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Malaysian Labor Markets Under Structural Adjustment

Dipak Mazumdar

In a generally healthy economy, Malaysia's labor market suffers some structural problems: steep wage-seniority scales, unemployment among secondary-school leavers, and an almost bizarre constancy in the relative differences in earnings (and ever wider differences in per capita income) between states — which suggests a serious problem in the sharing of fruits of economic growth through internal migration of the factors of production.

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This paper — a product of the Studies and Training Design Division, Economic Development Institute — is part of a larger effort in PRE to understand the role of labor markets in the process of structural adjustment of the economy. The paper is one of the country studies prepared for the project on "Labor Markets in an Era of Structural Adjustment." Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Marshall Schreier, room M4-013, extension 36432 (72 pages, including figures and tables).

Malaysia's sustained growth in the 1970s was boosted by windfall gains during two oil price hikes plus a commodity boom. Oil and commodity prices fell in the 1980s and Malaysia, an oil exporter, bungled into a rather severe depression in 1985-86. But it recovered quickly, to the surprise of some — and growth resumed in 1987.

The events that led to the recession and quick turnaround are a Southeast Asia prototype. Mazumdar analyzes the key relationships in this cyclical behavior. He then focuses on long-term labor market issues of interest during the economy's 20-year transformation. He concludes:

Events in Malaysia differed in important details from the standard sequence in "Dutch disease" models. The real exchange rate appreciated not because of more spending but because of the inflow of foreign capital to support the government's budget deficit. And the increase in average wages in the period leading up to the recession was not corrected with the rise in the domestic exchange rate (the ratio of the prices of nontradables to tradables) in a fully employed economy.

Wages increased more than labor productivity did at a time when employment growth had slowed and the rate of unemployment had risen. This perverse behavior may be attributable to certain East Asian labor market institutions — notably steep wage-seniority scales and the attachment of workers to firms after a period of service.

Rising labor costs were only part of the problem of rising costs before the recession. The whole package of fiscal, monetary, and exchange rate policies — together with labor market behavior — led to the recession.

And the recession was short-lived — no more than two years long. Factor markets were highly flexible: wages, interest rates, and exchange rates all drifted downward. This "collapse" of factor markets fueled the recovery when favorable trends reasserted themselves in Malaysia's external markets.

Mazumdar further concludes that:

- Plantation wages (especially rubber) lagged somewhat behind wages in manufacturing but the overall growth rate of real wages in the formal sector was positive, before the slowdown of the 1980s.
- Paddy farmers and smallholder cash-crop growers had significantly lower earnings in 1973 than nonagricultural employees (rural and urban) and estate employees — and their relative position has declined even further.
- The tertiary sector increased its share in total employment from 36 (1970) to 49 (1980) to 55 percent (1987), and government employment accounted for only part of this growth.
- The self-employed are only a small part (15 percent) of the work force in manufacturing but more than a third of the total in agriculture and distribution.
- Growth in white-collar jobs has not kept pace with growth in education, so there has been a problem of unemployment among the educated. Not all secondary-school leavers would accept blue-collar jobs. This type of white-collar unemployment is structural — not responsive to changes in demand, unless as in the latter half of the 1970s the boom is sustained and intense (perhaps favoring the white-collar sector).
- Relative earnings for women improved in striking ways in 1970-87.

Produced by the PRE Dissemination Center

Malaysian Labor Markets Under Structural Adjustment

by
Dipak Mazumdar*

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* This paper is one of the country studies prepared for the project on Labor Markets in an Era of Structural Adjustment. It is a revised version of a document produced for the research project on the Human Resources Development Plan, Module I, which the author coordinated. Other papers in the module to which this contribution has drawn, particularly in Section III, are those by Gan Wee Beng and L. Krause, R. Richardson and Soon Lee Yin, and to a lesser extent, S. Bhalla. The author has also benefited much from a reading of the project's Interim Report by R. Lucas and D. Verry. The author is grateful for helpful comments by Homi Kharas, Sue Horton, and members of the Economic Planning Unit in Malaysia.

I. The Basic Structure of the Economy.

A. Openness

Malaysia is a very open economy. Exports as a percentage of GDP hovered just below 50 per cent in the '70s. This share started to increase in 1983, and more sharply since 1985, and reached a record level of 72 per cent in 1988.

Table A.1 gives the composition of exports by the most important commodity groups for various years. It is seen that Malaysia has been a natural resource based economy but a major increase in the proportion of manufactures in total exports has been under way in the eighties.

Originally rubber dominated the export scene but over the years a diversified group of commodities- tin, palm oil and sawlogs and timber- have become more important. Petroleum became important after the oil price increases of the seventies. The growth rate of the exports of manufactured goods has been nothing short of spectacular in the last decade. But unlike some of the NICs, manufacturing exports has been highly concentrated in Malaysia, with electronics and electrical machinery accounting for over half of total exports in this category. Export processing zones have played a key role in this development.

Instability of exports earnings is a feature of the Malaysian economy, and because of the high ratio of exports this instability is liable to produce large swings in GDP. Although commodity exports are diversified large fluctuations in earnings from this group of exports is not at all uncommon. The 1985-86 crisis was, for instance, caused by a simultaneous fall in prices in all five commodity groups. A World Bank study (1988, vol.I, Appendix 1) calculated that the standard deviation of the rate of change of export earnings from commodities due to price changes was 15.8 percent. "This implies that one-third of the time, export earnings are likely to deviate from their expected value by more than M$2 billion (one standard deviation), and one-sixth of the time, there will be a shortfall of this magnitude."

The heavy concentration of manufacturing exports in an industry which is distinguished for its volatile world market adds to the instability. The recession of 1985-6 was in no small measure due to the shake-out in the world semiconductor market.

B. Importance of the Public Sector

The role of the public sector in the economy has increased throughout the period of Malaysia's recent economic growth. The New Economic Policy initiated in 1973 had as its objective a restructuring of the economy with a view to giving the native Malays (Bhumiputras) a greater share of the economic cake than they had traditionally enjoyed. A major instrument in this transformation was the expansion of employment in the public sector in which Malays had a favored role. At the same time, the boom in commodity prices and in oil during the seventies vastly increased the government's resources which enabled it to sustain the policy of expansion. The expansion took the form of a high rate of growth of wage bill in government services as well as a massive increase in public

investment through non-financial public enterprises (NFPEs) and other statutory authorities. During the period 1981-88 public consumption and investment together accounted for an average of 37 per cent of GNP and public investment was 41 per-cent of gross capital formation in the economy (Malaysia, Economic Report, 1988, Table 2.1, p.x).

Table I.1 Composition of Exports in Malaysia (in percentages)

	1970	1975	1980	1984	1987
Food, live animals, beverages and tobacco	5.92	6.72	3.70	3.90	5.56
Crude materials, inedible	53.79	35.00	32.32	21.10	23.46
Mineral fuels	7.08	10.48	24.49	29.59	19.76
Animal and vegetable oils and fats	6.00	16.34	11.11	15.18	9.15
Chemicals, manufactured goods, machinery and transportation equipment, and miscellaneous manufactures	26.08	30.40	27.82	29.76	41.58
Other exports	1.12	1.05	0.55	0.55	0.48

Note: Mineral fuels include coke, coal, petroleum and petroleum products and gas. Figures are in percentages of each year's respective total.

Sources: Ministry of Finance, Economic Report, 1988/89. Bank Negara, Quarterly Economic Bulletin, March/June 1986, Table VIII.6. (Bank Negara's source was Department of Statistics).

The large size of the public sector has meant that it has had an important influence on the business cycles in the economy supplementing the impact of the external sector. As we shall see public spending has fluctuated sharply in response to external shocks, and not always in a counter cyclical way.

C. The Role of Food.

An important variable determining the nature of the impact of external shocks on the economy is whether food is largely a tradeable or a non-tradeable good. The behavior of the consumer price index (of which food is an important component) relative to the index of producer prices depends on the "tradeableness" of food.[1] If there is an external shock, for instance, which causes

[1] The degree of "tradeableness" of food varies inversely with the extent to which domestic consumers are insulated from movements in world prices.

an appreciation of the exchange rate,[2] the price of tradeables falls relative to the price of non-tradeables. If food is a tradeable commodity its price also falls relatively and a downward pressure is exerted on the consumer price index. If real wages are sticky there will still be a decline in money wages relative to producer prices and the pressure on profitability in the traded goods sector will be eased somewhat. On the other hand, if food belongs to the non-tradeable category, product wages are likely to increase adding to the burden of the producers of tradeables unless there is a fall in real wages.

Rice is an important component of the basket of goods consumed by Malaysian workers. Ordinarily it would be a commodity traded in the world market. But Malaysia has a system of administered prices for rice for both producers and consumers. The system is administered by the National Paddy and Rice Authority (LPN) which is responsible for the marketing and pricing of rice. The object of the policy is to maintain a level of prices for domestic paddy farmers at a level higher than the border price of rice. The authority imports rice as necessary to supplement the amount it can procure from domestic producers, and sells the rice to consumers through its retail outlets at pre-determined prices which are not very different from prices paid to farmers. Rice prices were set by the Cabinet in 1974 at parity with border prices near the peak of the external market and have remained virtually unchanged despite halving of import prices. But constancy of rice price in nominal terms has meant that it had fallen by 39 percent in real terms by 1984.

Thus a component of the consumption basket is virtually insulated from external events including exchange rate fluctuations. The consumer price index in Malaysia tends to move with the commodities and services in the basket whose prices are free to vary--and these tend to be largely non-tradeables. But, of course, the extent of the variation is less than the price of non-tradeables because of the constant nominal price of one component of the index.

Thus Malaysia belongs to the model of the group of countries in which during periods of increase in the ratio of prices of non-tradeables to tradeables the squeeze on profitability in the tradeable sector tends to be accentuated by a rise in the product wage even if the real (consumer) wage is constant.

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[2] This is the typical "Dutch disease" case of an oil exporter when the price of oil increased.

ii. Growth and Cycles in the Malaysian Economy.

Figure II.1 plots the yearly rate of growth of GDP in real terms for the period 1970-1988. Because Malaysia is such an open economy the index of the terms of trade (with base = 100 for 1980) is also plotted in the same graph. The graph shows the high rate of growth of 7 percent or more which Malaysia has been able to sustain for most of the period. In the seventies growth was interrupted in only one year-1975. More difficulties emerged in the eighties with the growth rate struggling to keep at the level of the seventies culminating in the deep recession of 1985 and 1986. However the recession did not last long and by 1988 the economy had bounded back to a growth rate higher than 7 percent. The close relationship between GDP growth rate and the terms of trade is also revealed by the graph. A fall in the terms of trade in 1975 was associated with the sharp downturn in 1975. The sustained improvement in the terms of trade for the next five years seems to have been reflected in the recovery and maintenance of a generally high growth rate in the second half of the seventies. In the eighties the relationship between terms of trade changes and yearly variations in the growth rate is particularly close. But the deep recession of 1985-6 was of a much greater magnitude than the percentage fall in the terms of trade. Similarly the recovery in 1987-88 is much stronger than would be warranted by mere terms of trade improvement. Although led by terms of trade movements there were clearly other factors involved in the rather strong cycle of the eighties. We shall now discuss the phases of the cycle in the last decade in a little more detail.

Four phases of the cycle.

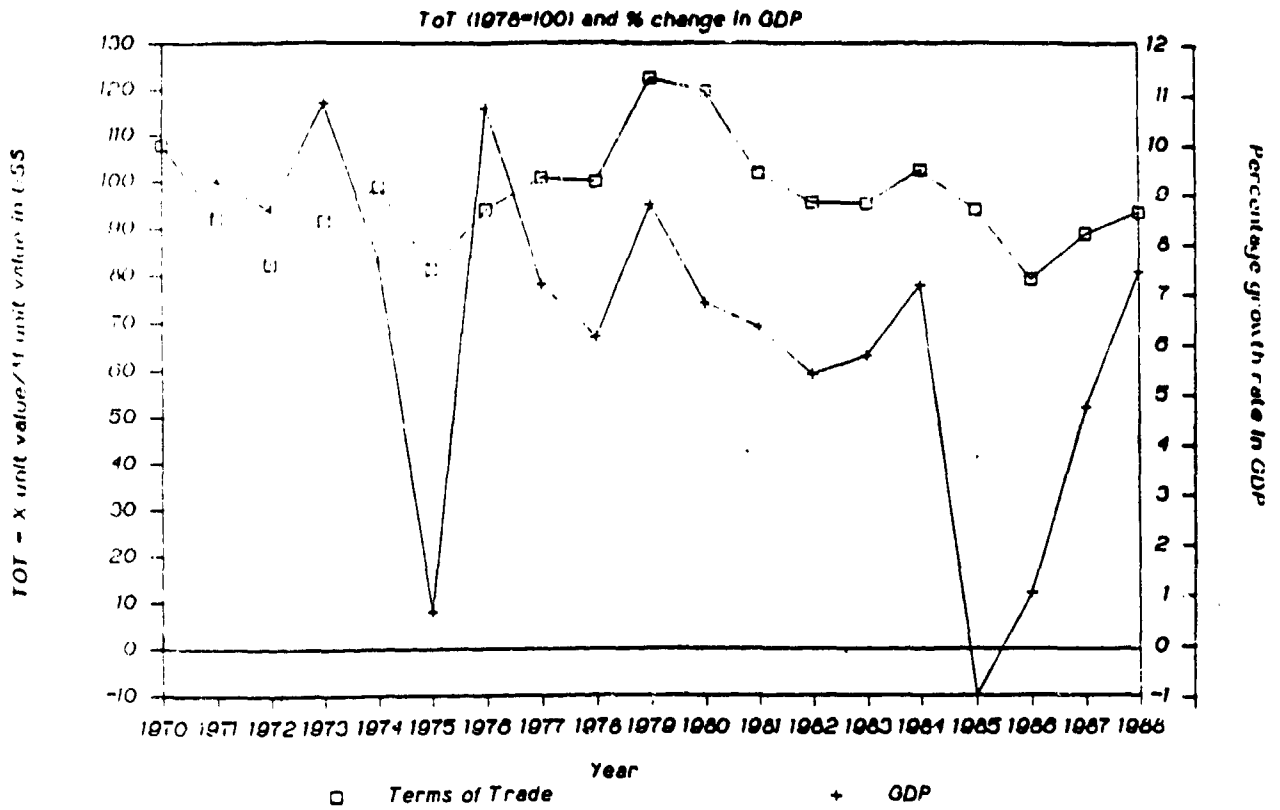
Phase I. The Upswing (1975-79).

As mentioned earlier, this upswing was fueled by a sharp increase in the terms of trade which were 51 per cent higher in 1979 compared to 1975. Prices of crude oil, rubber, tin and palm oil all rose simultaneously. The volume response was also positive but particularly strong in palm oil. The long term investment in palm oil was now paying off and it emerged as the leading agricultural export in this period, almost catching up with the share of rubber in total exports. In value terms, however, the most dramatic increase in export share was in petroleum, up from 9 to 24 per cent over the five year period.

The large increase in the value of exports increased domestic income through the multiplier process. 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. But during this phase of the cycle real incomes in Malaysia rose much more rapidly than did expenditures. Savings in the economy rose to record heights averaging 29.6 per cent of GNP in 1976-79. Investment although growing through the period at a substantial rate averaged less, at 25.3 percent, so that a current account surplus in the balance of payments was maintained throughout this period (see Figure II.2).

The respective role of the private and public sectors in the favorable resource position can also be inferred from the Figure II.2. The Federal budget deficit increased in absolute terms over this period, but not in any marked way. As a proportion of GDP it was in fact fairly constant. This ratio is plotted in

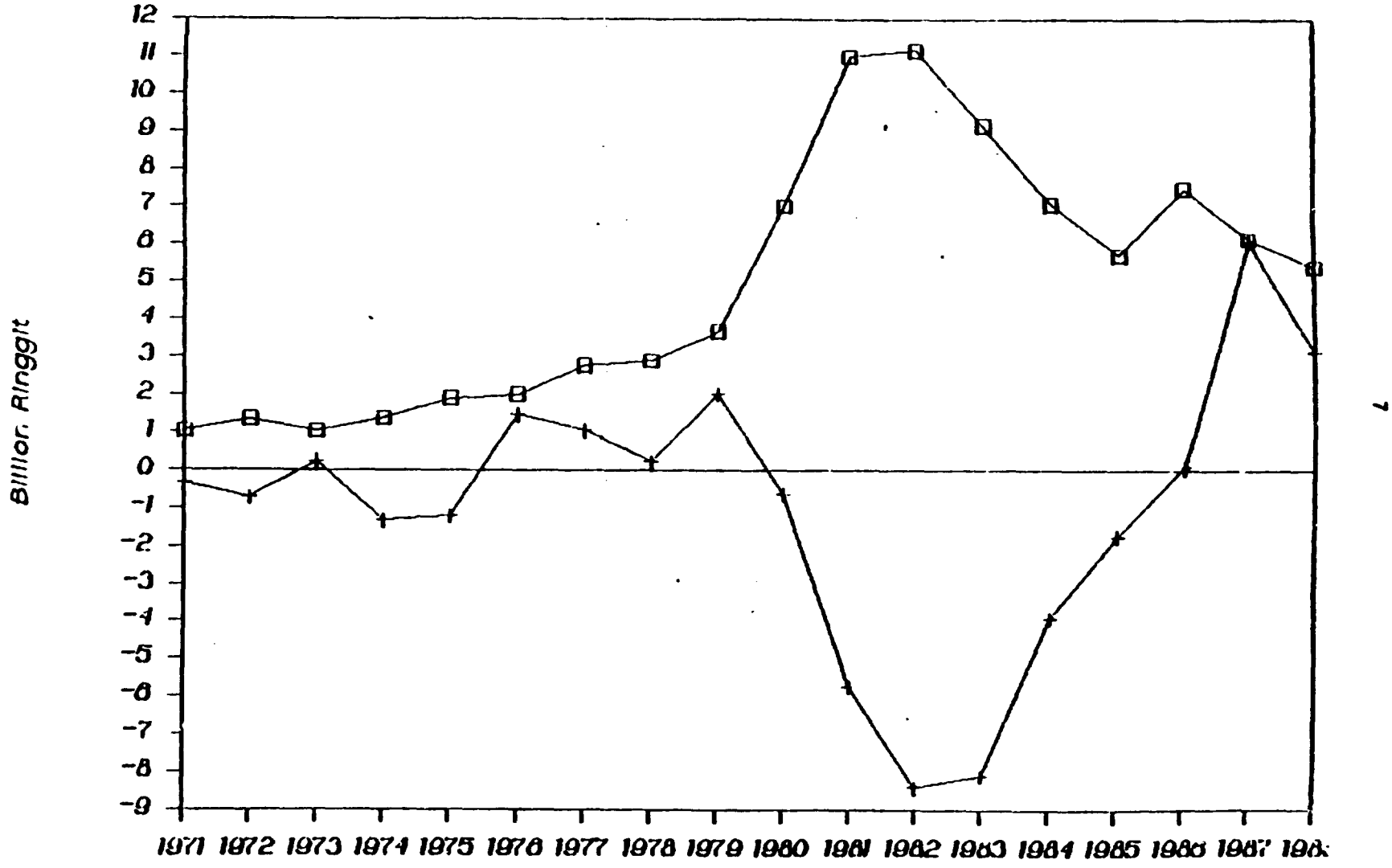
Figur' II.1



Note: Terms of Trade (ToT) = Export unit value divided by Import unit value in US $. (1978 = 100)
Gross Domestic Product (GDP) is expressed as percentage growth rate (using constant 1978 US $).

Source: Ministry of Finance, Economic Report, various issues.
Lawrence B. Krause, "Issues of Macro adjustment affecting human resource development in Malaysia." Table 1, July 1989.

Figure II.2
Balance in the Federal Budget and in the Current Account of the Balance of Payments



Note: The current account deficit is shown in negative values, and the federal budget deficit in positive values.

Figure II.3 together with the private sector Saving-Investment imbalance for theentire period of the seventies and the eighties. It shows the contribution of the positive private savings balance in sustaining the external accounts surplus during the upswing of the late seventies.[3]

Phase II. The attempt to sustain the upswing (1980-84).

The external terms of trade of Malaysia peaked sometime toward the middle of 1980. It took a downward course after then as commodity prices broke which continued until 1986 with a temporary respite in 1984. The decline in terms of trade during Phase II was around 20 per cent. At the same time the slow-down in the economies of the OECD threatened to reduce the growth rate of Malaysian exports.

The response of the government to the downswing in the external sector was to adopt a vigorous counter-cyclical fiscal policy. The expectation was that the recession affecting external trade was only temporary. Many people were predicting continued rise in petroleum prices and also a quick recovery of OECD growth. The expansionary fiscal policy took the form of a very sharp increase of federal government expenditure which was not compensated by increase in revenue. The swelling of budget deficit portrayed in Figure II.2 closely follows the pattern of increase in government expenditure. It peaked in 1982 but although reduced in successive years the ratio of public deficit to GDP in 1984 at 12.3 percent was nearly double the level of the mid-seventies.

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 and/or a fall in investment; or thirdly, 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 onwards the annual rate of growth of money supply (M1) declined continuously, registering a negative growth rate of -0.6 percent in 1984.[4] As a consequence the rate of inflation (measured by the GDP deflator) was at a lower level in Phase II with an average of 4.2 per cent compared to Phase I when it averaged 8.9 percent--though it was increasing in successive years after 1981.

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[3] The proportion of consumption goods in total imports fell from 22.2 per cent in 1975 to 18.4 per cent in 1980, while the proportion of intermediate goods went up from 41.3 to 49.9 per cent. Although growth in Malaysia is dependant on imported inputs the relatively low marginal propensity to import consumer goods helped to prevent deterioration of the balance of payments in this period.

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

As far as private domestic absorption was concerned unlike in Phase I private savings fell sharply in Phase II of the cycle. This is, of course, as is to be 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 (Phase III of the cycle), although as we shall see its composition might have changed. Thus the saving-investment balance in the private sector moved in a way opposite to what was required to offset the government budget deficit (see Figure II.3).

There was thus only one way left to finance the deficit-and that was borrowing from external sources. As a result of external debt financing the Debt-GNP ratio increased dramatically from 9.4 in 1980 to 39.0 in 1984. Furthermore, a great deal of the borrowing was done through commercial banks at variable interest rates.[5] Loans of this type increased from 45 percent of total debt in 1980 to 70 per cent in 1984 and a high of nearly 80 per cent in 1985. The high international interest rates of the early eighties increased the average interest cost of external debt from 8.1 percent in 1979 to a high of 13.1 percent in 1981 before it fell gradually to 9.7 percent in 1984.

Throughout this period the authorities in Malaysia took a passive attitude to the exchange rate. The capital inflow triggered by the budget deficit was instrumental in causing a significant appreciation of the real exchange rate. As we shall see in more detail below (Section III) this appreciation together with adverse movements in the labor market reduced Malaysia's competitiveness in world market and threatened to create an unsustainable deficit in the current account of the balance of payments.

Phase III. The period of adjustment and recession, (1985-86).

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% in 1982 to 7% in 1985. The improvement of the terms of trade in 1984 proved to be temporary and Malaysia was hit by a further drop in this key variable in 1985-86 (Fig. II.1). 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. We shall discuss in detail in Section III the way flexibility in the factor markets and in the exchange rate prepared the economy

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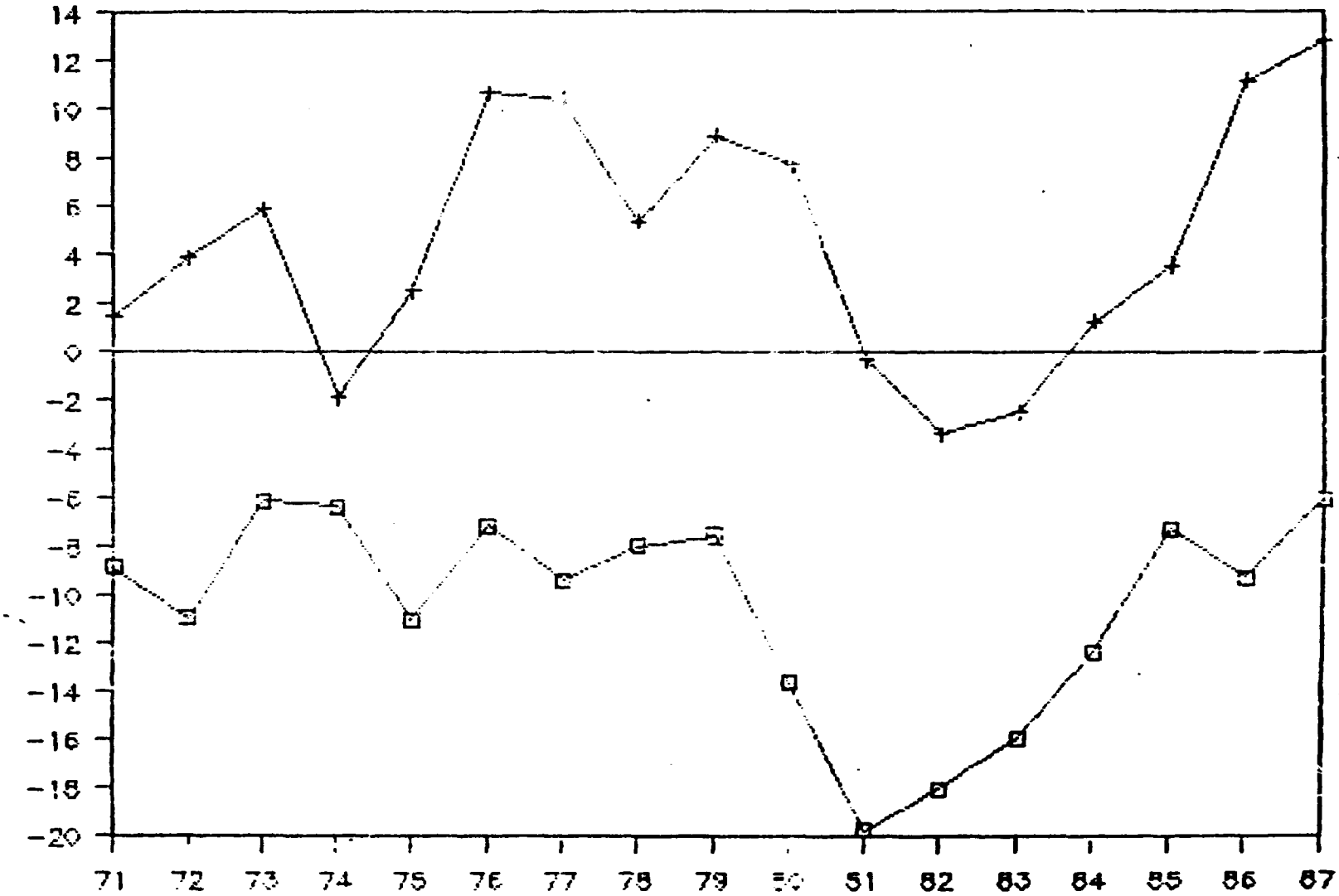
[5]"A substantial proportion of the foreign borrowing (57 percent in 1983-84) was undertaken by public enterprises. This recourse to external funds helped these agencies escape the surveillance and discipline that could have been imposed by he Federal Government had there been a greater reliance on the Treasury as a source of funds." (World Bank 1988,vol.I.,p.15).

Figure II.3 Consolidated Public Sector Fiscal Deficit and the [illegible] Imbalance (percentage of CDP), 1971-1987



to respond successfully to fresh stimuli for economic recovery. Here it is sufficient to note the extent to which the basic problem of absorption was overcome. As can be seen f om Fig. II.3 the fiscal deficit continued its dramatic improvement in 1985 but failed to sustain it the next year. It is difficult to cut budget deficits in a yeur of deep recession when revenues are generally falling off. The private sector surplus of savings over investment, however, continued to increase strongly. Private savings no doubt declined with falling income during the recession, but private investment fell faster. Taking the public and private accounts together the excess of spending over incone finally disappeared in 1986. At the same time these two years of recession saw for the first time the phenomenon of the current account of the balance of payments improve when the terms of trade were falling. This is because the value of imports fell due to the recession while exports registered a modest increase.

Phase IV. The recovery (1987-).

Somewhat to the surprise of observers the Malaysian economy registered a turnaround and a substantial rate of growth of GDP of 5.2% in 1987. The performance in 1988 was even better at 7.9% signifying that the recovery was well underway. The upturn was again fueled by the external sector with the terms of trade improving by 18%--the prices of the major non-oil commodities once more moving up in unison. At the same time exports volume which had started to grow already in 1986 surged forward in 1987-88. A major development in the behavior of exports is the leading role taken by manufactured goods whose share in total exports climbed to 48% by the end of 1988. However it remained heavily concentrated in electronics. "The robust expansion in electronics demand in turn follows from the economic growth of the leading industrial countries like Japan and the United States which are currently in their sixth year of growth as well as from the relocation of Japanese investments overseas." (Malaysia, 1988, p.114). At the same time the continued depreciation of the Ringgit helped the competitiveness of such exports in the world market. The combined effect of price and volume increase was that the current account of the balance of payments showed a sizeable surplus for the first time since 1979 (Figure II.2).

During this period of recovery restraint was observed in public expenditure growth. With the public sector deficit holding steady in proportion to GDP and the private savings-investment gap 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 gross Debt-GNP ratio fell from a high of 52% in 1985 to 37% in 1987 and was as low as 30% in 1988.

Gan and Krause underline the point that "the prepayment exercise provides an example of the judicious use of reserves in time of a primary commodity boom. The reserve inflows during the 1987-88 commodity boom would have resulted in the temporary appreciation of the Ringgit above its long-run equilibrium value, thereby delaying the adjustment process in transferring resources out of the non-tradeable to the tradeable sector." (Gan and Krause, 1989, p.23).

Recent information released by the Government shows the recovery during 1989 has continued in spite of a softening of commodity prices. At an estimated

7.6 percent, it is only slightly below the strong growth of 1988.[6] A major factor in the sustained growth is the continued expansion of manufactured exports which grew by more than 30 percent for the third year in a row. Malaysia has been able to sustain its international competitiveness and so achieve a high rate of growth without external imbalance.

[6] Malaysia (1990), p. 17.

III. The Short-run Problems of the Macroeconomy

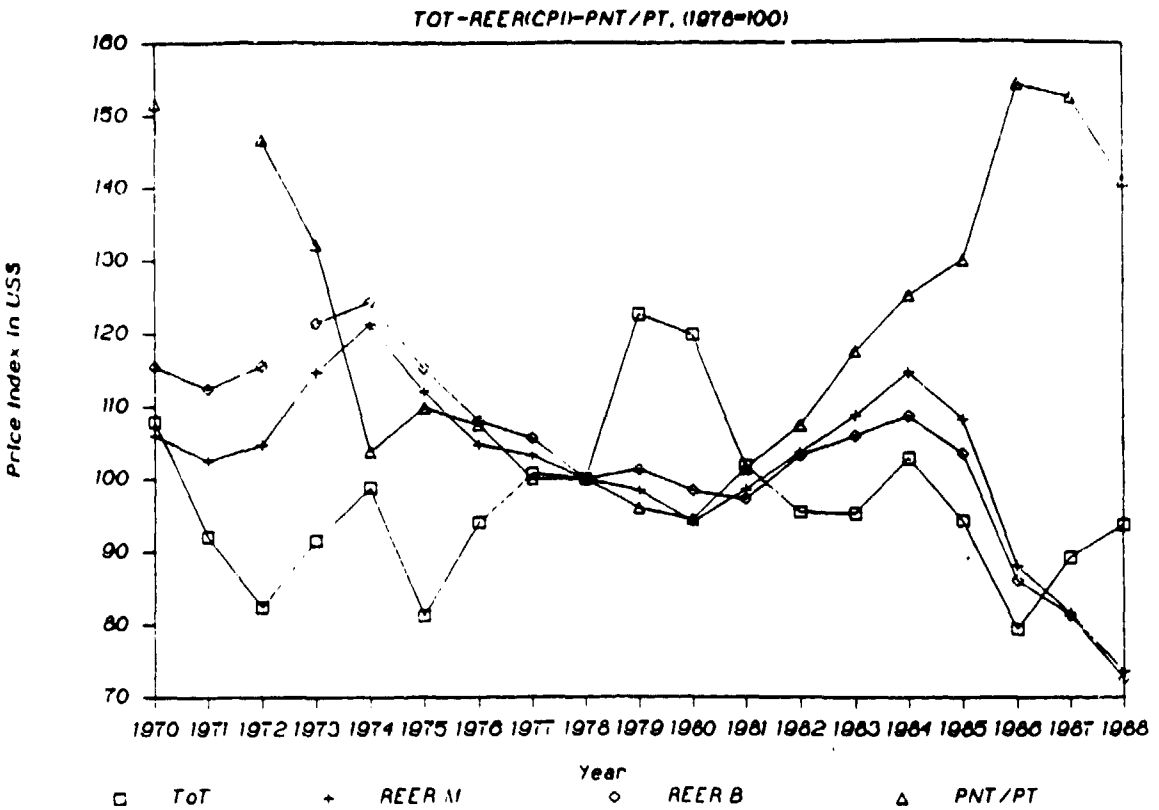
A. The Determinants of Exchange Rate Movements

The short-run problems for the Malaysian economy generated by the cycles described above can be understood in terms of the standard three-good model of an open economy. The three goods are: commodities whose world prices fluctuate sharply; other tradeables with a more stable price determined in the international market; and non-traded goods whose prices are determined in the domestic market. When there is an upswing in the terms of trade due to a rise in commodity prices there is a net flow of resources into the economy only a part of which is spent on tradeables. Depending on the proportion which is spent on non-tradeables, there will be an appreciation of the currency in a freely floating exchange rate regime. At this point it is necessary to distinguish between three concepts of the exchange rate. The first is the nominal effective exchange rate (NEER) which is the price of the currency in terms of some weighted average of the currencies of the trading partners. The second is the real effective exchange rate (REER) which corrects the nominal rate for differences in inflation rates between the country and its trading partners. This rate is particularly important in the factors determining the international competitiveness of the economy, i.e. it is an argument in the demand function for the country's export. The third is the real domestic exchange rate (RDER) which is the ratio of the price of non-tradeables to tradeables in the domestic market. This determines the relative profitability in the two sectors, and, therefore, is a factor affecting the supply function of exports. The last two-REER and RDER--will generally move together but there is no reason (except under very severe assumptions) why the magnitude of the change will be the same.

The "Dutch Disease" class of models have stressed the appreciation of the exchange rate (in all three aspects) because of a terms of trade (TOT) improvement due to an upswing of export prices of key commodities. In the Malaysian case the story is somewhat different. The series for the TOT, the REER, and the RDER are plotted in Figure III.1. It is seen that during the period of increase of TOT (1975-79), both REER and RDER declined substantially. They appreciated in the period (1980-85) when the TOT declined. The highest point of the REER was reached in 1984 but the RDER continued to increase until 1986. After these dates, as we have already discussed there was a decline. The decline of the RDER took place in 1987 and 1988 when the TOT improved appreciably. Thus contrary to the predictions of the standard model the exchange rate indices and the TOT are inversely related in the Malaysian case.

The reason for this has been implicit in the discussion of Section II. The "spending effect" caused by the TOT movements, in the Malaysian case, has been (i) dampened by the behavior of private savings which has moved directly with the TOT, and (ii) overshadowed by the much stronger counter-cyclical behavior of public expenditure. The sign and magnitude of the capital inflow generated by the resultant excess of spending over incomes (whether positive or negative) has been a more dominant effect on the exchange rate than the TOT, both

Figure III.1



Note: ToT = Terms of trade. It is the export unit value divided by the import unit value in US $ (1980 = 100).
REER M = Real effective exchange rate, Multilateral trading partner weights.
REER B = Real effective exchange rate, Bilateral trading partner weights.
PNT/PN = Price of non-tradables to tradables (i.e. Domestic real exchange rate). It is the service price index divided by the weighted manufactured export price index. Services price index is services component of the Consumer Price Index which includes rent, domestic services, transport and communication.

Sources: Department of Statistics, Monthly Statistics Bulletin, various issues.
IMF, International Financial Statistics, various issues.
IMF, Direction of International Trade, various issues.
United Nations, Yearbook of International Statistics, various issues.
Lawrence B. Krause, "Issues of Macro adjustment affecting human resource development in Malaysia," Table 1, July 1989.

in the upswing and the downswing of the latter.

In the upswing of the seventies government as well as private expenditure both increased but kept in pace with increase in GDP. As already mentioned, 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 in 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, they did. Net International Resources of Bank Negara (valued in US dollars) increased at a substantial rate so that the total in 1980 was three times the value in 1975.

As the terms of trade declined in the eighties, the government attempt to sustain a large counter-cyclical expenditure through massive foreign borrowing led to a large inflow of capital. It was this inflow which led to an appreciation of the Malaysian ringgit even though the terms of trade were declining.[7] In other words, in the Malaysian case financial flows in the capital account were the dominant influence in the exchange rate rather than flows generated by the current account of the balance of payments.

B. The Real Exchange Rate Movements and the Short-run Crisis

We have seen in Section II that the government had to indulge in massive external borrowing to finance its counter-cyclical budget deficit. This borrowing becomes unsustainable if the attendant appreciation of REER and RDER dampens the growth of exports so that the current account deficits fuel the soaring Debt-GDP ratio.

We will now present evidence to support the contention that the exchange rate appreciation indeed was a factor in the crisis of the eighties leading up to the recession and the subsequent depreciation was a necessary condition for the recovery.

The performance of the manufacturing sector and, more particularly, its export capability has increasingly become important in Malaysian growth. As noted earlier the composition of exports has shifted spectacularly, with manufacturing climbing by 1988 to nearly half the share of total exports.

There is <u>prima facie</u> evidence about the slowing down of the manufacturing sector during the real exchange rate appreciation of 1980-84.[8] Similarly, the

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[7] This interpretation differs from that given in Gan (1987), Gan and Krause (1989), which tell a standard "Dutch-disease" story. The government expenditure boom of the eighties is best viewed as a deliberate counter-cyclical policy, rather than a lagged response to the TOT increase.

[8] The average annual growth in manufacturing output declined from 13% in 1973-7 to 7.4% in 1980-84. The rate of growth of exports of manufactured goods declined from an annual rate of 56% during 1973-79 to 25% for during 1980-84 (Gan

recovery of 1987-88 has been accompanied by a strong revival in the growth of exports from the manufacturing sector, aided by exchange rate depreciation.

We need to know, however, if these fluctuations have been due to changing economic conditions in the world market rather than movements in the exchange rate. Gan (1988) estimated a reduced form export function as follows:

$$\log X_t = \beta_0 + \sum_{i=0}^{1} \beta_i \log REER_{t-1} + \sum_{i=0}^{1} \log WY_{t-1} + \sum_{i=0} u_i \log Y_{t-1}$$

where WY = Real GDP of all OECD countries
Y = Domestic real GDP
X = Quantum Index of manufactured exports

The equation was formulated in this way to allow for adjustment lags. It was estimated with quarterly data from 1974:1 to 1985:4. The real income of OECD countries was used because those countries accounted for 70% of Malaysian manufactured exports in 1983.[9] OECD real income was clearly significant along with REER (with different lags) but not domestic real income. However, the long-run elasticity of manufactured exports (the sum of lagged co-efficients) was much higher for REER (4.7%) than for WY (0.06%).[10]

Turning to the supply side of the market, there is considerable evidence on the squeezing of profitability in the tradeable goods sector due to the appreciation of RDER. It is well known that the initial expansion of the early eighties was sustained not only by government spending on services, but also by a construction boom in the private sector which it triggered.[11] Data gathered by Gan and Krause (1989) showed that during the first half of this decade the tradeable goods sector in Malaysia (including manufacturing) suffered a steady decline in the pre-tax return on equity and on fixed capital from 1980, while the rates of return in construction and retailing were well above the levels of the 70s.[12]

C. The Cycle and Labor Markets

RDER and the Wage-rate

It is now time to bring the wage rate into the picture. In the simple

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and Krause, op. cit., Token 17, 18).

[9] Gan (1988), Table 5, p. 23.

[10] Ibid, Table 8, p. 26.

[11] Cf. World Bank (1988), Vol. I, p. 9.

[12] Gan and Krause (1989), Table 16.

model of the open economy the product wage in the tradable sector will rise pari passu with the RDER. Under the assumption of full employment, a rise in the price of non-tradeables is assumed to be fully reflected in an increase in money wages--which rise to the same extent in both sectors. But with a complex labor market such as exists in Malaysia, we have to look in a more detailed way about wage behavior in different segments of the market.

Unfortunately, wage series on a quarterly and/or annual basis, are available in some form only for parts of the formal sector of the market--principally manufacturing and plantations. This is, however, not entirely unhelpful, because a substantial part of the tradeable sector coincides with the formal sector of the labor market (in both manufacturing and plantation agriculture). Food which is produced in the self-employed (or informal) labor market is, as explained in Section I a non-tradeable for the purposes of this analysis. Some part of the cash crops (which are exported) notably rubber, are, however, produced in the informal sector of smallholders.

In this section we thus concentrate on wage movements in manufacturing and plantations to throw light on the factors affecting changing labor costs in the short-run. Information on earnings in the informal sectors is available at more discrete intervals. It is used in the next section to analyze problems of distribution in the longer-run perspective of structural adjustments and economic growth in Malaysia.

Movements in Consumption (Real) and Product Wages in the Formal Sector

The series for real wage movements 1970-88 are plotted in Figure III.2 for four subsectors of the formal labor market. The statistical sources and details of the wage series are briefly discussed in the Appendix.

It is seen that in the manufacturing sector, real wages have been increasing steadily since the low point reached in 1976, but the trend rate of growth which continued to 1985 has not changed very much since the late seventies. The absence of variations in real wages with the phases of the cycle (and GDP growth) discussed earlier needs explanation and is discussed below. But before coming to this topic an important point about the behavior of product wage should be noted.

Real Wage and Product Wage

From the point of view of producers, the ratio of wages to producer prices (W/P_p) or "the product wage" is the critical variable determining costs. The real wage is related to the product wage through the identity

$$\frac{W}{P_P} = \frac{W}{P_C} \cdot \frac{P_C}{P_P}$$ where P_C and P_P are indices of consumer and producer goods respectively.

Now P_C/P_P will be related to the RDER (P_N/P_T) in a way which depends crucially on whether or not food is a tradeable good. In Malaysia we have seen in Section I that, because of the policy of maintaining rice prices, food is virtually a non-tradeable. Thus when, with real exchange rate appreciation,

P_N/P_T increased, P_C/P_P would have increased with it. It follows that as the real wage W/P_C increased in this period, the producer wage increased even more, putting pressure on costs in the tradeable sector.

Figure III.3 plots the indices of product wages for manufacturing and the

Figure III.2

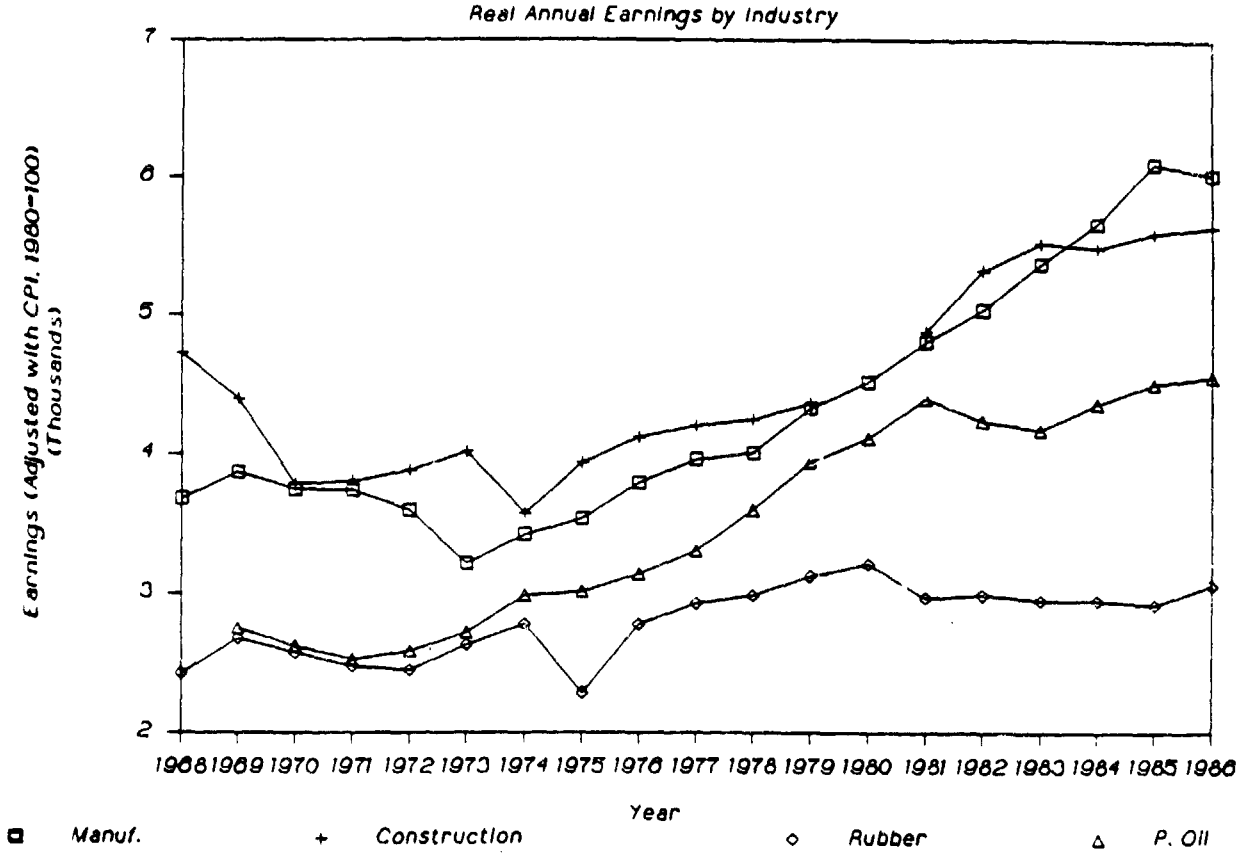
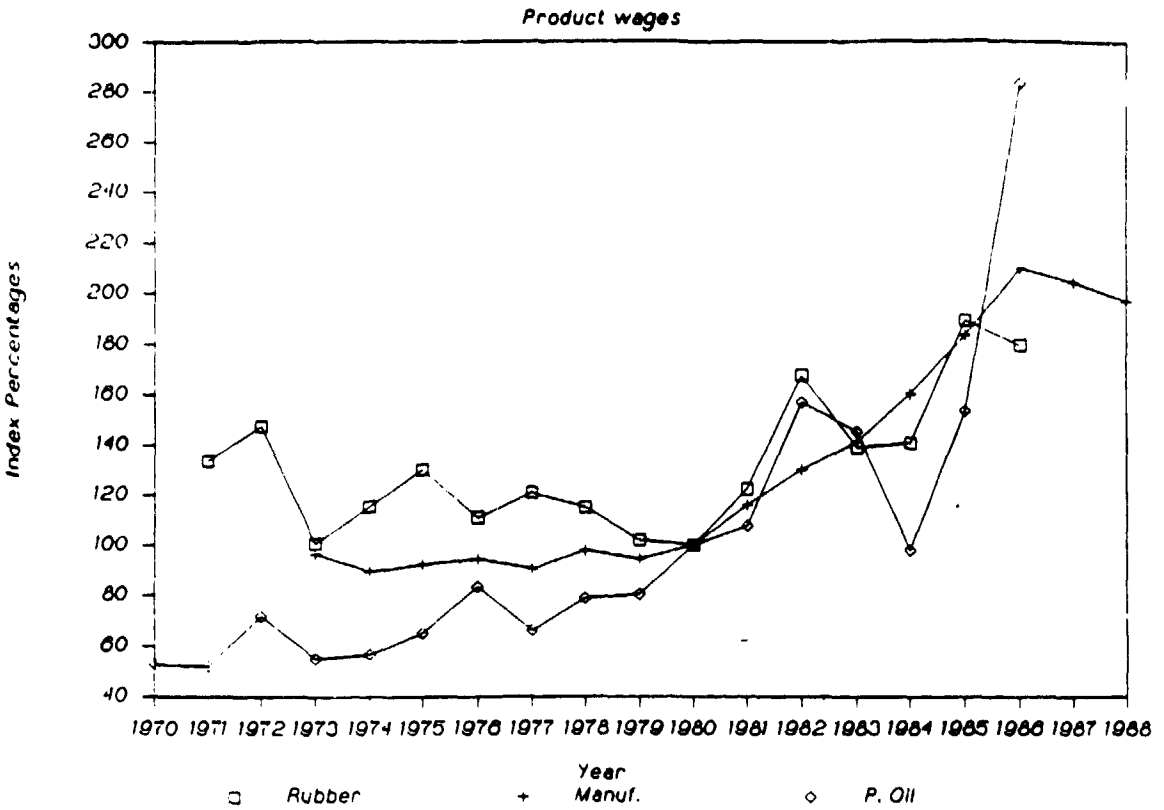


Figure III.3



Note: Product wage = Index of product wage rate divided by the Index of product price.

1. Rubber: Index of Rubber estate wage rate divided by Index of Malaysian RSS1 Rubber price index.
2. Manufacturing: Index of Manufacturing wages and salaries per paid employees divided by manufacturing weighted import and export unit value index.
3. Palm Oil: Index of Palm Oil nominal average earnings per employee divided by Index of Malaysian RSS1 Palm Oil price per metric tonne index. From 1970 to 1974 Price used was c.i.f. London $/tonne. From 1974 to 1988 Price used was f.o.b. Kuala Lumpur $/tonne.

Sources: Ministry of Finance, Economic Reports.
Department of Statistics, Industrial Surveys Oil Palm Statistics.
Lawrence B Krause,"Issues of macro adjustment affecting human ressources development in Malaysia," Table 12, (July 1989).

two estate sectors--palm oil and rubber. The remarkable increase in the indices in the period 1980-86, after comparative stability in the seventies, is brought out vividly in this graph. It was of a magnitude which the trend rate of increase in productivity could not offset. The resulting increase in unit labor cost for one sector--manufacturing--is also shown in Figure III.4. The increase in real (consumption) wage as well as the relative fall in the price of tradeables contributed to this adverse shock.

Determinants of Real Wage Behavior

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. The Figure III.5 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 relationship between employment and real wage growth was"normal"--both increasing. During these years the rate of unemployment was also falling. But in the period 1981-85 real wages continued to increase almost as fast as in the seventies, while the rate of unemployment increased every year, and the rate of growth of total employment fell--and, indeed, was stagnant in the manufacturing sector.

Richardson and Soon Lee Yin tried to fit an augmented Phillips curve to nominal wage rate changes in manufacturing, using quarterly data for the period 1976 to 1987. The equation is of the form:

$$W_t = a + b_1 \; E_t + \Sigma a_i \; I_{t-1}$$

where W is nominal earnings in manufacturing

E is the full-time manufacturing wages

I is the rate of inflation.

All the numbers are in logarithms. The last term is an autoregressive proxy for the (unobservable) rate of inflation expected by actors in the labor market.[13]

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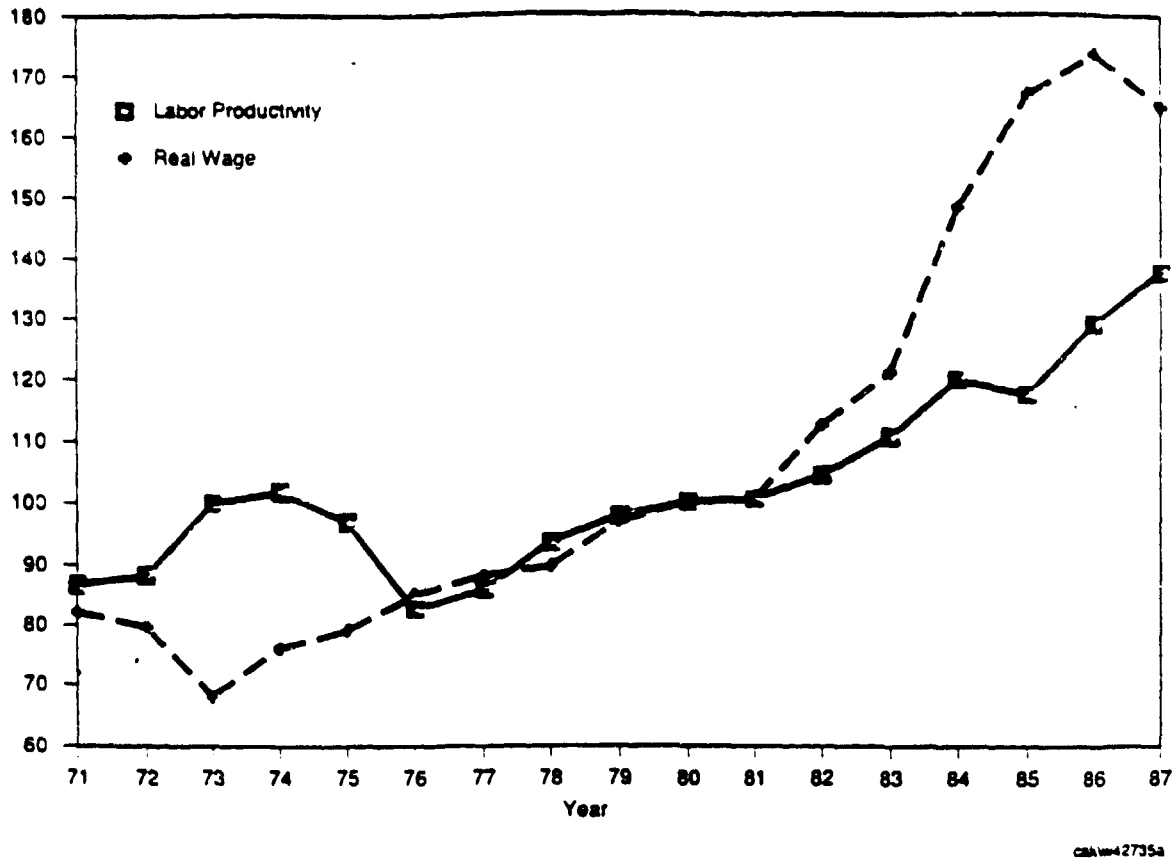
[13] Note that because of the absence of quarterly data on total formal sector employment, employment in manufacturing is used. The graphs in Figure C5 show that the correspondence between the two series of annual data is quite close. Employment was used as a labor demand variable rather than unemployment as in traditional Phillips curve models, because in Malaysia unemployment is very much a "structural" phenomenon affecting mostly white collar, first time job seekers (see section IV.E below).

Richardson and Soon Lee Yin write, "Three seasonal dummy variables were also included but are not reported.

The wage and employment data are quarterly, run from 1976 to 1987 and are taken

Figure III.4
Real Wage and Labor Productivity
Manufacturing Industry, 1980=100



Source: World Bank (1988), Vol. I, Fig. 2, p. 12.

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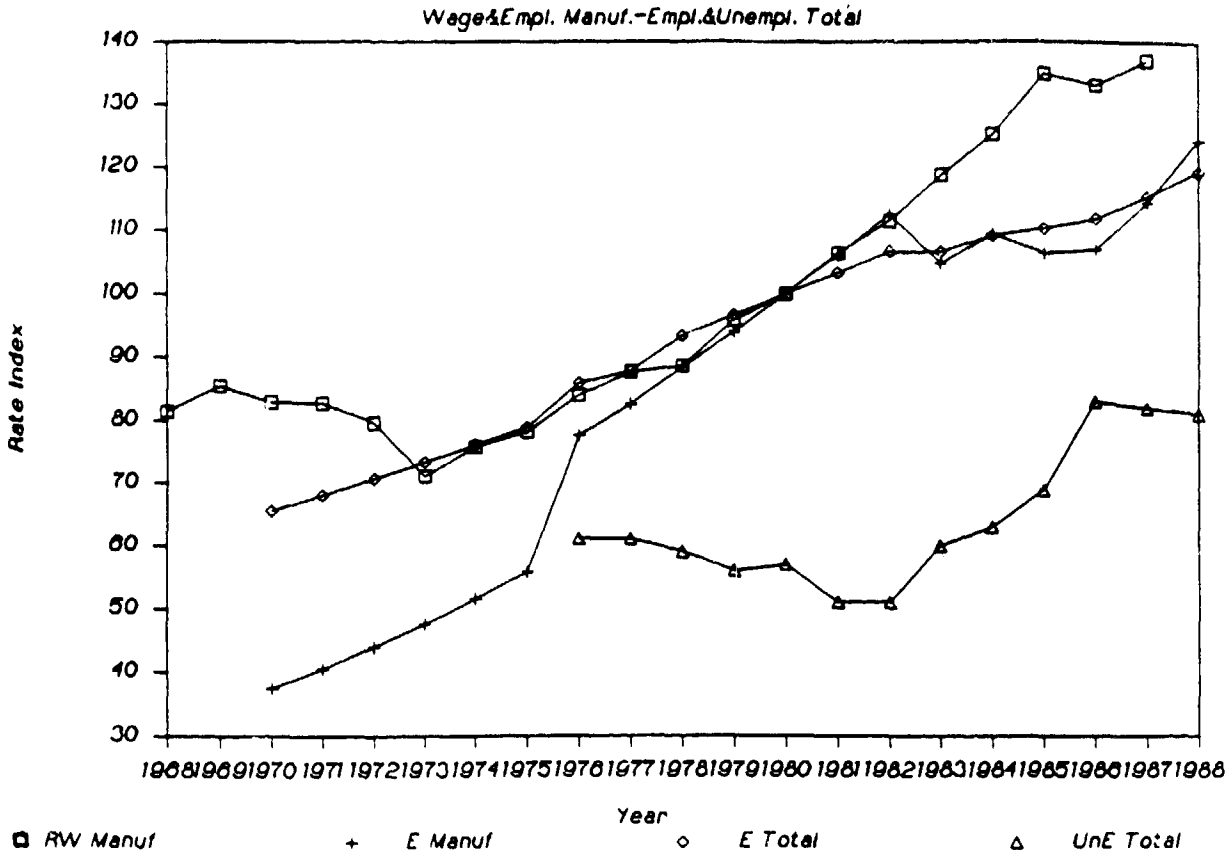
from *Monthly Industrial Statistics* published by the Department of Statistics The change in employment variable, E_t, was instrumented in order to remove a possible inconsistency being imparted from the joint determination of wages and employment; the instruments used were lagged changes in employment and inflation, and current and lagged changes in the ratio of manufactured product prices to import prices of raw materials and fuel."

Figure III.5



Note: RW Manuf = Real wage in Manufacturing
E Manuf = Employment in Manufacturing
E Total = Total employed
UnE Total = Total unemployed

The results are given in Table III.1, for the period as a whole, and the two subperiods before and after 1980. The employment change variable is negative in both periods but significant only in the second subperiod. This result underscores the puzzle already noted. Even after allowing for the effect of inflation expectations, the relationship between wage increase and employment increase was the opposite of what would be expected from labor market conditions.

The puzzle becomes deeper when we look at the divergence in the trend in wages in manufacturing and construction from the trend in the earnings in the plantation sector after 1980. It is seen from Figure III.2 that during the boom of the late seventies wages in both rubber and palm oil estates rose along with manufacturing wages. 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 since manufacturing wages were higher. But after 1980, while wages in the plantation sector were stagnant, manufacturing and construction wages bounded ahead until 1985.

What explains this odd behavior of wages in manufacturing and construction in Malaysia? Part of the explanation could indeed be economic. The wage series available is of average annual earnings. During the downswing, retrenchment of workers will affect those at the bottom of the wage ladder proportionately more--and this in itself will tend to push up average earnings. Lucas and Verry (1989) were able to look 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," (Table D.2 and p. 12). "However," they commented, "it was certainly not the only factor, for we know that pay of given individuals continued to rise also."

We turn to institutional factors which might have been important. Unionism is not a very powerful factor in the Malaysian labor market. In manufacturing by 1985 less than a quarter of the workers had been unionized, and in some subsectors, e.g. electronics, unionism was forbidden. Paradoxically, the sector which saw the stagnation of real wages in the eighties, viz., plantations 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.

We have seen that 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 eighties? Lucas and Verry cite evidence to show that 1980 through 1987 average wages in the public sector increased less rapidly than those for manufacturing. "On these grounds, it would seem difficult to make a case that public service pay has led private pay over the entire period, though in some intervals, such as 1983-84, it may have done so." (Fig. D.14 and p. 21).

It is to the contractual forms of wage agreement--both formal and informal--to which we must turn for an explanation of the rising wages of the eighties. Two different practices in Malaysian wage setting seem to be particularly

Table III.1
Nominal Wage Changes in Malaysian Manufacturing, 1976-1987

1976(3) - 1987(4)

$$\Delta W_t = \underset{(4.536)}{3.385} - \underset{(-2.213)}{0.134}\Delta E_t + \Sigma a_i 1_{t-i}; \text{ where } \Sigma a_i = \underset{(8.233)}{1.369}$$

$R^2 = 0.689$ SEE = 2.404

1976(3) - 1979(4)

$$\Delta W_t = \underset{(4.789)}{13.682} - \underset{(-1.242)}{0.179}\Delta E_t + \Sigma a_i 1_{t-i}; \text{ where } \Sigma a_i = \underset{(-1.877)}{-0.985}$$

$R^2 = 0.314$ SEE = 1.732

1980(1) - 1987(4)

$$\Delta W_t = \underset{(3.912)}{2.920} - \underset{(-3.723)}{0.233}\Delta E_t + \Sigma a_i 1_{t-1}; \text{ where } \Sigma a_i = \underset{(9.149)}{1.497}$$

$R^2 = 0.799$ SEE = 2.338

Figures in parentheses are t-values.

Richardson and Soon Lee Yin (1989), Table 23. The original data used for these computations are from the Monthly Industrial Statistics, Department of Statistics.

relevant here. First, many collective bargaining agreements in Malaysia provide for a two-to-three year coverage. Even when the plant is not unionized, formal sector employers are keen to follow the going practice of wage setting. Clearly, with contracts fixed for a long period of time, it is not possible for employers to cut wages of those employees who are not retrenched. It should be noticed in this connection that agreements in the plantation sector included provisions for tying the wages of their workers to the prices of their products through complicated formulae which ensure that to some extent wages fluctuate with product prices when there are severe shocks. The stagnation of real wages in the eighties in the plantations, after a period of rapid increase, may partly reflect this effect of the agrement working itself out after the decline in commodity prices. But in the manufacturing or construction sectors where the practice of tying wages to product market conditions does not exist, long contracts mean that there is a substantial lag before wages start to adjust.[14]

In fact, when the rate of inflation is falling, as it did in Malaysia, in the eighties, the length of time which elapses before real, rather than money wages begin to fall, may be considerable.

The second wage setting practice which 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.[15] While the system is expected to increase productivity by securing loyalty and attachment of the workers to the individual enterprise, it does not help the rapid adjustment of wages to business conditions, particularly when external shocks tend to be as large as they do for Malaysia. The Japanese wage system provides a safeguard against the seniority system by using bonuses (which are geared to the profitability of the firm) as a large component of the worker's earnings. Non-basic wages are not insignificant in Malaysia. Such payments, including fringe benefits constituted 15% of total earnings for male workers in 1984. This, however, was relatively low compared to Korea, where the share of bonuses and overtime payments in total compensation in 1982 was as high as 30% split evenly between the two.[16]

It has been pointed out that, while wages of "senior" workers are relatively rigid, reduction in entry level salaries is a major element in the downward flexibility of wages.[17] But this particular mechanism could be working

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[14] In fact this type of delayed adjustment of wages to economic shocks is not uncommon in much of Asia. Cf. Gus Edgren (1989).

[15] See McCarthy (1988).

[16] World Bank (1988), p. 155. Note that 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.

[17] Ibid.

strongly only when employment starts to recover and there is the opportunity of hiring a significant number of new workers. This is, indeed, 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% that year), reflecting built-in escalators in old contracts. But in 1987 average earnings finally fell, coinciding with the upturn.[18]

Labor Markets and Changes in Competitiveness

Malaysia's problem of adjustment in the 80s stemmed from the same sources as those for other developing countries--a fall in commodity prices, and as an oil exporter, she was also his by the fall in oil prices. Unlike many other countries, particularly in Latin Ameica, Malaysia had not overborrowed during the upswing of the late 70s. Quite the contrary, her strong reserve positions enabled her to go in for a strong counter cyclical policy, with substantial foreign borrowing, when the downturn in the external sector hit.

An emerging exporter of manufactured goods like Malaysia was heavily dependent on maintaining her international competitveness, especially when the price of commodities collapsed. It is possible to argue that if wages had shown more flexibility, particularly in the manufacturing sector, when employment growth slowed down in the early 80s, the recession of the mid-80s could have been less severe. As it was, the economy needed a sharp, albeit, short recession with a negative growth rate, to avert the increase in wages.

But it should be emphasized that it is the dollar cost of labor which is important for competitiveness, not just the domestic unit cost of labor. Thus an important part of the story is the behavior of the exchange rate. Enough has been said above about the appreciation of the ringgit without which the recession might have been less severe.

The World Bank report commented on the fact that other Asian countries (Korea, Taiwan, Singapore, Hong Kong, and Thailand) also suffered from the phenomenon of domestic wages rising faster than productivity. But because of differences in exchange rate policies, in "Korea, Thailand and Taiwan, unit labor costs in manufacturing denominated in US dollars were roughly level with their 1980 values in 1984 and 1985. In Hong Kong they were over 20% lower. Only in Singapore and Malaysia is the trend sharply upwards, with a rise of 40-50% in just four years," (World Bank 1988, Vol. I, p. 11 and Table 2.6, p. 13).[19]

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[18] World Bank, op. cit., Vol I. p. 26.

[19] The different exchange rate experiences in Korea and Malaysia stem from the fact that Korea has a closed capital account and effective central bank control over the nominal parity of the wan. With a floating exchange rate system, like Malaysia, and the large inflow of capital, the only way to keep down the dollar cost of labor would be to depress wages.

A second point which needs to be stressed is that labor costs are only a part of total costs, the share of wages in value added in manufacturing being of the order of 31 percent in the period 1983-6.[20] In the eighties tight monetary policy in Malaysia, to which reference has been made above, pushed up real borrowing costs (the real prime lending rate rose from 5.9% in 1983 to 7.1% in 1984 and further to 12.3% by 1985). At the same time firms in the tradeable sector had been severely rationed in the availability of credit as progressively more credit was channeled to the construction sector.[21]

It is thus the entire package of fiscal, monetary and exchange rate policies, acting together with labor market behavior, which led to developments culminating in the deep recession of 1985-6. Similarly, it was the simultaneous downward movements of interest rates, wage cuts and exchange rates which fueled the recovery--along with favorable movements in the world market.

Compared to the devaluation of the real exchange rate of over 30 percent, and a drop in the base lending rate from a peak of 12.25 percent in 1984 to 7.0 percent in 1988, the drop in average earnings per worker was, indeed, quite marginal. We did not see the massive wage costs which have been witnessed in Latin America. But clearly, unit labor costs fell as productivity increased faster. Secondly, and more importantly, the glut in the labor market changed the cost calculations for the employer as far as expanding employment was concerned. As a local economist wrote late in 1987: "The burden of adjustment has fallen primarily on new entrants into the labor market or otherwise on those who have been unfortunate enough to lose their jobs, either through business failures or retrenchments. This is readily apparent from a comparison of salaries of existing and new employees. In fact, in the case of graduates, the difference in starting salaries now and before can be as much as 50 percent or even more. The difference is somewhat less in the case of non-graduates.[22]

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[20] Lucas and Verry, Section D, p. 57.

[21] See, for further details Gan and Krause, Appendix A.

[22] Thillainathan (1987), p. 9.

iV. The Long-run Aspects of Adjustment and Labor Markets

A. The Initial Conditions and Objectives of Structural Adjustment

Malaysia, at the time of the initiation of the New Economic Policy in 1971, was an economy still heavily dependent on agriculture. Over 50% of the labor force was engaged in agriculture and produced 30% of the GDP. The manufacturing sector, though expanding, contributed only 13.4% of GDP, and employed just over 10% of the labor force. Incidence of poverty was judged to be high--officially 49.3% in 1970--although in absolute terms the Malaysian poverty line might have been high by international standards. How could an economy which had a relatively high per capita income to be classed as a middle income country and a very respectable growth rate of 6% per annum in the sixties have such a high incidence of poverty? Apart from a high population growth of 3%, observers, including official planners, seemed to agree that the economy contained large pockets of low incomes. One such pocket could have been in the small-scale tertiary sector activities which were an important source of employment. Another such pocket existed in agriculture because of its dualistic development. A large proportion of the work force was involved in cultivating small holdings, either in paddy or in cash crop, and often in both. The estates, principally in rubber and oil palm, produced a substantial fraction of the cash crops with a high land-labor ratio, and employed hired labor. The problem of "dualism" was exacerbated by the racial concentration in economic activity. Malays dominated the low income activities--like paddy, small holdings, and services. The Chinese were to be found in the more dynamic sectors of industry and commerce. Thus the incidence of poverty was much higher among the Malays.

The objective of the New Economic Policy was to bring about a restructuring of the economy with a view to reducing racial disparities in incomes, and as a by-product reduce the incidence of poverty, particularly among the Malays.[23] A selective list of the major instruments of policy is as follows:

1. A policy of price maintenance (at a level higher than world prices) and subsidies on inputs for paddy farmers.

2. Land development which took the form of resettling of Malay families in newly cleared land (at government expense) and setting them up as viable smallholders cultivating cash crops, particularly palm oil.

3. A massive expansion in education, especially at the post-primary level, accompanied by a rapid increase in employment in government services (in which the Malays were hired preferentially).

4. Application of a racial quota on new employment in industry and commerce.

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[23] The two principal official documents on the objectives of the policy are the Outline Perspective Plan (OPP) in Malaysia (1973) and Malaysia (1976).

Clearly the New Economic Policy encouraged a massive restructuring of employment, and it was sustained in this effort by the very satisfactory rate of growth of GDP maintained in the last two decades in spite of the fluctuations analyzed in Section III. We shall now look at the long-term results of this restructuring from the point of view of the behavior of labor markets and the pattern of earnings.

B. The Aggregate Supply and Demand for Labor

It is useful to start by looking at the long-run trends in the aggregate supply and demand for labor. Table IV.1 summarizes the trends in the rates of growth of labor force, employment and related variables over the last three decades. The rate of growth of the labor force has been higher than the rate of growth of population throughout, partly because of a shift in the age structure towards the working age group and partly because of an increase in participation rates, especially women (see below). In the sixties the employment growth failed to keep up with the growth in the labor force so that unemployment increased in the latter half of the decade, peaking at nearly 10% by the end of the decade. The labor market picture was much better in the seventies when in spite of an accelerated growth in the labor force, the employment growth rate stayed ahead, responding to the higher GDP growth stimulated by the NEP in the first half and by the commodity boom in the second. The unemployment rate fell to the level of 5-6 percent by the end of the decade. The figures in Table IV.1 for the eighties reflect the problems of the short-run crisis and adjustment already discussed in Section III. The unemployment rate in the second half of the eighties is back to where it was at the end of the sixties. As already mentioned above the apparent lack of sensitivity of the unemployment rate to the recovery of 1987-88 has raised the specter of a more long-term structural problem of unemployment in the labor market. This is discussed in more detail below in Section IV together with the issues of educational expansion with which it is connected.

Table IV.1 Growth Rates of Population, Labor Force and Employment Relative to GDP in Malaysia, 1961-85 (percent per annum)

	1961-70	1971-75	1976-80	1980-85
GDP	5.3	7.3	8.5	4.5
Population	2.8	2.7	2.6	2.6
Labor Force	3.1	3.6	3.5	2.8
Employment	2.8	4.6	3.7	2.8

Source: Wong (1983), Table 10 for the periods until 1980. Fifth Malaysia Plan for 1980-85. Note that for years earlier than 1980 the growth rate of GDP relates to all Malaysia but the other statistics are for Peninsular Malaysia only.

C. Trends in Employment and Earnings in the Formal and the Informal Sectors

It was noticed in Section III that real average earnings in manufacturing after growing rather slowly in the first half of the seventies, started to accelerate around 1977-8 and went on increasing through the eighties in spite of slackening employment growth and rising unemployment. Some of the short-run issues about wage-flexibility in the labor market--or lack of it--has already been addressed in Section III. But these wage data refer entirely to the formal sector of the economy. It is necessary to see how the wage movements in this sector compare with trends in earnings in the informal sector or various subsectors of it. We need to know if economic growth in Malaysia has been accompanied by a widening gap in earnings between the formal and the informal sector--thus accentuating the economic dualism which the NEP was expected to correct. On the other hand, if the evidence suggests no such disparity in increase in earnings, then we should conclude that the accelerating wage increase in the formal sector since the late seventies is symptomatic of Malaysia's transition from a labor "surplus" to tighter labor market conditions--which the short-run downturn in employment in the eighties did not affect significantly.

The Definitions of the Formal and the Informal Sectors

The Informal Sector is generally defined to include the self-employed who are outside the wage system, but should exclude those of the self-employed who work in professions with restriction on entry (lawyers, doctors, etc.)[24] Generally, a reasonable way to exclude the professionals is to apply an educational cut-off to the self-employed. A further problem attaches to the distinction between the self-employed and own-account workers. The former, in the terminology followed here (but not necessarily in other works), include the employers, i.e. the owners of small businesses who could also be workers in their establishments. Their earnings are a mixture of wages, profits and rents. It is difficult to separate out these elements. The own-account workers are paid family or autonomous workers and have no wage earners working for them. Hence, in some of the empirical work referred to below both concepts are used to identify the informal sector in alternative ways.

The informal sector should also include the small firms employing wage labor who are outside the legal and institutional framework covering larger firms, who use methods of structuring and deploying labor which are less bureaucratic and hence more susceptible to the free play of forces of supply and demand. Although arbitrary to some extent, small and large sectors could be usefully differentiated for a particular economy by researchers with detailed knowledge of the economy. Unfortunately, the statistical data collected in Malaysia do not permit of this separation in wage employment.

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[24] For a summary of the extensive discussion on the problems of defining and measuring the informal sector, see Mazumdar (1989), Chapter 3.

However, a large proportion of the wage earners in the small-scale sector in Malaysia are employed in the tertiary sector, which as we shall see, has expanded very fast. In this section we, therefore, look at the trends in earnings difference between tertiary and other sectors to form such judgment on whether or not there is prima facie evidence of pockets of low income labor developing in the tertiary sector.

Before turning to differences in earnings we look briefly at the changes in the distribution of the labor force by mode of employment and by its industrial composition.

Trends in the Distribution of the Workforce by Mode of Employment

In common with most other developing economies Malaysia has been undergoing expansion of wage employment relative to the self-employed and own-account workers. But in recent years perceptible increase in the share of wage workers seems to have taken place only since 1975. Wong's data show that the proportion of employees in total employment in Peninsular Malaysia was about the same in 1975 as in 1957, hovering round 58 percent (Wong, Table 12, p. 22). Data from the LFS for more recent years are given in Table D.2. It shows that the wage worker's share increased significantly between 1975 and 1984 by about 10 percentage points, but that this trend was checked by the recession. Between 1984 and 1987 the share of employees in the total actually fell by about 3 percentage points.

Looking at individual sectors[25], we first note the resilience of the self-employed in the agricultural sector. Unlike in many developing economies economic growth has not led to a transformation of agriculture from a family-based to a commercial wage economy. Undoubtedly such a trend is observed in particular regions, notably the Muda region. But the region is not large enough to affect trends in the agricultural sector of the country as a whole. Also the major growth in agricultural output has come from the cash crop sector. In this sector the proportion of wage workers in the total employed is much higher than in the food sub-sector. But for several reasons, including the land development efforts of agencies like FELDA this proportion has been declining in the last two decades at a significant rate (Cf. Wong Table 13, p. 23).

Table IV.2 Distribution of Employed Labor Force in Peninsular Malaysia by Employment Status (percentage)

	Year			
Employment Status	1975	1980	1984	1987
Employer	2.46	2.74	2.66	2.96
Employee	57.98	64.66	68.57	65.63
Own account worker	24.50	21.48	19.79	20.72
Unpaid family worker	15.05	11.12	8.98	10.68

Source: Malaysian LFS

[25] The detailed data are not given in the interest of brevity, but it can be found in the original version available from the author.

A second point to notice in the Malaysian case is that the proportion of non-wage workers in manufacturing is quite small compared to many other developing countries. Further this proportion has been declining over time such that when wage workers reached their peak in 1984, the self-employed were barely 12 percent of the manufacturing workforce. The data suggest the relative unimportance of the informal sector in manufacturing. Of course, we have no information from the LFS on the size of wage employment in small firms.

Outside agriculture the self-employed are important only in "Distribution." But here too they were losing ground between 1975 and 1984. Nevertheless, they continued to account for just under half of the workforce found in the distributive trades.

Trends in the Distribution of the Workforce by Industry of Employment

There was a fairly continuous decline of the share of agriculture in total employment through the seventies. The decline was arrested in the more difficult years of the eighties as far as non-cash crop sector is concerned, but the decline continued at much the same rate in the sector producing rubber, palm oil and coconut. Both manufacturing and the tertiary sectors absorbed labor released by industry. But after 1980 the share of manufacturing stabilized as did employment in government services. The private tertiary sector thus grew at the expense of the declining cash crop sector in the years leading to and during the recession.

Table IV.3 might give a better idea where the growing labor force went. For the two periods 1970-80 and 1980-87 we give separately the increase in employment in each sector as a percentage of the increase in total employment. In the first period of rapid growth agriculture actually lost labor absolutely by a small percentage. The whole of the increase in labor force had to be absorbed by the manufacturing and the tertiary sectors. The data show that manufacturing played the leading role in providing new jobs-to the tune of nearly a third of the total increase. The table also shows the importance of the government sector in labor absorption-21.6 per cent of the incremental employment. The rest of the new labor force was absorbed in the private tertiary sector in which distributive services dominated but construction also played a not insignificant role.It is interesting to note that private services, per se, was a declining sector in this period losing labor by an amount equal to 7.2 per cent of the increase in employment.

Rather dramatic changes are seen in the second period. In fact this period consists of two distinct sub-periods in terms of the economic cycle in Malaysia. The first 1980-84 was the period leading to the crisis in which government spending slowed down but the boom was kept going by the upswing in the private sector largely based on construction. The second sub-period 1984-7 were the years of recession. Data on the marginal shares of employment in each sector are presented separately for the two periods. Taking the two periods together the leading role of manufacturing and government in labor absorption falls significantly. Thus the private tertiary sector was called upon to absorb no less than 72 per cent of the increase in new employment in this period as a whole (as compared to less than 50 per cent in the seventies). A rather significant aspect

of the changed role of the private tertiary sector was the importance of the sub-sector called "private services" in the eighties. We have already drawn attention to the remarkable fact that private services actually lost labor absolutely in the seventies. However, in both the sub-periods of the eighties this sector provided more than a quarter of the new jobs. We will come back to this point soon.

Table IV.3 Marginal Changes in Employment by Sector in Peninsular Malaysia (% of total change)

Sector	1970-80	1980-87	1980-84	1984-87
Agriculture	-1.2	0.8	-16.2	32.1
Mining	-1.2	-1.1	-0.1	-3.2
Manufacturing	32.0	16.7	16.6	17.1
Utilities	1.8	-1.6	-3.0	0.9
Construction	11.9	6.0	22.1	-24.1
Distribution	30.0	29.9	26.5	32.6
Transport	5.7	3.9	5.6	0.9
Commerce	9.0	7.0	5.3	10.2
Private services	-7.2	27.6	28.9	25.3
Government	21.6	10.8	14.2	10.8
Total	100.0	100.0	100.0	100.0

Source: Malaysian Labor Force Survey, various years

One important difference between the two sub-periods of the eighties should be pointed out at this stage. The recession after 1984 did not help employment in manufacturing to pick up much. The government continued to increase its workforce but at an even lower rate than in the earlier sub-period. At the same time there was a precipitous fall in employment in construction. The lack of employment opportunities in the hitherto booming sectors led to an increase in the rate of unemployment (which is discussed in a later next section). But Table 2.2 reveals another striking aspect of the adjustment in the labor market. Employment in agriculture which had been decreasing at a slow rate in the seventies and much faster in the period 1980-84, reversed its trend rather dramatically. New employment in agriculture in the recession years of 1984-87 was nearly a third of the total increase.

Differences in Average Earnings by Industry and Mode of Employment

Table IV.4 gives the means and first quartile values of different groups of workers, each value expressed as a relative with the earnings of paddy own-account workers set at 100. The statistics are given for each of those years for which Household Survey data were available--1973, 1984 and 1987. For the moment we look at male earnings only.

Paddy and other Sectors

The first point which stands out from these tables is the substantial increase in the difference between mean incomes of paddy cultivators, on the one hand, and workers in most other sectors, on the other. However, an interesting point is that while this is true of mean incomes at the different dates, the

first quartile value of earnings does not seem to have increased in other sectors relative to paddy, with the exception of own-account workers in smallholdings. What this means is that the earnings distribution in the paddy sector in 1973 was flatter than in the other sectors (so that the difference in Q_1's was larger than the difference in means). But in the eighties the earnings distribution in paddy has become as skewed to the right as in the other sectors.

Table IV.4 Relative Mean and First Quartile Earnings by Usual Employment Status for Males in Peninsular Malaysia for 1973 and 1987

	1973		1984		1987	
Rural Sector	Mean	Q1	Mean	Q1	Mean	Q1
Padi, Own Account	100	100	100	100	100	100
Smallholdings, Own Account	87	98	168	149	141	155
Estates, Employees	119	194	214	191	158	195
Production, Employees	132	202	190	224	184	216
Production, Own Account	114	141	189	216	227	208
Sales, Employees	174	304	208	281	226	271
Services, Own Account	196	180	277	255	257	249
Urban Sector						
Production, Employees	148	247	211	272	215	240
Production, Own Account	147	196	226	269	213	245
Production, Self Employed	181	206	270	287	258	277
Sales, Employees	217	210	230	283	273	233
Sales, Own Account	214	271	329	315	273	283
Sales, Self Employed	311	314	400	359	320	311
Services, Employees	186	239	319	280	241	290
Services, Own Account	157	245	335	345	284	280
Services, Self Employed	273	275	404	383	370	335

Sources: The Malaysian 1987 household income survey and the 1973 household expenditure survey.

Notes: The self employed include employers and own account workers. Q1 stands for first quartile.

The paddy sector has been traditionally a pocket of low incomes in Malaysia. It was identified in the seventies as one of the "target groups" for poverty reduction. In spite of the policies of price support mentioned above, it is evident that labor which has remained in this sector has continued to fall

behind incomes in other sectors.[26] This, in spite of the fact that the proportion of labor force engaged in this sector has been halved between 1970 and 1987.

Paddy and the Cash Crop Sector

Another striking point is the relative improvement in earnings in the cash crop subsector of Malaysian agriculture relative to paddy, both for own-account smallholders and employees in estates. Between 1973 and 1984 mean earnings for both the latter groups increased substantially relative to paddy farmers. They fell back somewhat during the downswing of the eighties, but were in 1987 well above the relative levels of 1973. The point made above about the differentials in first quartiles holds for estate employees vis-a-vis paddy farmers, but not for smallholders.

Evidently, productivity in the cash crop sector responded more positively to the package of policies to help this sector (including land development) than those aimed at paddy farmers.

The Agricultural-Nonagricultural Difference

The data given in Table IV.4 suggest that the strong economic growth between 1973 and 1984 reduced the differential between mean earnings in non-agriculture and the earnings of both smallholders and estate laborers. But the impact of the downswing on earnings of the cash crop sector in agriculture was larger than that of the non-agricultural sector, so that earnings differentials between the two were in 1987 back at the same level as in 1973.

The Difference in Earnings between the Tertiary and Production Sectors in Non-Agriculture

We have seen above that Malaysia has depended a great deal on the tertiary sector for the absorption of its growing labor force. In the 1970's government services played a very significant role in providing new jobs, but in the eighties the burden has shifted more to the private tertiary sector. The tertiary sector as a whole--public and private together--accounted for one-half of the total employment in Malaysia in 1987. An important question to ask is whether this shift to a service economy in Malaysia has meant that large numbers of people are employed at relatively low incomes in the non-production sectors.

The figures of earnings for male workers given in Table IV.4 do not suggest that this has been so. There is no evidence of any significant trend in the differential in the 15-year period to 1987. In the service sector earnings seem to have increased relative to production during the upswing of the early eighties and fallen during the downswing ending in 1987. But even at the end of the period, mean earnings in services (as in sales) were significantly

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[26] Bhalla's data suggest that absolutely there has been improvement in the incomes of paddy farmers, but the incidence of absolute poverty was in 1987 still high at 57%, having fallen from 88% in 1970 (Bhalla, Table 6.4, p. 47a).

higher than the corresponding groups in production, compared to 1973.

It is sometimes argued that the earnings distribution in the tertiary sector is markedly skewed to the right, so that the high earnings of a minority pull up the mean. The first quartile differentials (Q_1) are included in Table IV.4 to take care of the point. We see that generally for all the years the difference in Q_1's between tertiary sector workers and the corresponding production workers is smaller than the difference in means. This supports the hypothesis that the earnings distribution in the tertiary sectors is more skewed to the right than that in production. But, with the possible exception of employees in the sales sector, the value of Q_1 in the tertiary groups was higher than in production. It is also clear that the differentials in Q_1, if anything, increased over time in favor of the tertiary groups.

Earnings will be affected by the skill level of workers, and to that extent comparison of earnings across occupational groups should ideally control for skill differences. One way of dealing with this problem is to have recourse to the standard human capital model of earnings, assuming as it does that the major determinants of earnings are education and experience. Anand estimated a large number of earnings functions for different groups of urban employees in a large data set (Post-Enumeration Survey, PES) for 1970. We have estimated similar functions from the Household Expenditure Survey data sets of 1984 and 1987. The analysis is confined to male workers.

Table IV.5 Co-efficients of the Human Capital Model, Males, 1970, 1984, 1987

Year/Occupation	Intercept	S	T	T^2	R^2
1970					
Production	5.74	0.08	0.10	-0.0014	0.40
Services	5.35	0.13	0.11	-0.0014	0.32
Sales	5.21	0.12	0.12	-0.0017	0.47
1984					
Production	7.19	0.07	0.09	-0.001	0.12
Services	6.97	0.09	0.09	-0.001	0.09
Sales	6.36	0.15	0.11	-0.001	0.16
1987					
Production	6.70	0.09	0.10	-0.001	0.20
Services	6.58	0.12	0.10	-0.001	0.07
Sales	6.42	0.13	0.10	-0.001	0.21

Note: S = Years of schooling; T = Years of experience. All the variables are highly significant.
Source: 1970, Anand; 1984 and 1987 estimated from HIS data.

Table IV.5 presents the results of the estimated equations for the three sectors in which blue collar workers are found, viz. production, sales, and

services.[27] [28] The pattern of the co-efficients of the equation are strikingly similar in the three years, though the value of R_2 seems to have been reduced drastically in the eighties. The clear result from the Table is that although earnings of raw labor (with no schooling and no experience) are lower in sales and services than in production, the higher co-efficients of education and experience in the tertiary sectors ensure that the differential is reduced, if not eliminated for workers with some education and experience. This is seen in the figures of predicted earnings (derived from the equation) given in Table IV.6 for two types of labor. Furthermore, the important conclusion emerges that there is no evidence for earnings in the tertiary sectors to fall further below the earnings in production in later years, as labor was reallocated more towards the sales and services categories. On the contrary, barring "sales" in 1984, predicted earnings in both the tertiary sectors increased relative to the production sector over time. But it should be remembered that this point refers to male urban employees only.

Table IV.6 Predicted Earnings in 1970, 1984, 1987

	Labor with S = 0, T = 0			Labor with S = 6, T = 10		
	1970	1984	1987	1970	1984	1987
Production	100	100	100	100	100	100
Services	68	80	89	92	91	106
Sales	59	44	76	76	86	117

Source: Calculated from equations in Table IV.5.

The Difference in Earnings between the Formal and the Informal Sectors

We now go into a comparison of labor in the formal sector (defined as the employers) with labor in the informal sector (the self-employed who include own account workers as well as employers).

The Difference in Age Profiles

It is usual in the literature of the developing countries to hypothesize that the informal sector is the depository of low income workers--partly because it contains a disproportionate number of non-prime age and poorly educated workers. In the Malaysian case it has already been noticed that this stereotype does not fit the picture very well as far as age is concerned. Blau (1986) produced longitudinal evidence from the Malaysian Family Life Survey carried out in Peninsular Malaysia in 1976-7 to show that for males, both in urban and rural

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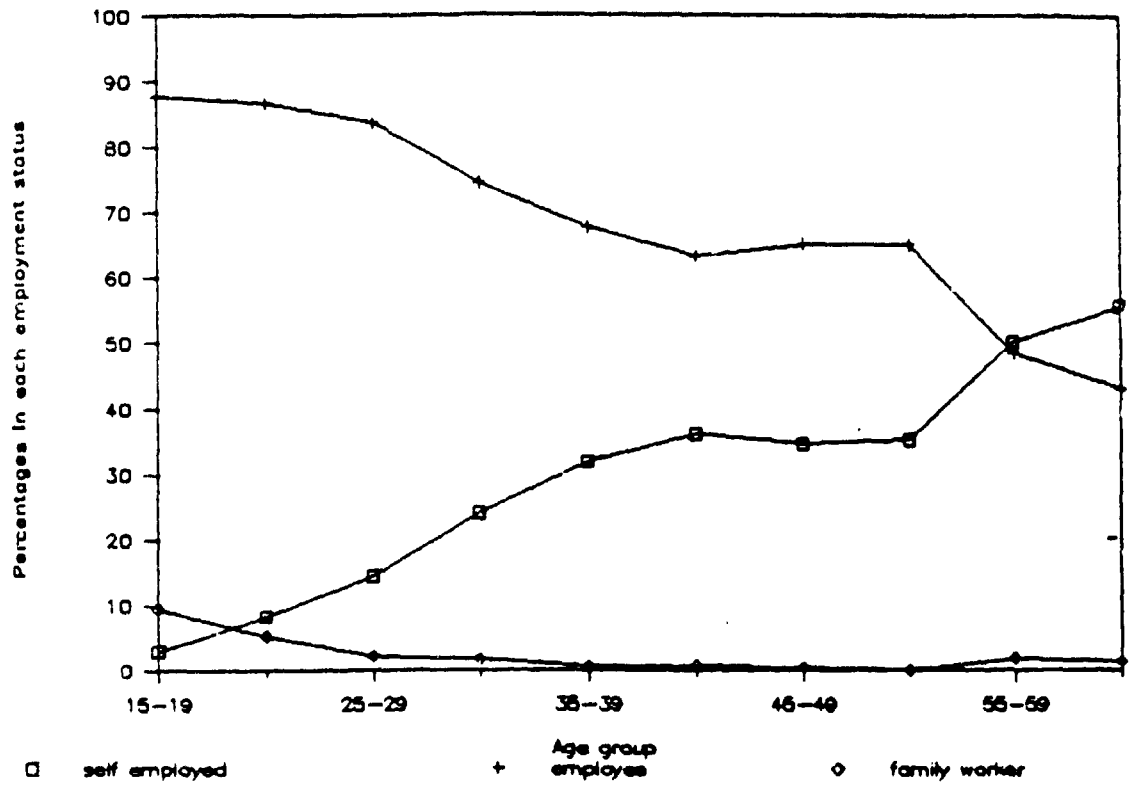
[27] It is not meant to suggest that if a worker is relocated from one sector to the other his earnings were likely to increase or decrease as indicated by the relevant equations.

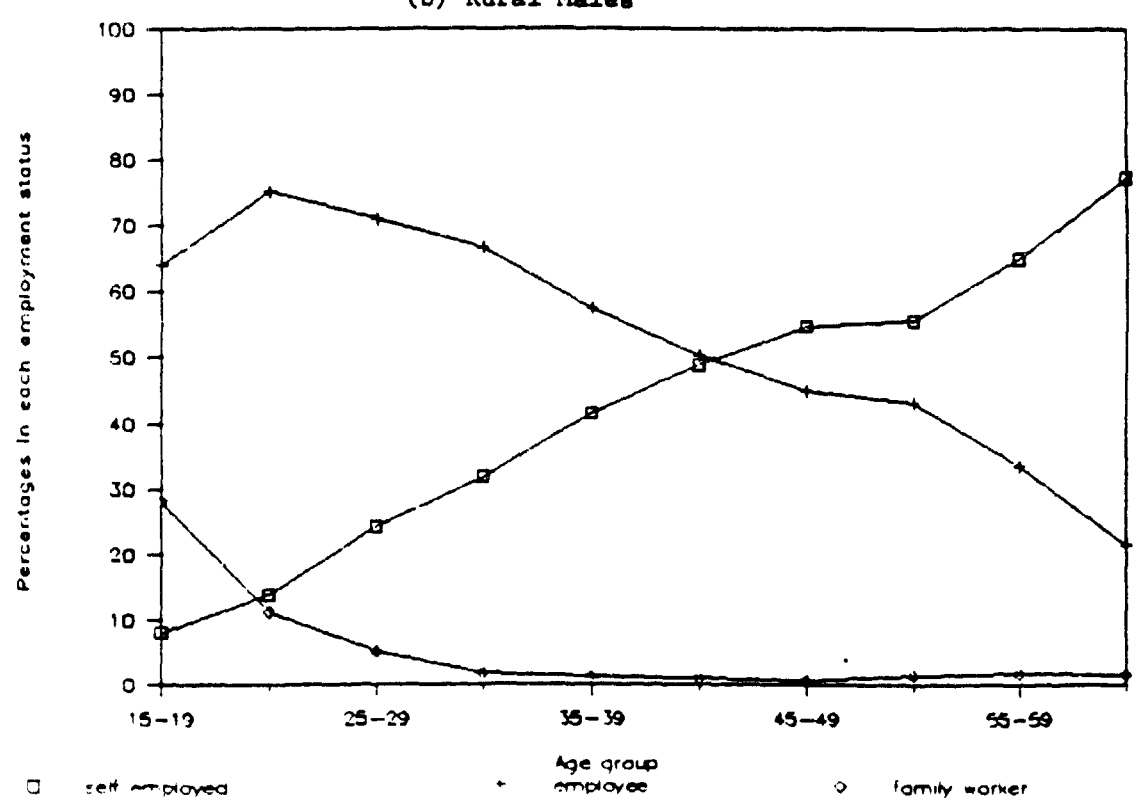
[28] It should be noted that a large number of workers in government services are excluded as they are likely to be in the occupational categories "clerical" or "administrative."

Figure IV.1 Distribution of Workers by Age Group in Different Modes of Employment, 1984

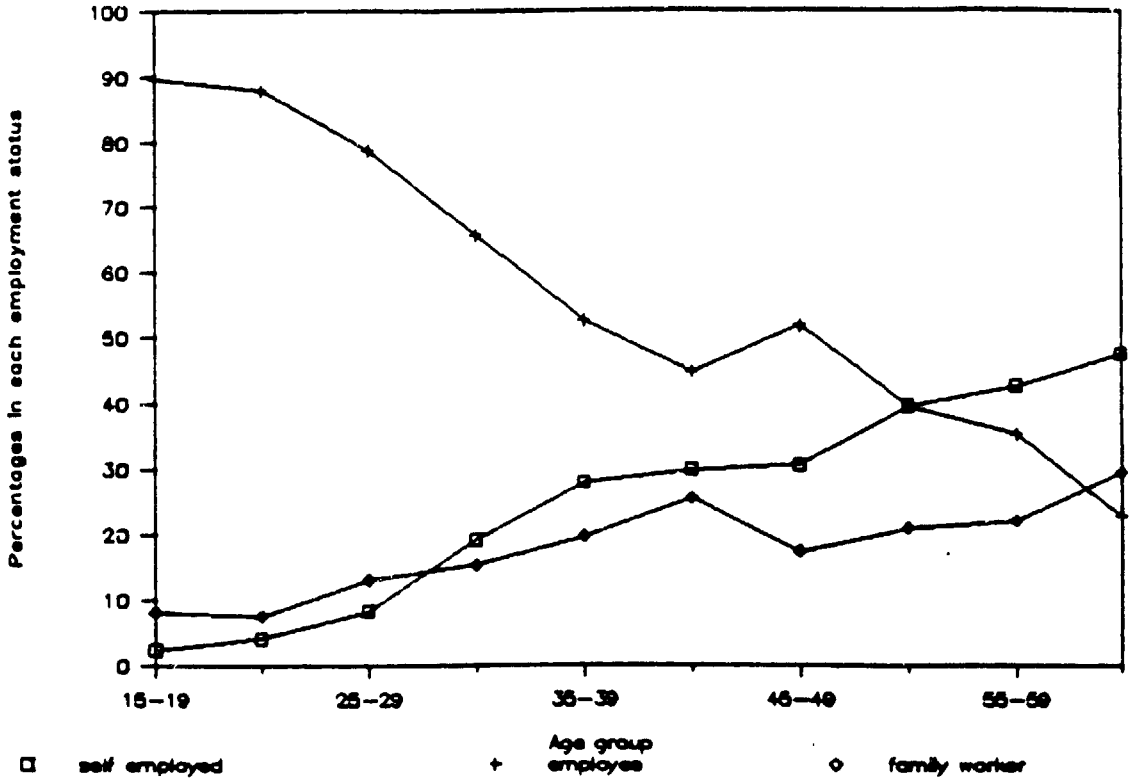
(a) Urban Males



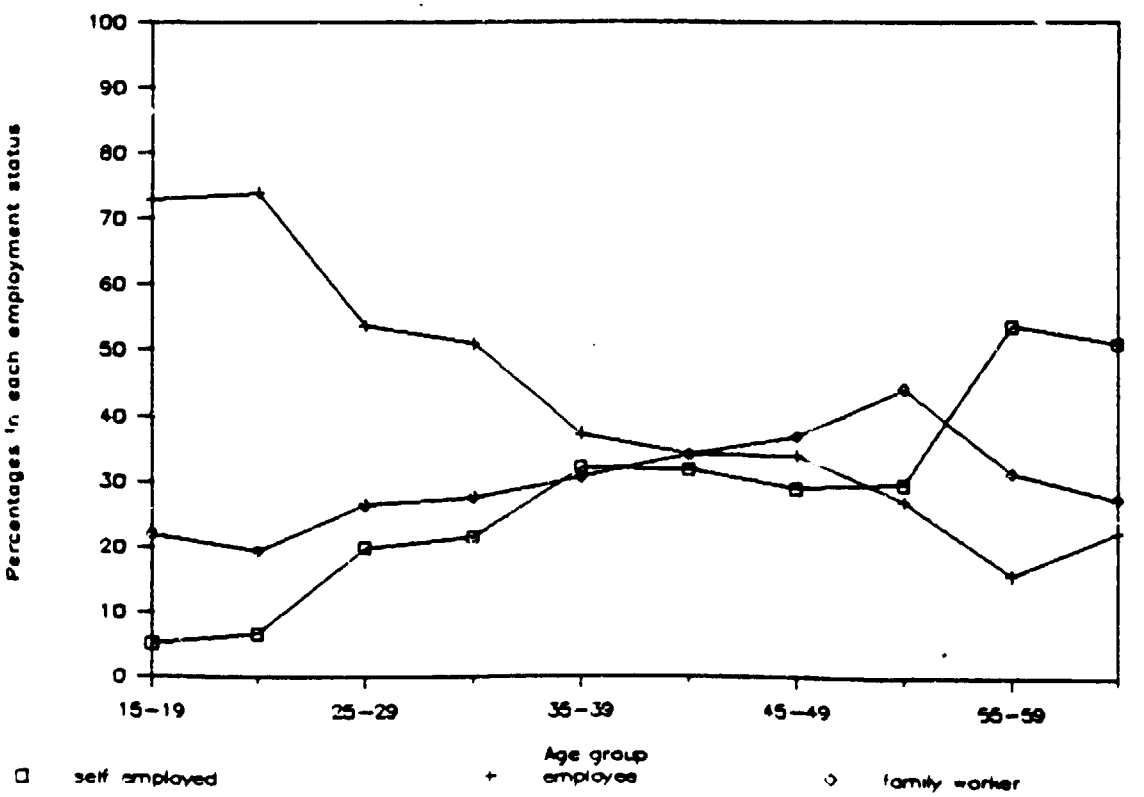
(b) Rural Males



(c) Urban Females



(d) Rural Females



areas, the proportion working as employees fell with age, and the proportion in self-employment increased. In the data collected by the Household Income Surveys in Malaysia, we do not have the longitudinal experience of workers, but we can use cross section data to throw some light on this issue. Figure IV.1 gives the age distributions of the three categories of workers--employees, self-employed and family workers, separately by sex and by rural and urban areas. Blau's point is confirmed for the 80's. The self-employed are--contrary to the popular hypothesis--a rising proportion of the workforce at successively higher age groups.[29]

Differences in other Characteristics

Table IV.7 gives the distribution of the employees and the self employed by various characteristics for 1984, for the two sexes. Apart from the marked difference in age profiles already noted, very large differences are seen in educational attainment. Only a very small proportion of the self employed have

Table IV.7 Proportions of Employees and Self Employed in each Category

	Males		Females	
	Employees	Self-Employed	Employees	Self-Employed
Age:				
15-19	.09	.02	.10	.01
20-24	.19	.05	.27	.06
25-29	.20	.10	.23	.10
30-39	.28	.30	.24	.30
40-49	.16	.28	.12	.29
50+	.08	.25	.04	.24
Education,				
No schooling	.05	.14	.09	.37
Completed primary	.54	.72	.41	.55
LCE or equivalent	.13	.07	.12	.03
MCE or equivalent	.20	.06	.30	.04
HSC or equivalent	.02	.00	.02	.01
College Diploma	.02	.00	.04	.00
University Degree	.04	.01	.02	.00
Race:				
Malay	.44	.46	.40	.66
Chinese	.39	.45	.43	.37
Indian	.17	.09	.17	.07
Sector:				
Rural	.30	.48	.25	.49
Urban	.70	.52	.75	.51

[29] Note, however, that this cross-section picture may be due partly to the shift from employee to self-employed status with age, and partly to the fact that employees have been expanding faster than the self-employed over time.

education beyond the primary level, and of the females a significant proportion have no schooling--in sharp contrast to the employees. Significant racial difference exists for the females: more of the self employed are Malays. As expected while the majority of employees are in the urban sector, the self employed are equally divided between rural and urban areas.

Earnings

We attempt to estimate earnings functions separately for the self employed and the employees--for all three dates. It is well known that when the whole sample of individual observations is partitioned like this between two groups, the OLS regression estimates of the determinants of earnings will be biased. We present estimates from a model which allows for some selectivity bias in the Appendix. It is seen that the co-efficients of the regressors in the OLS estimates in Table IV.8 and Table IV.9 are generally very different from those in the model of the Appendix. But for our present purposes, we want to look at what the pattern of earnings have been for different groups with different modes of employment rather than the expected level of earnings if someone were to relocate from one mode to another. The relevant equations for this are the OLS equations of Tables IV.8 and IV.9.

The OLS regressions are used to "predict" the earnings of the employees and the self-employed, males and females for 1973, 1984 and 1987. Three sets of estimates are given in Table IV.10. The first line (for each sex) gives the employee/self-employed earnings difference on the basis of the characteristics actually observed for the two categories of labor at the relevant dates. The next two lines give the hypothetical earnings differences on the assumption that both groups had identical characteristics, first, those shared by the employees, and secondly, those shared by the self employed. These hypothetical estimates are meant to give an assessment of the extent of the earnings difference due to different characteristics of the two groups.

It is seen that in most cases the differential is drastically reduced--and even sometimes reversed in favor of the self-employed when we control for the difference in characteristics.

The differential in favor of the employees is generally much larger for the females. The important point to note for our present purposes is that the trends in the differentials over time are different for the two sexes. As far as male workers are concerned, self-employed have increased their earnings relative to the males not only in the boom period ending in 1984, but also probably during the recession of 1984-7. This result is consistent with our finding above that male employees in the tertiary sector did not lag behind in earnings relative to the earnings in the production sector.

Table IV.8 Regression Analysis of Male Individual Earnings: Employees and Self Employed Workers

Dependent Variable: Logarithm of Total Earnings

	1973		1984		1987	
	E	SE	E	SE	E	SE
Intercept	3.515	2.932	7.175	7.391	7.046	6.945
Age (Base = 15-19)						
20-24	0.526	0.668	0.545	0.033	0.578	0.568
25-29	0.876	1.224	0.891	0.362	1.033	0.952
30-39	1.151	1.376	1.180	0.608	1.324	1.139
40-49	1.328	1.531	1.286	0.676	1.445	1.248
50+	1.023	1.233	1.151	0.564	1.368	1.084
Education (Base = No schooling)						
Completed Primary	0.489	0.378	0.277	0.357	0.283	0.249
LCE or equivalent	0.857	0.726	0.483	0.568	0.515	0.451
MCE or equivalent	1.354	0.876	0.791	0.859	0.771	0.602
HSC or equivalent	1.606	0.897	1.095	1.380	0.966	0.710
Co lege Diploma	1.857	0.898	1.229	1.145	1.153	0.898
University Degree	2.387	2.112	1.728	1.736	1.705	1.409
Race (Base = Malay)						
Chinese	0.188	0.807	0.249	0.547	0.183	0.605
Indian	0.065	0.292	0.025	0.158	0.013	0.257
Urban (Base = Rural)	0.183	0.243	0.164	0.342	0.140	0.137
NOBS	4703	2769	9616	3174	9300	3535
R^2	0.456	0.307	0.477	0.306	0.472	0.293

Notes: E is employees, SE is self-employed workers. All the co-efficients are highly significant.

Sources: Malaysian Expenditure Survey 1973. Malaysian Household Survey 1984 and 1987.

Table IV.9 Regression Analysis of Female Individual Earnings: Employees and Self Employed Workers

Dependent Variable: Logarithm of Total Earnings

	1973		1984		1987	
	E	SE	E	SE	E	SE
Intercept	3.539	2.670	6.828	6.540	6.717	6.835
Age (Base = 15-19)						
20-24	0.141	0.332	0.442	0.580	0.443	0.079
25-29	0.383	0.378	0.735	0.665	0.787	0.158
30-39	0.530	0.780	0.854	0.707	0.945	0.346
40-49	0.540	1.086	0.870	0.811	1.005	0.664
50+	0.293	0.900	0.856	0.724	0.967	0.597
Education (Base = No schooling)						
Completed Primary	0.288	0.278	0.392	0.108	0.422	0.041
LCE or equivalent	0.926	0.854	0.483	0.073	0.769	0.155
MCE or equivalent	1.469	0.813	1.020	0.682	1.056	0.600
HSC or equivalent	1.621	-----	1.151	1.025	1.202	0.845
College Diploma	2.042	1.749	1.586	-----	1.599	-0.269
University Degree	2.576	1.812	1.972	1.032	2.009	1.719
Race (Base = Malay)						
Chinese	0.360	0.951	0.151	0.566	0.164	0.641
Indian	0.400	0.226	0.027	0.143	0.012	0.128
Urban (Base = Rural)	0.070	0.037	0.203	0.238	0.132	0.128
NOBS	2275	1076	4907	941	5020	1042
R^2	0.392	0.225	0.393	0.134	0.373	0.151

Note: E is employees, SE is self employed workers, and se, is standard error. The P-values are given in the row below the co-efficients and .000 is a P value of less than .001.

Sources: Malaysian Expenditure Survey 1973. Malaysian Household Survey 1984 and 1987.

The behavior of the female labor market has been quite different. Even though employees earned considerably more than self-employed women in 1973 (even

though a substantial part of this difference could be attributed to difference in characteristics), the differential increased significantly during the boom ending in 1984. Thus the popular expectation that pockets of labor in the informal sector do not share in the upsurge of earnings in the formal sector is borne out for the female labor market. Equally interesting is the phenomenon revealed by the data in Table IV.10 that female employees lost relative to the self employed during the downswing of the economy.

This cyclical behavior of the earnings differential may be due to institutional factors operating in the wage labor market. But, if it were so, the institutional influences, working to establish a premium for employees, seem to be highly responsive to economic conditions. On the other hand, the observed cycle is consistent with a purely economic hypothesis that the supply of female labor to the informal (self-employed) sector is much more elastic than the supply to the formal sector.

Table IV.10 Predicted Incomes for Males and Females, Employees Relative to Self Employed (=1)

	Males			Females		
	1973	1984	1987	1973	1984	1987
With own characteristics	1.58	1.03	1.01	2.04	2.37	1.90
With characteristics of employees	1.11	1.00	0.82	1.11	1.63	1.28
With characteristics of self-employed	1.12	0.89	1.07	1.20	1.48	1.08

Source: Calculated from estimated regression equations given in Tables D.10 and D.11 and using the mean values of the explanatory variables in the equations for each year.

D. Educational Expansion and Change in the Occupational Structure

As indicated in sub-section I above the Malaysian authorities pushed forward with a policy of educational expansion--one of its objects being to reduce the racial imbalance between Malays and Chinese in educational attainment. By 1984 this had generally been achieved.

Expansion of education in Malaysia has been very rapid. Wong noted that "the proportion of the labor force with no schooling was reduced by two-thirds (from 43 per cent in 1962 to 15 per cent in 1979) while the proportion with secondary education and above tripled (from 13 per cent to 39 per cent)." It should be noted that Wong's figures on the proportion with secondary education are clearly based on the years of schooling recorded, and would thus include the drop-outs from the secondary schools.

The structure of demand for labor changed over time to accommodate the changing skill composition of the workforce. As can be seen from Table IV.11 the occupational distribution of the employed changed significantly over time

with the white collar proportion nearly tripling between 1957 and 1984 until the recession stopped the continuous increase. The question arises if this upgrading of the labor force proceeded smoothly without creating problems of adjustment in the labor market.

Rate of Return to Education

We could first consider the rate of return to education. The gross rates are found from the co-efficients of schooling in the basic human capital model reported in Table IV.12. It is seen that in spite of the expansion in education there is no evidence of the gross rates declining in the eighties compared to 1970. On the contrary, they seem to have increased somewhat, particularly for the Malays, and were higher in 1987 after the downswing than in 1984. But it should be remembered that the gross rates do not take account of unemployment or of wages in the length of time taken to find the first job. Nevertheless, the fact that the co-efficients of schooling for those who were in wage employment were generally higher in the eighties, after more than two decades of expansion in education, is an important point to note.

Table IV.11 Trend in Employment in Peninsular Malaysia by Occupation (Percentage)

Occupation	1957	1975	1980	1984	1987
Professional	3.10	5.52	6.85	7.58	7.88
Administrative	1.20	1.30	1.90	2.19	2.10
Clerical workers	2.90	7.10	8.46	10.21	9.92
Sales workers	8.60	10.36	10.42	11.38	12.65
Service workers	8.60	8.16	9.42	12.05	12.37
Agricultural workers	56.21	41.86	32.85	26.61	26.94
Production workers	18.90	25.69	30.10	29.99	28.15

Source: Malaysian LFS.

1957 population census as quoted by Wong, Table 14. "The definition changed slightly for 1970 onwards. Government executive officials previously classified as "administrative and managerial" workers were included in clerical workers instead since 1970, as were some categories of communication and transport workers. These changes then slighlty inflate the share of clerical workers in later years, but the effect is small.

The simple human capital earnings function of the type represented in Table IV.12 does not take account of another significant issue--that of differential returns to education at different levels. Earnings functions were estimated for male workers for 1984 and 1987 from the survey data of HES which replicated as closely as possible the functions estimated by Mazumdar from the PES data for 1970 (Mazumdar, Table 8-2, pp. 128-9). This equation is given in Appendix Table A.2. The incremental rates of return for different levels of education are derived from the estimated equations by calculating the differences in the co-efficients of the dummies for successive levels of education. They are set out, for the three years 1970, 1984 and 1987 in Table IV.13. Three main points emerge.

(i) The first point to draw attention to is that there has been a major change at the bottom end of the educational spectrum, with the incremental return to some primary schooling (relative to no

schooling) falling drastically in the eighties compared to 1970. At the other end of the spectrum, the returns to completed high school certificate and tertiary education went up sharply, even though the recession of the mid-eighties reduced the returns somewhat between 1984 and 1987. This finding is consistent with the nature of the upswing in which public sector job creation played a leading role. Rates of return to completed lower and middle secondary education fell over time, but only slightly.

(ii) Mazumdar had noticed that the 1970 data showed evidence of strong increasing returns to education at levels higher than lower secondary. This phenomenon has been accentuated in the eighties.

(iii) Mazumdar had also drawn attention to the importance of "credentialism" in the labor market for the educated in Malaysia as evidenced by the fact that there is a particular level with much higher incremental returns if they had successfully obtained a certificate. In the period 1970-87 the point became more pronounced. Note the striking case of those with Form VI education having actually lower earnings than the completed middle secondary certificate holders, both in 1984 and 1987.

Table IV.12 Estimates of the Basic Human Capital Model: Peninsular Malaysia, Urban Males, All Occupations, 1970, 1984, 1987

Race and Year	Constant	S	E	E^2	R^2
Malays:					
1970	5.42	0.14	0.09	-0.001	0.45
1984	6.20	0.16	0.10	-0.001	0.45
1987	5.93	0.17	0.11	-0.001	0.44
Chinese:					
1970	5.32	0.14	0.11	-0.001	0.52
1984	6.66	0.14	0.10	-0.001	0.62
1987	6.34	0.15	0.10	-0.001	0.44
All:					
1970	5.42	0.14	0.10	-0.001	0.49
1984	6.51	0.14	0.10	-0.001	0.41
1987	6.21	0.16	0.10	-0.001	0.44

Source: 1970, Anand, Table 7.1, 1984, 1987 estimated from the HIS data.

Table IV.13 Incremental Returns to Education, 1970, 1984, 1987
Urban Male Employees and Self-Employed

Education Level	1970	1984	1987
Some Primary	0.33	0.16	0.16
Completed Primary	0.18	0.13	0.18
Forms I to III, no certificate	0.08	0.04	0.11
LCE or equivalent	0.17	0.13	0.10
Forms IV and V, no certificate	0.14	0.00	0.02
MCE or equivalent	0.33	0.30	0.25
Form VI, no certificate	0.18	-0.12	-0.01
HSC or higher	0.44	0.76	0.58

Source: 1970 calculated from Mazumdar (1981), Table 8-2, 1984 and 1987 calculated from table A.2 in the Appendix.

Both the last two points suggest that there are significant elements of "administered prices" in the Malaysian labor market. Imbalances between supply and demand for labor would, in this case, result in quantity rather than price adjustments. We then look at the changes in the levels and patterns of unemployment in Section E.

E. Unemployment: Trends and Causes

The problem of unemployment had been a serious one in Malaysia in the sixties and early seventies. Mazumdar (1981) had analyzed the problem in detail. The study clearly pointed to a supply/demand imbalance in the market for educated labor as the basic cause of the situation. Between 1957 and 1967 the rate of growth of unemployment was several times higher than the growth rate of the labor force with post-primary education. The unemployment rate was highest for young first entrants with 7 to 9 years (lower secondary) and 10-11 years (middle secondary) education.[30] The imbalance was caused by a growth rate of secondary school leavers well in excess of the growth rate of low grade white collar occupations to which they aspired, together with sluggish change in their occupational preferences.

Although there are differences in the rate of unemployment as estimated by the Department of Statistics and by EPU/Treasury, the broad trends in the rate in the last two decades are clear. Throughout the seventies the population grew at about 2.6 percent per annum. Labor forced grew at a much higher rate, partly

[30] Mazumdar (1981), Fig. 14-1, p. 264 and Table 14-8, p. 271.

because of a higher proportion of the population being in the working age group, and partly because of higher participation rates of females in the labor force. Nevertheless, employment grew at an even higher rate--estimated at 3.7 percent per annum. Unemployment fell from a level of around 8 percent to 5 percent through the decade.

As discussed above, the boom came to an end with the fall in commodity prices in the early eighties. GDP growth rate was sustained for a while by increased government deficit spending and foreign borrowing. But employment growth decelerated significantly, falling to a level at least a third below the rate of growth of the seventies. The unemployment rate started to increase after 1982 reaching the 1970 level by 1985. It continued to increase through the depression year of 1986, and has fallen only slightly, if at all, through the recovery years of 1987, 1988 and 1989.

Unemployment and Aggregate Demand

There was considerable debate in Malaysia during the upturn of the unemployment rate about the desirability of re-inflating the economy as a solution to the unemployment problem. But the consensus among both Malaysian policy makers and the economic staff of international agencies like the World Bank seems to have been that a purely Keynesian approach to the unemployment problem was inappropriate. Unemployment could not be related in a simple way to the level of aggregate demand. There was substantial evidence of the re-emergence of the problem of structural unemployment, which had been noticed in the early seventies.

The evidence for the tenuous link between unemployment and aggregate demand is suggested by the graph of Figure IV.2 which shows no simple relationship between the unemployment rate and GDP growth rate. In particular, unemployment began to rise well before the downturn in GDP growth in 1985, and increased significantly in 1983 and 1984 when the growth rate of GDP also increased. More recently the unemployment rate has shown resistance to decline in spite of the recovery and the strong increase in GDP of 5.2 percent in 1987 and 7.4 percent in 1988 (in real terms).

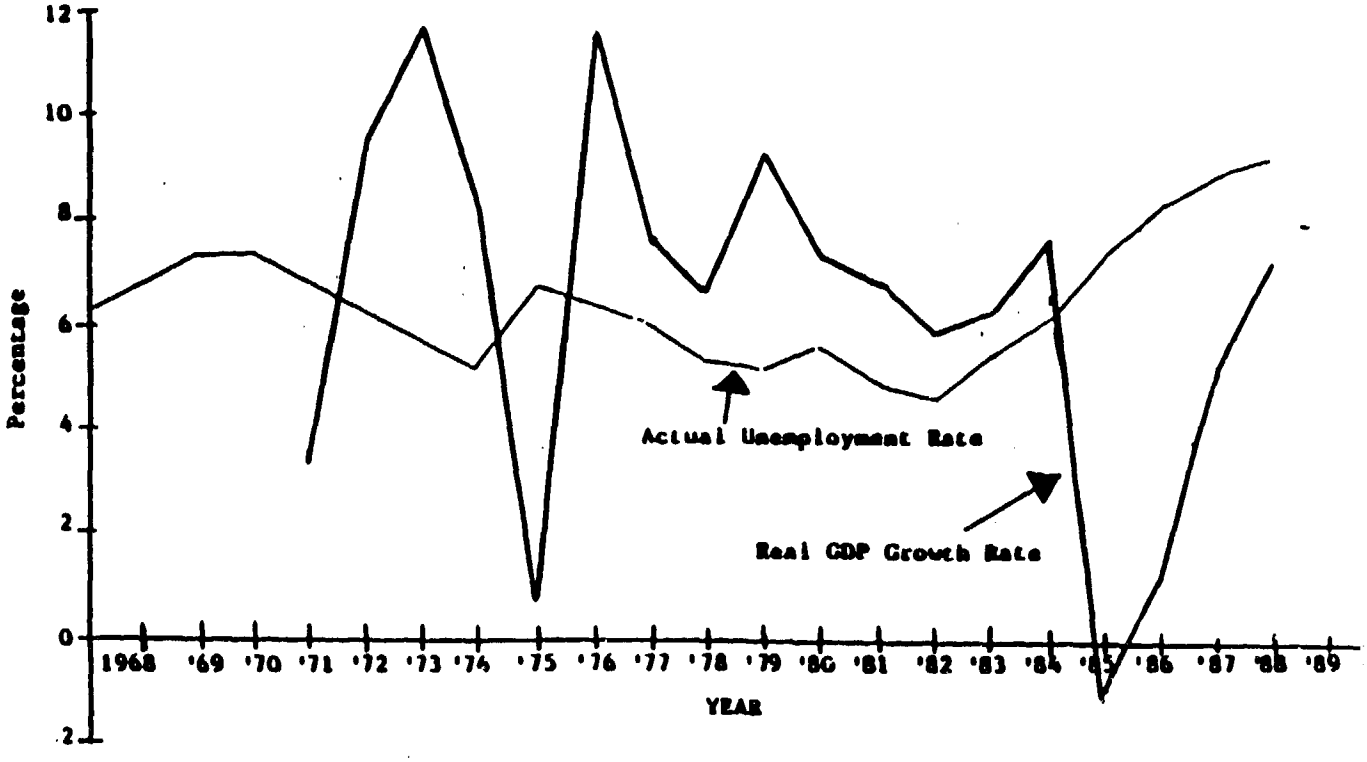
The fact that in several years of the eighties the labor market slackened even though GDP growth was strong suggests that the structure of demand for labor had altered in a way which was less favorable to absorption of labor. The problems would generally arise both on the demand and supply side of the labor market. The necessity for structural adjustment in a changed external environment alters the composition of demand. Because of rigidities in the labor market the supply of labor adjusts only slowly to the shifting demand, so that unemployment increases rather more than is warranted by the slowdown in GDP growth.

Nature of the Unemployed

The unemployed in Malaysia are concentrated in the 15-19 and 20-24 age groups, are mostly first time job seekers, and have a disproportionate number of secondary school leavers. During the recession, there was evidence of a significant increase in the proportion of the unemployed who were older than

25.[31] But the basic problem continued to be one of youth unemployment.

Figure IV.2
Actual Unemployment Rates and Real GDP Growth Rate
1966 - 1990



Source : Malaysian Plans, various years.
Ministry of Finance, Economic Reports, various years.
Reproduced from Salih and Young, 1989.

[31] The proportion went up from 23 percent in 1982 to 32 in 1986 (World Bank, 1988, Table 33, p. 134).

Table IV.14 gives the distribution of the unemployed by age and education level for the young job seekers at the two dates--1975 and 1987.

Table IV.14 Percentage of the Total Employed by Age and Education Separately for Males and Females, Peninsular Malaysia, 1975 and 1987

Age-Group	Education (years)	Males		Females	
		1975	1987	1975	1987
15-19	0				
	1-6	13.9	4.6	13.1	5.4
	7-9	15.6	14.5	14.9	13.9
	10-11	11.8	10.0	15.3	16.4
	12-13	-	-	-	-
	14+	-	-	-	-
20-24	0	-	-	1.8	-
	1-6	8.2	4.6	9.8	3.1
	7-9	9.9	11.2	10.0	7.8
	10-11	9.0	12.5	12.2	20.3
	12-13	2.4	3.1	1.2	7.4
	14+	-	2.2	-	3.2
Total		70.6	62.7	78.3	77.5

Three important points of change stand out between the two dates:

(i) For both sexes and for both age-groups there is a substantial decline in the proportion of the unemployed with primary education or less. This partly reflects the withdrawal of young people from the labor force due to the spread of education.

(ii) The proportion of those with lower secondary education (7-9 years of schooling) decline a little, particularly for females.

(iii) This is offset by a big jump in the percentage of the unemployed accounted for by those with middle and higher secondary education, and those with post-secondary education. This is true of both sexes in the age-group 20-24, but the change is more marked for females. Females ages 20-24 and with education higher than lower secondary now account for nearly a third of the total females unemployed.

The increase in the relative importance of the older age-group 20-24 and those with more than lower secondary education is a distinctive feature of the scene of the late eighties compared to the mid-seventies.

The Probability of Unemployment: a Multivariate Analysis

A probit analysis was attempted for the determinants of unemployment for

the sample for 1987. The results are presented separately for males and females in Table IV.15.

The rate of unemployment decreases significantly for both males and females for older age groups above 25. The co-efficients are large, confirming the importance of youth unemployment.

The probit analysis brings out clearly the important point that, holding age and other factors constant, education is positively related to the rate of unemployment. But there is an important difference between males and females. For males the rate of unemployment begins to increase only with the middle secondary certificate, and is strongly increasing only for upper secondary and college certificates. By contrast, female unemployment rate increases strongly and monotonically from the level of lower secondary education and all the way to college education. The (positive) co-efficients of the successive levels of education are large and increasing, and are all significant. It should also be noted that the co-efficients are much larger for the females. The important conclusion emerges that the education-unemployment link is stronger and quantitatively much more significant for females.

Another important result is the highly significant negative co-efficient of YCAP (the household income per capita). The small value of the co-efficient should not mislead, since the variable is used as a continuous one, and only shows the decrease in the rate of unemployment with each ringgit-increase in per capita income. The result has implications for the hypothesis of "voluntary unemployment" which has been advanced by some commentators, recently by the World Bank (1988). The clearest test of "voluntary" unemployment is that it is more important for higher income groups who can afford to wait for the right job to turn up. Our result would seem to negate this hypothesis. While unemployment in Malaysia increased with the level of education (more strongly for females), holding other factors constant, it decreases significantly as the income level of the family goes up.

Unfortunately, this result is not as unambiguous a test of "voluntary" unemployment as one would like it to be. It is always possible to argue that the income per capita of families from which the unemployed come was relatively low because the unemployed were not "voluntarily" taking a job. In fact, when we added the "potential" income of the unemployed to the actual family income (using an earnings function and characteristics of the unemployed) the sign of the income variable in the profit model was reversed. Thus, we can only conclude that the positive association of unemployment with actual household income per capita (which a "strong" version of the voluntary unemployment hypothesis would suggest) is not observed.

As far as location of the unemployed is concerned, for both sexes, the rate of unemployment is higher in the urban areas. Another interesting result is that, contrary to the Harris-Todaro type of hypothesis, the incidence of unemployment is not higher in the high income region (Region I). In fact, the unemployment rate for females is significantly higher in the poorer regions.

Table IV.15 Probability of Unemployment, 1987

Variables	Males	Females
Constant	1-0.52	1-1.05
	(-6.25)	(-9.20)
Age (Base = 15-24)		
25-34	-0.79	-0.80
	(-15.96)	(-12.06)
35-44	-0.97	-1.08
	(-15.77)	(-10.23)
45-54	-0.89	-1.00
	(-12.20)	(-7.29)
55-64	-0.76	-0.89
	(-7.62)	(-4.91)
Education		
(Base = No Certificate)		
Primary	-0.13	0.004
	(-1.89)	(0.04)
Lower Secondary	-0.35	0.21
	(-0.50)	(2.03)
Middle Secondary	0.08	0.37
	(1.10)	(3.63)
Upper Secondary	0.27	0.63
	(2.15)	(4.56)
College	0.33	0.67
	(2.89)	(4.37)
Region		
(Base = Reg. 1)		
Region 2	0.009	0.16
	(0.20)	(2.51)
Region 3	0.041	0.21
	(0.69)	(2.66)
Race		
(Base = Malay)		
Chinese	0.15	-0.17
	(3.13)	(-2.59)
Indian	0.08	-0.005
	(1.26)	(-0.06)
Sector		
(Base = Rural)		
Urban	0.22	0.089
	(4.95)	(1.56)
YCAP	-0.00013	-0.00014
	(-10.30)	(-7.81)

Apparently, in spite of the large-scale internal migration of females in recent years, a large proportion of young, educated female job seekers continued to be "locked in" without employment in low-income labor markets.

Lastly, there is an interesting difference between males and females as far as race is concerned. Other things being equal, the incidence of unemployment is higher among Chinese males (relative to Malays) but lower among Chinese females. The "locked-in" female unemployed in poor regions could be expected to be disproportionately Malay.

Causes of Unemployment

The review of characteristics of the unemployed do not give a precise answer to the question: how far is unemployment a structural rather than demand related phenomenon. The fact that unemployment increased in the period 1982-86 among the group which typically has relatively less incidence of unemployment--e.g. males, and that in the age group above 25--suggest that demand deflation had some part to play in the emergence of the problem. But as mentioned above, aggregate demand (represented by GDP growth) is not clearly related to the degree of slack in the labor market. A policy of expansion of demand would not by itself create a significant dent in the unemployment rate, and may indeed create problems of inflationary pressure.

The fact that secondary school leavers constitute the largest part of the unemployed suggests a structural problem of absorbing the educated beyond the primary state quickly in the employed labor force. The problem of jobs for the more educated had clearly become worse in 1987 when we saw there was a significant increase in the proportion of unemployed who were somewhat older (in the 20-24 group) and who had more than lower secondary education compared to the mid-seventies.

Some further light on the causes of unemployment is thrown by looking at the occupational distribution of the unemployed. This information cannot be derived for the entire sample of the unemployed. A large proportion of the unemployed were fresh job seekers. In any event, the LFS did not record the previous occupation or occupational preferences of the job seekers. The Annual Economic Report of the Treasury, however, provides information about the registered unemployed by occupational groups. The percentage share of the major groups among the unemployed are given below:

Ye	Production Workers	Agriculture	Services	Clerical	Professional Technical	Other
1975	59.1	4.6	7.5	24.1	4.2	0.6
1983	37.6	1.9	6.2	47.4	5.5	1.3
1986	35.7	1.6	5.2	42.8	12.0	2.7
1987	31.1	1.3	4.8	39.8	14.1	2.9

The changing problem of unemployment is revealed by the marked shift in the occupational structure of the unemployed who were registered. The slackening

demand for labor in the government services had a major effect in the white collar labor market. The proportion of the unemployed with unsatisfied demand for clerical jobs nearly doubled compared to the mid-seventies, and towards the end of the depression the proportion aspiring for professional/technical jobs also increased significantly.

The resultant unemployment is best viewed as a rationing problem rather than voluntary job search. When there is an excess supply of labor, and job seekers have a distinct occupational preference, they get more slowly absorbed into employment. (The queue gets longer). But the data suggest that the duration or unemployment for the majority has not become excessive (less than 6 months). In this sense the basic unemployment problem which re-emerged in the eighties is no different from what was observed in the late seventies, except that there has been some educational upgrading, on average, of the unemployed.

The structural problem in this aspect of the unemployment story is a combination of rigidity in occupational preference and limited wage flexibility. When supply runs ahead of demand, relative wages may fall sufficiently to clear the market, and if this does not happen employers would tend to adjust by upgrading the educational requirements of the labor force (bumping). Job seekers of a particular educational skill will lower their expectations and accept jobs of lower skill. But the required change in occupational preference comes gradually, and the speed with which the change occurs determines the period of unemployment which the new entrants into the labor market, on average, experience.

F. Women in the Labor Market and Adjustment

A major feature in the long-term evolution of labor markets in Malaysia has been the increase in participation rates of females. The overall male participation rates have declined by a few percentage points due to the fall in the rates of younger people due to schooling and of older people due to earlier retirement. But this decline has been more than offset by the increase in female participation. Figures IV.3 and IV.4 graph the participation rates by age groups for the years 1970, 1980 and 1987, separately for rural and urban areas. It is seen that the lift in female PR's in the period 1970-87 is much larger in the urban than in the rural areas. Nevertheless, the basic difference in the rural-urban patterns of female PR's remain after 20 years of change. In particular, the urban distribution is single-peaked with the highest PR being reached at the age 20-24. By contrast, the rural distribution today is double-peaked. In 1970 the rural females had the highest PR in the post-childbearing age group 35-49. Developments since 1970 have added to the sharpness of this peak which is now found in the age group 40-49, but at the same time there has been a remarkable increase in PR in the 20-24 age group, resulting in two peaks.

Tables IV.16 and IV.17 show relative importance of females in total employment, by industry as well as by occupation for the various years. The major shift in the employment pattern of females has been away from agriculture. While the share of agriculture in total employment has declined from 38 to 22 percent between 1975 and 1987, the share of females in employment in this sector

has also declined. Female workers have thus contributed significantly to the growth in employment in the leading tertiary and secondary sectors. By occupation, the administrative, clerical, and sales categories have seen the growth of the female share of employment. Trends in production activities have held their share in the period of fast growth in manufacturing employment. In fact the industrial classification shows that the share of females in this sector

Figure IV.3

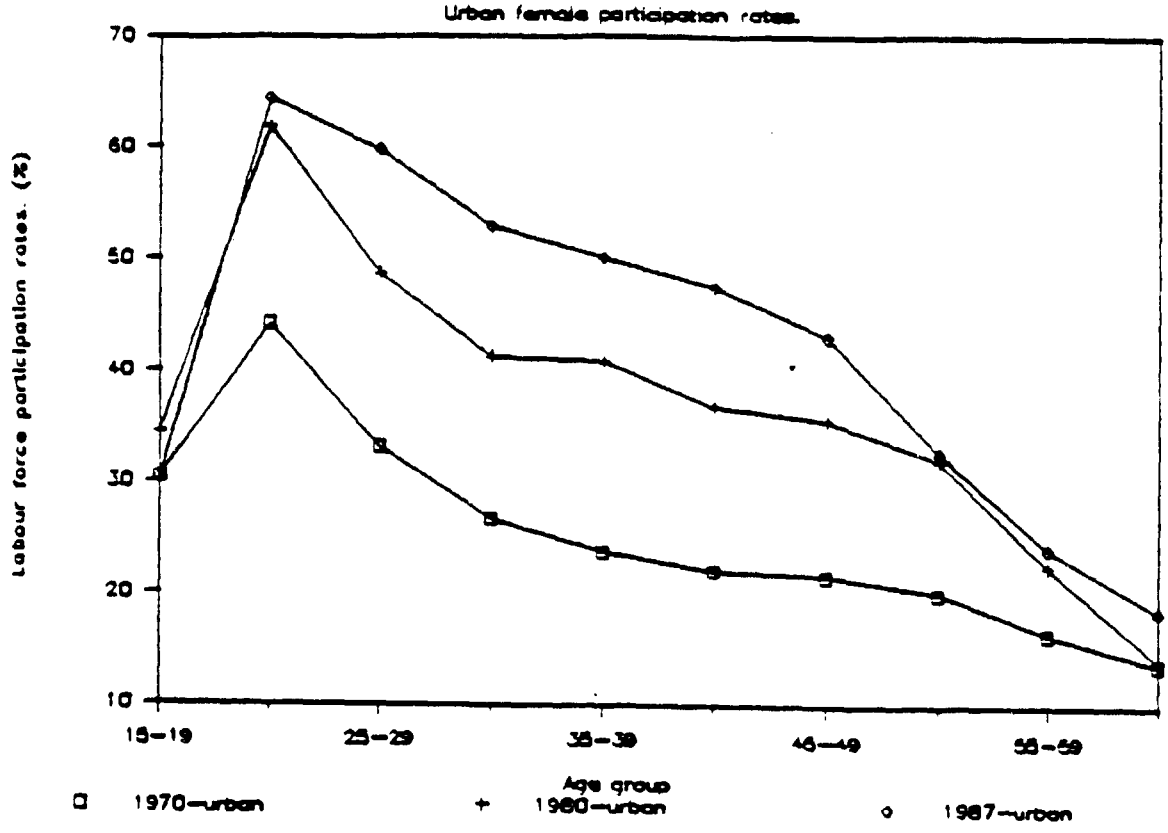
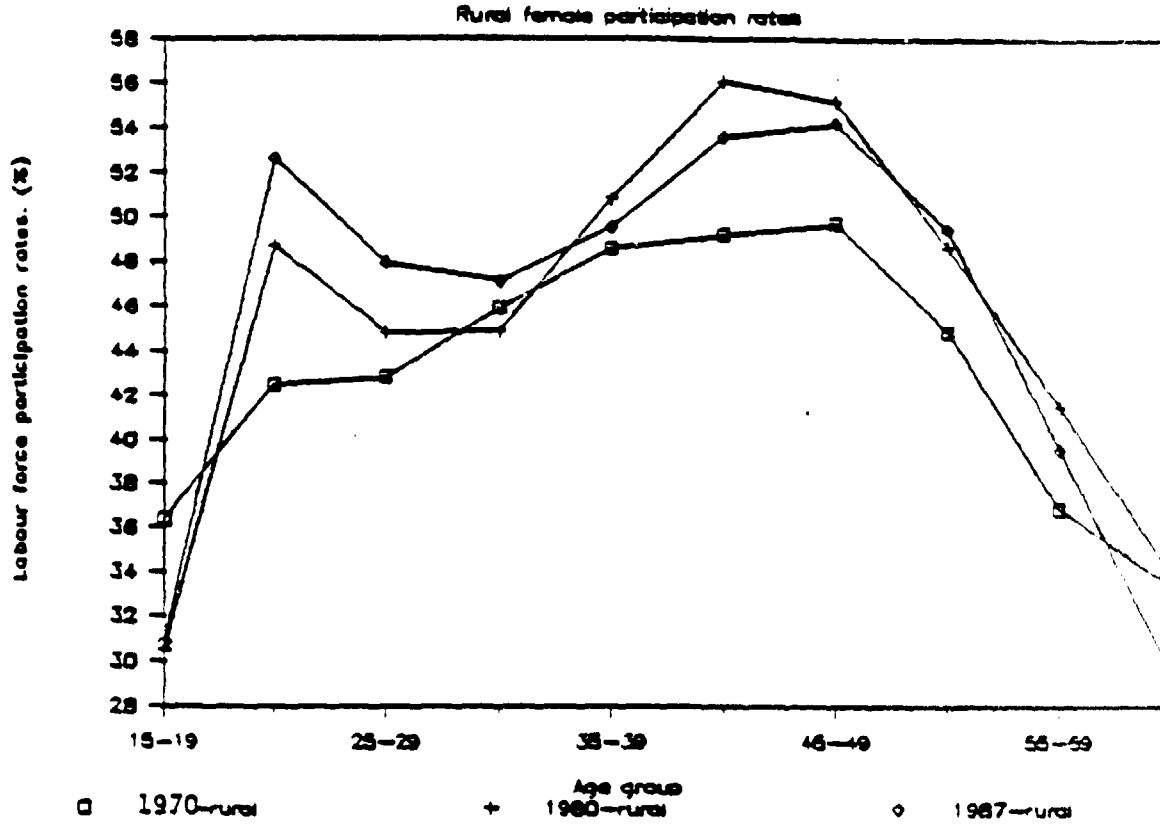


Figure IV.4


Rural female participation rates
Labour force participation rates. (%)
58
56
54
52
50
48
46
44
42
40
38
36
34
32
30
28
15-19
25-29
35-39
45-49
55-59
Age group
1970-rural
1980-rural
1987-rural

is very high and increasing slowly--much higher than Korea where the female share in manufacturing between 1974 and 1984 has hovered around 35-37 percent.[32]

The aggregate figures, in fact, do not tell the full story of the role of female labor in Malaysia's industrial growth. The upsurge in industrialization in Malaysia in the last decade has been dominated by the electronics industry. As in other Southeast Asian countries, transnational cooperations in this industry were lured into Malaysia--particularly in the free trade zones (FTZ's)--by the prospect of a plentiful supply of cheap female labor possessing the manual dexterity and pliability which were needed. Research on the workers in this industry in the later seventies and early eighties brought out the importance of female operatives and also the remarkable uniformity in their characteristics. They were, by and large, single girls, aged 16-24, in their first job, and what might be of some surprise to those who share popular ideas about limited participation in market work by Moslem girls; they were mostly Malay girls from rural areas.[33] We can conclude that it was not difficult to create a newly emergent class of industrial workers in Malaysia. In spite of lack of tradition in industrial work, ethnic or religious barriers did not prevent young Malay girls to meet the demands of the leading industry. It should be noted, however, that the mediating role of the state was an important one. The objective of the New Economic Policy (NEP) was to encourage greater participation of Malays in manufacturing activities. New ventures, particularly transnational ones, cooperated in this process, but they did not seem to have faced too many rigidities in tapping the desired source of labor.

Table IV.16 Percentage Share of Females in Total Employment by Industry 1975, 1980, 1984 and 1987

Industry	1975	1980	1984	1987
Agriculture	40.9	39.6	36.6	32.9
Mining	12.3	13.7	11.9	11.1
Manufacturing	39.3	40.7	42.9	46.1
Utilities	3.2	5.7	4.8	2.9
Construction	6.4	5.7	5.5	4.7
Distribution	26.9	31.5	36.5	38.2
Transport	6.3	7.9	9.1	9.9
Services	37.9	34.1	36.0	39.3
Total	34.5	33.5	34.2	35.4

Source: Malaysian Labour Force Surveys, 1975, 1980, 1984 and 1987.

[32] Grootaert, Table 11, pages 18-19.

[33] See Young (1987), p. 16, and the many references cited there.

Table IV.17 Percentage Share of Females in Total Employment by Occupation 1975, 1980, 1984 and 1987

Occupation	1975	1980	1984	1987
Professional	35.0	39.3	42.2	46.5
Administrative	3.7	6.5	9.7	10.3
Clerical	35.8	44.2	49.7	51.6
Sales	18.6	28.4	31.2	33.8
Services	45.3	42.3	40.0	43.8
Agriculture	41.2	40.5	38.1	34.0
Production	24.3	24.3	23.8	27.0
Total	34.5	34.1	34.1	35.4

Source: Malaysian labor force surveys 1975, 1980, 1984, and 1987.

Table IV.18 gives the percentages of males and female workers (separately) found in different industrial sectors by mode of employment. An interesting point to note is that female workers in Malaysia are more likely to be in wage employment than in self-employed activity than male. (Note that unpaid family workers are excluded from this table). This difference has increased over time, and is more pronounced in non-agriculture.

Earnings of Males and Females

What has been happening to the relative earnings of males and females over the last twenty years when the employment of women expanded so much in the economy? We again depend on the earnings function analysis. The base estimates are available for 1970 from Anand's work. We have estimated our own earnings functions from the HIS data sets for 1984 and 1987. These are presented, along with Anand's equations in Table IV.19. The analysis is confined to urban employees.

In 1970 returns to schooling were practically the same for males and females, but returns to experience were higher for males--spectacularly so for the Chinese males. Over the years, the returns to both education and experience have increased absolutely for females, and relatively with respect to the males, for both races. At the height of the peak in 1984, returns to schooling were higher for the females (relative to the males) for both races, more so for the Malays. Males and females had also reversed their relative positions on returns to experience as far as the Malays are concerned. Chinese females had pulled up their returns to experience considerably, but not enough to close the gap with respect to the male employees.

Table IV.18 Distribution of Employed Labor Force in Peninsular Malaysia by Sex, Industry and Employment Status (in percentages)

	1975		1980		1984		1987	
Males	E	SE	E	SE	E	SE	E	SE
Agriculture	14.86	20.05	12.25	15.20	9.34	13.55	9.61	15.51
Mining	1.44	0.06	1.30	0.08	1.11	0.04	0.81	0.02
Manufacturing	11.78	1.83	14.18	2.05	13.89	1.37	13.55	1.17
Utilities	0.82	0.00	1.71	0.00	0.87	0.00	0.97	0.00
Construction	5.85	1.17	6.95	1.51	10.38	1.36	7.55	1.33
Distribution	7.41	7.22	9.18	7.28	9.77	7.17	10.20	7.69
Transport	4.78	1.59	5.04	1.53	5.23	1.39	4.95	1.44
Commerce	3.44	0.54	3.76	0.54	3.63	0.37	4.01	0.58
Services	15.86	1.25	16.12	1.29	19.20	1.30	19.07	1.51
Total	66.24	33.71	70.49	29.48	73.42	26.55	70.72	29.25
Females								
Agriculture	25.09	15.40	18.99	12.31	13.85	9.03	10.58	7.77
Mining	0.30	0.19	0.47	0.09	0.35	0.03	0.20	0.04
Manufacturing	16.81	5.06	22.09	3.75	21.63	4.33	22.52	4.77
Utilities	0.06	0.00	0.22	0.00	0.08	0.00	0.02	0.00
Construction	1.32	0.00	1.15	0.02	1.54	0.00	0.94	0.01
Distribution	5.97	4.46	9.05	4.23	11.59	4.99	11.62	5.36
Transport	0.98	0.03	1.23	0.02	1.38	0.03	1.47	0.03
Commerce	3.32	0.08	3.85	0.06	4.87	0.05	5.28	0.11
Services	19.37	1.71	20.81	1.64	24.30	1.91	26.65	2.58
Total	73.22	26.93	77.86	22.12	79.59	20.37	79.28	20.67

Source: Malaysian labor force surveys 1975, 1980, 1984 and 1987.

Notes: E is employees and SE is self employed (which includes own account workers and employer)
Figures are percentages of the total of each gender group.

Table IV.19 Earnings Functions for Urban Males and Females by Race (All Occupations Together)

	1970	
All occupations together		
Malay		
log y(males) =	$5.42 + 0.142S + 0.093T - 0.0012T^2$	$R^2 = 0.451$
log y(females) =	$5.20 + 0.147S + 0.071T - 0.0011T^2$	$R^2 = 0.421$
Chinese		
log y(males) =	$5.32 + 0.139S + 0.110T - 0.0014T^2$	$R^2 = 0.521$
log y(females) =	$5.46 + 0.133S + 0.068T - 0.0007T^2$	$R^2 = 0.437$
	1984	
All occupations together		
Malay		
log y(males) =	$6.20 + 0.157S + 0.104T - 0.0014T^2$	$R^2 = 0.452$
log y(females) =	$5.73 + 0.173S + 0.124T - 0.0022T^2$	$R^2 = 0.412$
Chinese		
log y(males) =	$6.66 + 0.139S + 0.096T - 0.0012T^2$	$R^2 = 0.410$
log y(females) =	$6.36 + 0.148S + 0.077T - 0.0009T^2$	$R^2 = 0.351$
	1987	
All occupations together		
Malay		
log y(males) =	$5.94 + 0.171S + 0.111T - 0.0014T^2$	$R^2 = 0.439$
log y(females) =	$5.47 + 0.196S + 0.110T - 0.0016T^2$	$R^2 = 0.421$
Chinese		
log y(males) =	$6.34 + 0.153S + 0.098T - 0.0012T^2$	$R^2 = 0.437$
log y(females) =	$6.25 + 0.152S + 0.076T - 0.0009T^2$	$R^2 = 0.326$

Note: S = number of years of formal schooling.
T = number of years of labor force experience.
Years of labor market experience T, are assumed to be measured by age A, minus schooling S, minus 5; that is T = A - S - 5, where six is assumed to be the age at the commencement of schooling.

Source: Malaysian household survey for 1984 and 1987, Sudhir Anand, Inequality and Poverty in Malaysia, Measurement and Composition, Table 7.1 and 7.6, Oxford University Press, 1983.

In 1987, when the data reflect the effects of the recession of the mid-eighties, some interesting differences in the overall trend emerge. Females seemed to have lost ground somewhat with respect to the returns to both education and experience. Returns to experience are now equal for males and females as far as the Malays are concerned, and the higher return to education for females no longer held for the Chinese. The relative decline in returns to human capital factors for females are consistent with labor market behavior in recessions. When the demand for labor slackens, labor with a relatively weak position in the market will be reduced in numbers first. This means that not only workers with low values of experience and education will be losing their positions first, but within these groups those with less ability or less attachment to the firms (and therefore, of lower earnings) will decline in numbers. Thus the differential in average earnings between workers with low and high endowments of human capital is reduced. Evidently, this mechanism was more pronounced for females than for males. This aspect could, of course, be reinforced by a more discreet fall in the wages of highly skilled female labor relative to skilled male labor.

What is the evidence on the relative endowments of human capital factors for the two sexes, rather than in the rates of return? Table IV.20 presents the relevant data. Rather surprisingly females had more years of schooling for both races in 1970 and 1984. But the recession reversed this situation. Thus, the numbers as well as the wages of educated female workers fell relatively to those of males in the depression.

The data on experience tells the well-known story that male involvement in the labor force tends to be substantially longer than female participation. But the trend is clear. For both races the difference in the years of experience between males and females has been substantially reduced through time. In this case, long-run trends in the labor market and cyclical factors have worked together. In the depression the relative decline in the numbers of less experienced workers would affect females more. This will reinforce the long-run effects of increasingly stronger attachment of females to market.

The relative earnings of females are the product of their relative endowments of human capital and the relative returns to these factors. Over the period 1970-1984 ending at the top of the boom, the trends on both counts would imply an increase in the relative earnings of females. During the recession, the two effects pull in opposite directions, and the outcome a priori is uncertain.

Table IV.21 gives the male-female earnings ratios for the two races, both actual and what is predicted by the human capital equations (given the mean values of education and experience for each sex). As expected, the trend factors during 1970-84 result in an improvement of the female relative earnings, and in a particularly striking way for the Malays. During the recession of 1984-7, the trend improvement was arrested for the Malays. Attention should also be drawn to the large difference between the actual and predicted earnings ratio for 1987--a difference which is not nearly so large for the other years. Evidently, factors other than the human capital ones were holding the relative earnings of females up during the recession.

Table IV.20 Difference in Mean Years of Education and as well as in Labor Market Experience for Urban Males and Females by Total Occupation and Race

	1970	
Mean Years	Malay	Chinese
S =	(-) 0.465	(-) 0.234
T =	4.930	3.464
	1984	
Mean Years	Malay	Chinese
S =	(-) 0.514	(-) 0.195
T =	4.024	2.632
	1987	
Mean Years	Malay	Chinese
S =	0.561	0.686
T =	3.241	2.166

Note: S = number of years difference between males and females (M-F) of formal schooling,
T = number of years difference between males and females (M-F) of labor force experience.
Years of labor market experience T, are assumed to be measured by age A, minus schooling S, minus 5; that is T = A-S-5, where six is assumed to be the age at the commencement of schooling.

Sources: Malaysian Household Survey for 1984 and 1987,
Sudhir Anand, Inequality and Poverty in Malaysia, Measurement and Composition, Table 7.1 and 7.6, Oxford University Press, 1983.

Table IV.21 Ratio of Earnings of Urban Females to those of Males, Employees, by Total Occupation and Race, Predicted and Actual

	Actual		Predicted	
	Malay	Chinese	Malay	Chinese
1970	0.51	0.57	0.52	0.56
1984	0.68	0.60	0.71	0.57
1987	0.65	0.63	0.52	0.54

Note: Predicted values were determined by the equations in Table 23 and by the mean values of education and experience in Table 24.

Sources: Malaysian Household Survey for 1984 and 1987,
Sudhir Anand, Inequality and Poverty in Malaysia, Measurement and Composition, Table 7.1 and 7.6, Oxford University Press, 1983.

G. Regional Affects of Labor Market Adjustment

A very important issue for countries like Malaysia with a rapid rate of growth is the question if different regions of the country have shared in the benefits of growth. Economic growth, by its nature, is concentrated in particular regions or sectors. But regions lagging in the process could still share in the prosperity if internal migration of labor is sufficiently large and sufficiently responsive to income differentials.

In the literature of economic development, the movement of labor from rural to urban areas typically receives prime attention. The growth rates, in the modernization of economies, are often located in the urban sector. Income for workers generated in urban activities is generally much higher than in the rural traditional sector. The nature of urbanization could, however, generate problems of unequal growth if, for example, urban growth is concentrated in one or two very large cities, or if the rural-urban income difference widens significantly during the development of the economy.

Malaysia has been no exception to the general experience of developing countries in having a fast growth in its urban population. Between the census years of 1970 and 1980 the total urban population of Peninsular Malaysia grew by 59 percent, nearly half of which was accounted for by net internal migration. The proportion of urban population (living in towns of 10,000 or more) increased from 28.7 to 37.2 percent.[1] An important aspect of the rural-urban migration is that the Malays seemed to have participated increasingly in this process.

[1] Hugo, Lim and Narayan (1989), p. 45 quoting figures from Wee (1985).

This is in accordance with one of the major objectives of the New Economic Policy, viz. "the elimination of the identification of race with vocation as well as location."[2]

Bhalla reports that trends in urban and rural incomes are consistent with the general trend that the distribution of income in Malaysia has improved in the course of the economic growth since 1970. Urban income per capita in 1973 was twice the level of rural income, but at the peak of the boom in 1984, the differential was no higher. During the recession of 1984-1987 urban income per capita (in real terms) fell while rural income remained more or less unchanged, leading to a fall in the differential by about 10 percent.[3]

However, the emergence of a primate city is an important phenomenon in Malaysia as in other Asian countries. The urban concentration based on Kuala Lumpur and the surrounding areas in Selangor during 1970-80 grew at almost twice the rate as the total urban population. The problem of concentration is, of course, not as great as in Thailand, for example, where Bangkok is some 50 times larger as the second city, Chingmai. But a "major change is occurring in the urban system towards a more primate city-size distribution," as indicated by several indices of concentration in the last two decades.[4]

Related to some extent to the pattern of urbanization is the persistence of inter-state differences in income. Internal migration flows in Malaysia have been well documented in official census volumes. A study of these problems, as summarized, e.g., by Hugo, Lim and Narayan, shows clearly that "the states of Selangor and Patang are the main centers of net immigration--the former largely because of the attraction exerted by the major metropolitan area...and the latter which was the focus of expansion of rural settlement."[5] The persistence over three decades of these states as recipients of a net inflow of migrants, all other states showing net outflow, is striking. In fact, the data suggest a progressive exacerbation of an established pattern of movement, in spite of the emergence of Penang in the Northwest as a new center of industrial growth. Furthermore, the main origins of immigrants to the Selangor-Kuala Lumpur urban complex are the more developed and urbanized states of the West coast. This major migration stream would tend to maintain, if not increase, inter-regional inequality. It is balanced to some extent by the migration stream to the other major recipient area, the agricultural region of Pahang, which attracts migrants mostly from the least developed agricultural areas of the East Coast, but also

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[2] Ibid., p. 45.

[3] Bhalla, p. 25 and Table 4.4.

[4] Cf. Hugo, Lim and Narayan, pages 46-47.

[5] Ibid. p. 58, cf. the maps given in pages 55-57.

from the agricultural areas of the West coast.

Table IV.?2 reproduces Bhalla's data showing the mean income per capita in 1976 and 1984 by individual states (urban and rural combined) as well as the distribution of population by three regions, distinguished by income levels. The correlation in the ranking of the states by income level is very high. It is plotted in Figure IV.5.

The simple regression equation is:

$$Y_{1976} = \underset{(0.065)}{0.586} + \underset{(11.634)}{0.448\ Y_{1984}}$$

Adjusted R^2: 0.924.

[Y is per capita income and t-statistics are in parenthesis.]

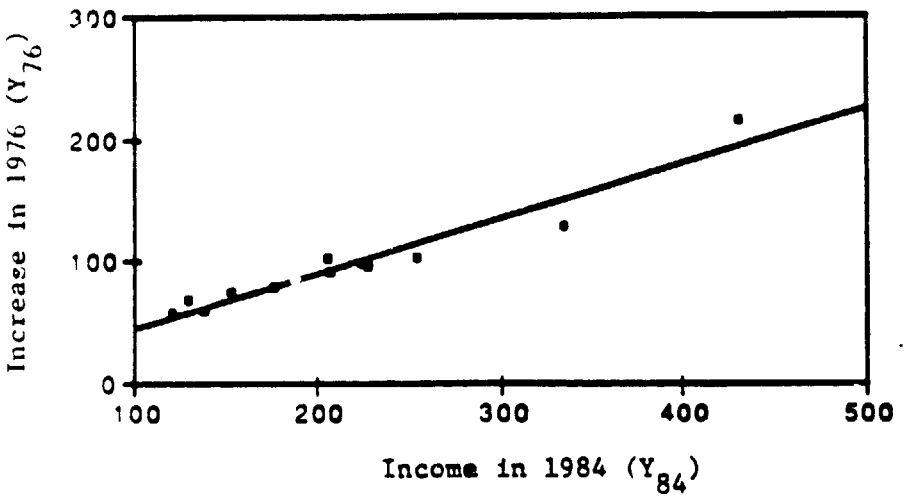
Almost all states in 1976 had a mean per capita income of 45 percent of that in 1984. We conclude that the high rate of growth during the decade did not alter relative inter-state differences in income in any significant way. But clearly absolute differences between per capita income levels have increased markedly along with the increase in overall income levels in the economy. Finally, attention should be drawn to the striking fact in Table D.28 that the proportion of population found in the three regions of high, middle and low per capita income is almost exactly the same at the end of the period as at the beginning.

Table IV.22 Per Capita Monthly Income by State and Distribution of Population between Regions, 1976 and 1984

State	Per Capita Monthly Income		Percentage Distribution of Population	
	1976	1984	1976	1984
Region I (High Income)			28.6	29.9
Kuala Lumpur	214	430		
Selangor	129	335		
Pulau Pinang	103	255		
Region II (Middle Income)			47.2	45.4
Melaka	102	206		
Johore	92	208		
Perak	80	177		
Pahang	96	228		
Negri Sembilan	99	226		
Region III (Low Income)			24.2	24.7
Perlis	68	129		
Kedah	59	139		
Terenganu	75	153		
Kelantan	58	121		
Mean/Total	99	227	100	100

Source: Bhalla (1989), Tables 4.5(a) and 4.5(b), pages 26a and 26b. Original sources for 1976 are Turgoose (1981) and Statistical Yearbook (1981) and for 1984 30% sample of Household Income Survey.

Figure IV.5 Per Capita Increase in 1976 and 1984
States of Peninsular Malaysia



Note: The regression line uses Y_{84} as the independent variable to predict Y_{76} for each state. The data in the scatter diagram shows actual values of each state.

Source: The original data are taken from Bhalla (1989) Table 4.5 (a).

V. Conclusions

In this paper we have looked at both the short-run problems of adjustments as they were affected by changes in labor costs, and the longer run issues of labor markets during the growth process.

The Short-run Problems

Malaysia underwent some sharp fluctuations in economic activity in the last two decades, associated with the commodity and oil price booms, and the subsequent fall in prices in the 80s. We saw in section II that government expenditure policies--particularly the attempt to pursue a counter-cyclical fiscal policy to keep the upswing going when commodity prices turned downwards in 1980--was not entirely successful. The heavy foreign borrowing needed to finance this policy led to a recession of some severity. It was seen in our discussions that the behavior or wages in the tradeable sectors--and particularly manufacturing--was also of a nature which led to Malaysia's loss of competitiveness in world markets and must have contributed to the sharp recession.

Our analysis of events showed in section III that the event in Malaysia differed in some important details from the standard sequence described in the "Dutch Disease" models. In particular the appreciation of the real exchange rate was not due to greater spending induced by the upswing in commodity prices, but rather due to the inflow of foreign capital to support the government's budget deficit--at a later period when the terms of trade were falling. Similarly, the increase in average wages during this period leading up to the recession was not corrected with the rise in domestic exchange rate (the ratio of the prices of non-tradeables to tradeables) in a fully employed economy. Wage increase in excess of labor productivity increase occurred at a time when employment growth had slowed down, and the rate of unemployment increased significantly. We pointed to some labor market institutions (common to most East Asian countries) particularly the steep wage-seniority scales and the attachment of workers to firms after a period of service) which might have contributed to this perverse behavior of average wages.

We took particular care, however, to say that rising labor costs were only part of the problem of rising costs in the tradeable sector in Malaysia in the period leading up to the recession. The appreciation of the real exchange rate increased the dollar cost of labor compared to the trading partners. A large increase in interest costs contributed to the problem and was a direct consequence of the monetary policies that were followed. We conclude then that it was the entire package of fiscal, monetary and exchange rate policies, acting together with labor market behavior, which led to developments culminating in the recession.

But the recession was short-lived--of no more than two years' duration. Factor markets proved to be highly flexible downwards--with wages, interest rates and exchange rates all drifting downwards. This "collapse" of factor markets was instrumental in fueling the recovery when favorable trends reasserted

themselves in Malaysia's external markets.

Long-run Aspects

Because the short-run problems of labor markets in Malaysia are seen to have been of limited importance, the longer-run aspects of adjustment in the labor markets in response to rapid economic growth probably are of greater interest. Some selected issues on this topic are discussed in Section IV of the paper.

We produced evidence in section III of the paper that real wages in the formal sector of Malaysia increased significantly in the last two decades. Plantations, particularly rubber, lagged somewhat behind manufacturing, but the growth rate of real wages was positive, at least before the slowdown of the 80s. The question arises: did the non-formal sectors in Malaysia share in the growth in earnings?

The availability of household surveys for 1973, 1984 and 1987, and also some previous work done from the Post Enumeration Survey of 1970 enable us to get some statistical information on this point, since earnings data for the non-formal sector are not collected regularly. In the agricultural sector paddy farmers as well as smallholder cash crop growers had significantly lower earnings in 1973 than not only employees in the non-agricultural sector, both rural and urban, but also relative to estate employees. Our material showed that paddy farmers--in spite of the policy of price maintenance and subsidies pursued by the government have not been able to improve their relative earnings over time. In fact, the differential in earnings of paddy farmers and other workers widened significantly during the boom period. It narrowed somewhat in the downswing of the eighties, but in 1987 the differential was well above that in 1973.

An attempt was to look at the trends in the formal-informal sector earnings differential, first by studying the relative earnings in the tertiary sector, and secondly by analyzing the earnings difference between employees and the self employed. We have seen in Table IV.4 above that the tertiary sector as a whole increased its share in total employment from 36 in 1970 to 49 in 1980 and 55 in 1987. Employment in government accounted for a growing part of the service sector, at least in the decade of the 70s. But even subtracting the share of government, the private tertiary sector certainly increased its share. (In 1987 we estimate it to have been 45 percent of the total employment).

Are these new workers in the tertiary sector a pocket of low-income labor who could not break into the manufacturing sector? The evidence is that, as far as male workers are concerned, it is not so.

We next cut up the labor market between employees and the self-employed and examined the trend in earnings of the two groups. Although unlike many other developing countries, the self-employed in the manufacturing sector in Malaysia is not a very large proportion of the workforce (around 15 percent), they constitute rather more than a third of the total in agriculture and the distributive trades. The proportion of the self-employed in the economy as a

whole has been declining--but rather slowly. Traditional views of the self-employed which suggest that they enter young, then "graduate" to the formal sector as employees, is refuted by the Malaysian evidence. Both in rural and urban areas, and for both males and females, the proportion of the self-employed increases with age.

Earnings functions were fitted separately for employees and the self employed, males and females for the three years 1973, 1984 and 1987. Analysis of predicted earnings for these equations show that although employees earned more than the self-employed in all the years, a great deal of the difference could be attributed to differences in characteristics. Holding characteristics constant, the differentials in favor of male employees were within 10 percentage points, and in some cases the differential was actually reversed in favor of the self-employed. Female earnings difference in favor of employees were generally much higher than for males.

There were important differences between the trends in the male and female labor markets. As far as male workers are concerned, the self-employed have increased their earnings relative to employees not only in the boom period, but also probably in the recession of 1984-87. The behavior of the female labor market has been quite different. There was a substantial increase in the differential in favor of employees in the boom up to 1984, even though employees started with a much higher relative earnings (compared to males) in 1973, but there was a reduction in the differential in the downswing. Female labor fits the prediction of some labor market models that the informal sector does not fully share in the upsurge of earnings in the formal sector in the boom.

Another aspect of structural transformation in the Malaysian labor market is the very large educational upgrading of the labor force. The evidence suggests (analyzed in section IV.D) that although the proportion of jobs of a non-manual nature increased significantly, the rate of increase of educated labor was higher than the rate of growth of white collar jobs. Thus we see the usual adjustment in the labor market with a gradual movement of educated labor to blue collar jobs over time. The frictions involved in this process of adjustment leads to a problem of unemployment of the more educated. In Malaysia in the late 60s, the high rate of unemployment (of around 10 percent) was identified as being a problem of secondary school leavers. This problem was alleviated during the boom of the 70s, but seems to have re-emerged in the 80s. Evidence was presented to show that this type of unemployment is of the structural kind, not responsive to changes in demand, unless as in the latter half of the 70s the boom is sustained and intense (also perhaps favoring the white collar sector).

Another important feature of Malaysian development has been the increasing participation of women in the labor market--and particularly of Malay labor utilized in urban activities. The analysis of the earnings of male and female employees over the period 1970-87 showed that the trend factors, in the acquisition of human capital factors, as well as in the rates of return to these factors, resulted in an improvement of female relative earnings and in a particularly striking way for Malays. During the recession of 1984-87 the improvement trend was arrested. But there seems to have been an increase over time in the importance of factors, other than education and experience, in

"explaining" the male-female differential.

Finally in section IV.G we look at the important problem of the persistence of regional differences in income in Malaysia, as in many other countries of Southeast Asia. In spite of substantial internal movements of labor, the income per capita of an individual state in 1976 could be exactly predicted by the per capita income of that state in 1984--it was 44% of the level of 1984. The almost bizarre constancy in the relative inter-state differences in earnings suggest a serious problem in the sharing of the fruits of economic growth through internal migration of the factors of production. With growth in income over time, of the magnitude which Malaysia has experienced, constancy of relative differences produces rather large widening of absolute differences in income per capita. Moreover, the distribution of population among the regions of high, medium and low income per capita seems to have remained unchanged.

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