracts mean that there is a substantial lag before wages start to adjust.¹³ In fact, when the rate of inflation is falling, as it was in Malaysia in the 1980s, the length of time that elapses before real, rather than money, wages begin to fall may be considerable.¹⁴

The second wage-setting practice that is pertinent to the problem of wage flexibility in the Malaysian labor market is that of automatic seniority increments. Malaysian employers, at least in the formal sector, seem to follow the Japanese system of granting pay increases based on years of service in the firm. A detailed report for the International Labour Organisation found the practice to be widespread and also noticed that the incremental scales were typically wide (McCarthy 1988). It was not unusual for a collective bargaining agreement to provide for an occupation-specific wage scale that would grant the worker an annual increment of 7 percent for 10 years until the maximum in the grade was reached. The worker would receive these increments irrespective of current economic conditions. This would be in addition to any change in basic pay or bonuses resulting from cost-of-living adjustments or renegotiated contracts.

13. This type of delayed adjustment of wages to economic shocks is not uncommon in much of Asia (Edgren 1989).

14. Other factors contributing to the difficulty of cutting wages in the downswing include the government concern for employees of Malayan origin under the New Economic Policy. It might have been difficult for employers of foreign origin to cut wages—or deny the workers seniority increments—in firms employing a large Malay labor force.

Lucas and Verry (1989), in the course of their interviews with firms, found that large nonunionized firms (including multinationals) followed similar wage practices. The system of automatic seniority increments is expected to increase productivity by securing the loyalty and attachment of the workers to the individual enterprise. But it does not enable wages to adjust rapidly to business conditions, particularly when external shocks tend to be as large as they were for Malaysia. The Japanese wage system provides a safeguard against the seniority system by using bonuses, geared to the profitability of the firm, as a large component of the worker's earnings. Nonbasic wages are not insignificant in Malaysia. Such payments, including fringe benefits, constituted 15 percent of total earnings for male workers in 1984. This percentage was relatively low compared with Korea's. There, the share of bonuses and overtime payments in total compensation in 1982 was as high as 30 percent, split evenly between the two (World Bank 1989).¹⁵

It has been pointed out that, although wages of "senior" workers are relatively rigid, reduction in entry-level salaries is a major element in the downward flexibility of wages (World Bank 1989). But this particular mechanism can work strongly only when there is an opportunity to hire a significant number of new workers. This indeed is what seems to have happened in 1986 and 1987, when the economy started to recover. The wage for new entrants had started to fall in 1985 at the bottom of the depression, but average payments to all employees continued to rise through 1986 (by 7.2 percent that year), reflecting built-in escalators in old contracts. In 1987, however, average earnings finally fell, coinciding with the upturn (World Bank 1989: 26).

Markets for Foreign Exchange

In both Korea and Malaysia, movements in the nominal exchange rate were very important in determining the timing and magnitude of changes in the unit cost of labor. The contrasting experiences of the two countries have been noted. But the difference in the systems of exchange rate determination in causing the different outcomes merits reemphasis. Korea, with a managed exchange rate system and strict control over international capital flows, was able to determine the exchange rate needed to sustain or improve international competitiveness.¹⁶ In particular, immediately after the two oil shocks, massive devaluations of the won reduced the unit cost of labor drastically. By contrast, Malaysia, with an accommodating exchange rate system and no control over the capital account of the balance of payments, seems to have been at the mercy of foreign capital flows, even though these flows were caused by the actions of Malaysia's own

15. Overtime payments, like bonuses, input a certain flexibility to total wages even with a tenured labor force whose basic wages increase with years of service.

16. A telltale sign of strict control over international capital flows is the existence of a black market premium for foreign exchange. Korea had a significant premium of this type until the very recent financial liberalization.

private and public economic agents.¹⁷ The result seems to have been rather perverse movements of the nominal exchange rate from the point of view of required changes in the unit cost of labor over the cycles. The exchange rate appreciated significantly when the export markets were declining, not when Malaysia enjoyed a terms-of-trade bonanza.

The inverse fluctuation of the exchange rate (both real and nominal) with respect to the terms of trade has been implicit in the discussions above. In Malaysia, the "spending effect" caused by movements in the terms of trade has been dampened by the behavior of private savings, which has moved directly with the terms of trade, and also has been overshadowed by the much stronger countercyclical behavior of public expenditure. The sign and magnitude of the capital inflow generated by the resultant excess of spending over income (whether positive or negative) has been a more dominant effect on the exchange rate than the terms of trade has been, both in the upswing and the downswing of the cycle.

In the upswing of the 1970s both government and private expenditure increased, keeping pace with increases in GDP. The increase in private savings helped to balance the deficit in the government budget so that the current account of the balance of payments was in surplus during this period. This surplus would have put an upward pressure on the exchange rate if government or private savers or both were not willing to hold foreign assets. As it happened, the government and private savers were willing to hold foreign assets. The net international resources of the Bank Negara (valued in U.S. dollars) increased at a substantial rate, so that the total in 1980 was up by more than a third of its value in 1975.

As the terms of trade declined in the 1980s, the government attempt to sustain a large countercyclical expenditure through massive foreign borrowing led to a large inflow of capital. It was this inflow that led to an appreciation of the ringgit even though the terms of trade were declining.¹⁸ The capital inflow became more important in the early 1980s because of the decentralized nature of

17. This does not mean to suggest that there is no government supervision at all over, for example, direct foreign investment. In fact, there has been a persistent attempt to influence investors in the direction of desired industries, for example, industries managed by Bhumiputras. But the regime is liberal compared with the regimes of many countries of the region. The following passage from the *Annual Report of Malaysia Bank Negara* (1981: 125) gives the intentions of the bank:

The liberal and non-discriminating system of exchange control was relaxed further as from October 1981, when the commercial and merchant banks in Malaysia were allowed to lend, or syndicate loans, in foreign currency to residents of Malaysia. . . . At the same time these banks were also permitted to borrow or accept deposits from non-residents in foreign currency. . . . Only foreign borrowing of US\$100,000 or more requires specific permission, and permission is freely given for all loans raised in reasonable terms and used for productive purposes in Malaysia.

18. This interpretation differs from that given in Gan and Krause (1989), which tells a standard "Dutch disease" story. The government expenditure boom of the 1980s is best viewed as a deliberate countercyclical policy, rather than a lagged response to the terms-of-trade increase.

decisionmaking with respect to foreign borrowing. A World Bank study reported:

A substantial proportion of the foreign borrowing (57 percent in 1983–84) was undertaken by public enterprises. This recourse to external funds helped these agencies escape the surveillance and discipline that could have been imposed by the federal government had there been a greater reliance on the Treasury as a source of funds. Overall net foreign inflows more than compensated for the current account deficits being registered. Central Bank foreign exchange reserves built up steadily, and pressure to depreciate the exchange rate was temporarily diverted. (World Bank 1989: 15)

There were real counterparts to the external financial flows in the two periods. In the late 1970s the inflow as a result of the current account surplus led to an increase in aggregate savings. In the 1980s the inflow of capital as a result of foreign borrowing was used to increase public sector spending, much of it bolstering demand in the domestic nontradable sector, leading to an increase in the DRER on top of the nominal exchange rate appreciation.

The last point underlines another difference between the Korean and Malaysian experiences, a difference pertaining to the efficiency with which foreign borrowing was used. It has already been mentioned that although Korea increased its foreign debt ratio significantly following the oil shocks, the productivity of the investment it made possible was high, as evidenced by the high TFP growth. However, a substantial part of the foreign borrowing in Malaysia in the 1980s was used to finance public sector projects of doubtful profitability. Evidence suggests that the TFP declined in this period (see, for example, World Bank 1989: 53–54).

V. CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

This article has discussed how two open economies with different factor market institutions responded differently to external shocks and the need to maintain international competitiveness. The variable used in the analysis is the unit cost of labor in dollars. A country's international competitiveness depends on sustaining a satisfactory unit cost of labor in relation to that of its competitors in the world market. This is particularly true of the newly industrializing countries in the world market for manufactured goods. A simple decomposition of the determinants of the unit cost of labor showed that the three related elements constitute this critical ratio: the wage-productivity gap, the nominal exchange rate, and the domestic real exchange rate (DRER). But policies regarding the behavior of the labor market would specifically affect the first element, policies regarding the exchange rate would affect the second, and both sets of policies would affect the third. In addition, fiscal and monetary policies used to influence the economy's internal and external balance would have an impact on all three factors.

The analysis of the development of the two economies following the international shocks has demonstrated the usefulness of concentrating on the unit cost of labor and its determinants as the focus of the analysis. For most developing economies, except the very closed ones, the unit cost of labor in manufacturing seems to be a crucial variable, whose behavior determines the degree of success attained in adjustment to external shocks as well as in longer-run growth. Comparison of the determinants of the unit cost of labor for two or three economies in other regions might be a useful way to cut through a maze of diverging trends and experiences.

The two Asian countries considered here did not suffer from fiscal indiscipline or monetary mismanagement to the extent that countries in other regions have. Hence this article has concentrated on the behavior of the labor and foreign exchange markets and the policies and institutions affecting them. Fiscal and monetary factors have entered the discussion only insofar as they have had an impact on the markets for labor and foreign exchange. In studies of the adjustment of Latin American economies, for example, imbalances caused by fiscal and monetary factors would need much more attention. But this article is not meant to provide generalizations across countries of different regions or even the same region. Instead, the analysis of two countries in the same region, both of which managed successful adjustments to external shocks and also sustained long-run growth, should convince readers of the importance of looking carefully at differences in policies and institutions between countries. The focus on the unit cost of labor provides the necessary framework for studying these differences.

The role of Korea's managed system, both for wage setting and for exchange rate determination, has been shown to have been critically important to adjustment. The crucial role of successfully managing the direction of change in the determinants of the unit cost of labor at critical periods of the cycles has been highlighted.

The contrasting case of Malaysia is interesting because, in spite of the low degree of institutional wage setting in much of the formal sector, rules of behavior seem to have emerged that produced inflexibilities in wages. Perhaps this illustrates the way a "free" labor system evolves in the formal sector. Institutional intervention may, in fact, be necessary to make the wage system respond to economic fluctuations in the desirable way. The value of institutional intervention can be seen in Malaysia's plantation industries, which have been strongly unionized for a long time: wage contracts negotiated in that sector have allowed wages to be tied to the (volatile) price of the output (rubber) in a conscious attempt to make wage costs vary with fluctuations in the international market for rubber. But, as we have seen, this adjustment mechanism was absent in the other segments of the formal sector in Malaysia, notably in the growing manufacturing sector. Thus, average earnings apparently increased in those sectors in periods of recession and increasing unemployment in the first half of the 1980s. The flexible exchange rate system, with freedom of capital flows, accen-

tuated the "perverse" movement of the unit cost of labor. A sharp recession was needed to bring about the downward flexibility in the factor markets; the recession was indeed sufficiently strong to trigger Malaysia's recovery in 1987 and after.

In recent discussions policymakers have proposed that the wage system in Malaysian manufacturing embody more elements of the profit-sharing model so that wage costs would vary directly with business conditions (Nabi 1991). Further research on this development would be a useful link to the analysis provided here.

In Korea the central question for the future evolution of labor markets is the extent to which the management of the unit cost of labor depends on maintaining a paternalistic system of control. The initial impact of the relaxation of controls over industrial relations, a relaxation that accompanied political liberalization after 1987, has not been very encouraging. An unprecedented increase in labor disputes and explosive wage increases seems to have dominated the last two years of the 1980s (Park and Park undated). At the same time, the very elements that had been instrumental in providing flexible wage costs under the managed system are being blamed for creating new rigidities in the payments system. An example is the critique of the bonus system, which seems to have been enshrined as a worker's right, no longer possessing the flexibility it had in the past (Nabi 1991: 11-14). The new industrial relations seem to tend toward a new, viable system. The implications of this system for labor market flexibility is an important topic for further research.

APPENDIX. SOURCES OF DATA USED IN THE TEXT

Korea

Data on earnings in the manufacturing sector were extracted from the *Statistics Yearbook*, published by the Economic Planning Board in Korea. These statistics are collected by the Ministry of Labor through the monthly wage survey. The survey covers all manufacturing establishments with 10 or more employees. The earnings reported are the average monthly earnings of all (men and women) regular employees. (Regular workers are those whose employment contract is for one month or more and who worked for more than 45 days during the three months before the reporting day.) Monthly earnings include overtime pay, bonus pay, and base pay.

Statistics on value added, employment, and price deflators are also based on data collected by regular surveys and reported in the Bank of Korea's *Economic Statistics Yearbook* (various years).

The following secondary sources were also used for constructing the time series: Bank of Korea, *Principal Economic Indicators* (various years) for the consumer price index and the nominal exchange rate; International Monetary Fund, *International Financial Statistics* (various issues); and United Nations, *Industrial Statistics Yearbook* (various issues).

Table A-1 presents major economic indicators used in the analysis for Korea.

Table A-1. Major Economic Indicators for the Republic of Korea, 1967-88

Year	GNP growth (percent)	Current account (percentage of GNP)	Growth of exports (percent)	Budget deficit (percentage of GNP)	Unemploy- ment rate (percent)
1967	6.60	-4.12	28.00	-	6.2
1968	11.30	-7.49	42.20	-	5.1
1969	13.80	-7.76	36.90	-	4.8
1970	7.60	-7.35	34.00	1.60	4.5
1971	8.60	-9.38	27.90	2.30	4.5
1972	5.10	-3.56	52.10	4.60	4.5
1973	13.20	-2.28	98.60	1.60	4.0
1974	8.10	-13.05	38.30	4.00	4.1
1975	6.40	-9.05	13.90	4.60	4.1
1976	13.10	-1.09	51.80	2.90	3.9
1977	9.80	0.03	30.20	2.60	3.8
1978	9.80	-2.17	26.50	2.50	3.2
1979	7.20	-6.43	18.40	1.40	3.8
1980	-3.70	-9.56	16.30	3.20	5.2
1981	5.90	-7.21	21.40	4.70	4.5
1982	7.20	-3.91	2.80	4.40	4.3
1983	12.60	-2.07	11.90	1.60	4.1
1984	9.30	-1.62	19.60	1.40	3.8
1985	7.00	-1.01	3.50	1.00	4.0
1986	12.90	4.39	14.60	1.80	3.8
1987	12.80	7.39	36.20	-	3.1
1988	12.20	7.84	28.40	-	2.5

— Not available.

Source: Bank of Korea (various years—b) for GNP and growth of exports (1988 GNP growth rate is preliminary); Bank of Korea (various years—a).

Table A-2. Major Economic Indicators for Malaysia, 1971-86

Year	GDP growth (percent)	Current account (percentage of GDP)	Growth of exports (percent)	Budget deficit (percentage of GDP)	Unemploy- ment rate (percent)
1971	10.0	-2.5	—	-8.1	—
1972	9.4	-4.9	2.0	-9.6	—
1973	11.7	1.3	14.2	-5.6	—
1974	8.3	-5.0	15.9	-6.0	—
1975	0.8	-4.7	-3.0	-8.4	—
1976	11.6	5.8	17.0	-7.1	6.1
1977	7.8	3.3	4.5	-8.6	6.1
1978	6.7	0.7	7.2	7.7	5.9
1979	9.5	4.4	18.0	-7.9	5.6
1980	7.4	-1.1	3.2	-13.6	5.7
1981	6.9	-9.6	-0.8	-19.1	5.1
1982	5.9	-13.4	10.7	-17.9	5.1
1983	6.3	-11.5	12.3	-13.2	6.0
1984	7.8	-4.9	13.8	-8.9	6.3
1985	-1.0	-2.1	0.4	-7.4	6.9
1986	1.2	-1.1	17.6	-10.5	8.3

— Not available.

Source: Malaysia, Ministry of Finance (various years).

Malaysia

The basic data for the manufacturing sector are collected by the Department of Statistics through its surveys of the manufacturing, mining, construction, and stone-quarrying industries. There have been five censuses—in 1959, 1963, 1968, 1973, and 1981—and in the years when there was no census, surveys were conducted annually, except in 1980. In survey years, the coverage was based on selected five-digit industries. Small establishments with less than five, and in some cases less than 10, full-time employees were generally not covered.

Table A-2 presents major economic indicators used in the analysis for Malaysia.

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