

PROGRAM OF DEVELOPMENT STUDIES
121 Sewall Hall
WILLIAM MARSH RICE UNIVERSITY
Houston, Texas 77001

Paper No. 45

INDUSTRIALIZATION IN MALAYSIA: A PENANG MICRO-STUDY

By

Fred R. von der Mehden

Winter, 1973

The author is Albert Thomas Professor of Political Science at Rice University. This paper reports research related to AID contract no. csd-3302, on Distribution of Gains, Wealth and Income from Development. Program Discussion Papers are preliminary materials circulated to stimulate discussion and critical comment. References in publications to Discussion Papers should be cleared with the author to protect the tentative character of these papers.

Industrialization in Malaysia: A Penang Micro-Study

1. Introduction

This discussion paper is an analysis of industrial policies in Penang, Malaysia, their benefits and political-administrative ramifications. It is a section of a projected cross-national monograph now being implemented under the auspices of the Program of Development Studies of Rice University which is undertaking a multi-faceted research project in income distribution. The focus of this study is on one of the major elements of the Program's research interests, benefits derived from government policies. In this case we were concentrating on industrial policies in Malaysia and, more particularly, how they were implemented in the state of Penang. Penang was chosen because 1) it is the center of state-led efforts at industrialization that appear to be paying off, 2) it is easier to separate state from federal policies there, whereas other data have led us to believe that many business respondents in the capital area find it difficult to differentiate between the two levels of government, and 3) it is experimenting with new programs such as the free trade zone. The cooperation provided by the Penang Development Corporation and Universiti Sains Malaysia were also attractive features.

Three broad questions were considered in formulating and carrying out this project:

- 1) How and why were industries established in Malaysia, and particularly Penang? What advantages and disadvantages were involved?
- 2) What benefits were derived from industrialization?
- 3) What have been the experiences and attitudes of firms regarding govern-

ment industrial policies?

These questions were formulated so as to analyze on a local level the efficacy of the industrial policies of the Malaysian federal and Penang governments and to see how the results of these policies pertain to the two major prongs of the Second Malaysia Plan to "eradicate poverty, irrespective of race, and restructuring Malaysian society to reduce and eventually eliminate the identification of race with economic function."¹ Present national efforts in this area focus on five primary goals:

- a) Increased industrialization
- b) Attracting foreign investment in the modern sector
- c) Emphasis upon labor intensive industry as part of meeting unemployment
- d) Dispersal of industries throughout the nation
- e) Increased Malay ownership and participation in the modern industrial sector.

In an effort to attract new types of factories or "Pioneer Industries" the federal government offers tax and investment incentives, with added incentives for export-oriented firms. There were 275 Pioneer Industries as of the end of 1972, controlling 35% of the industrial output. They now employ some 54,000 people and have gross sales of M\$1,632 million (the Malaysian dollar is floating and was worth approximately US\$0.43 in November 1973). This is an increase over ten years from 68 Pioneer Industries, employing less than 5,000 people and with gross sales of M\$94.3 million (at which time the Malaysian dollar was worth approximately US\$0.33). However, manufacturing remains a small percentage of the GDP (12%) and employs only about 9% of the labor force. As we shall see Penang's industrialization pro-

¹Government of Malaysia, Second Malaysia Plan, 1971-1975 (Kuala Lumpur: Government Printer, 1971), pp. 1-9.

gram brought into question several of the aforementioned goals of the national policy and we shall review these following an analysis of developments in Penang.

The setting for this study was the state of Penang in northern West Malaysia, originally a major entrepot and free port center for the region. Its primary city of Georgetown on the island of Penang developed into a largely Chinese commercial center of some 500,000, while the mainland area of Province Wellesley remained largely agricultural. In the post-war years the state's commercial position had badly deteriorated under a combination of interacting circumstances including opposition control of the state government, severe diminishment of the port's free port status, changing trade patterns and an apparent lack of economic initiative. In the late 1960's some aspects of this situation began to be reversed, most particularly following a change in government at the state level which brought to power leadership that was both committed to new economic initiatives and prepared to cooperate with the party in power in the national capital.

Two major thrusts of the state's new program were to attract tourists, both foreign and Malaysian, and to bring in new industries. Industrialization and tourism appeared particularly appropriate to meet a high unemployment rate of 15-18% which had serious economic and political overtones. In the industrial sector it was felt that Penang could offer a labor force that was literate and relatively inexpensive, a good infrastructure including port and airport facilities and an attractive place to live. Industrial policy centered upon the establishment of industrial estates and free trade zones. The industrial estates provided the infrastructure for primarily small and medium sized factories on the mainland where there was already some industry and where the government wants to contain less "clean" or pollution producing operations. The free trade zones are export-

oriented, allowing the firm to import and export raw materials and finished goods on a duty-free basis. Initially these new factories were largely of the traditional import substitution variety, but the effort to meet unemployment brought more labor-intensive firms, particularly in the free trade zones. Under the direction of an aggressive government agency called the Penang Development Corporation (PDC), both the industrial estate and free trade zone patterns grew rapidly after 1969:

Growth of Industrial Estates and Free Trade Zones

	1969	1972
Industrial Estates and FTZ	1	6
Factories	15	50
Workers	2,400	10,000

This study is an analysis of the two largest industrial estates, the original one at Mak Mandin and the newer and still growing Prai estate plus the largest free trade zone at Bayan Lepas on the island of Penang. The Bayan Lepas Free Trade Zone was the first in Malaysia and was patterned after one on Taiwan. The data base for the analysis was three questionnaires given in March-May 1973 to firm managers and a sample of employees.

Through the use of students from the Universiti Sains Malaysia we were able to interview representatives and employees of 37 of the 46 firms actually operating in the chosen industrial estates and free trade zone as of March 1973. The interviewers considered 32 of the respondents to be both honest and very cooperative, three reserved in their comments and two were not believed to be giving truthful answers. In each case the firm manager or his representative was questioned on experiences of his factory in Penang and asked to help in preparing a

history of his firm. While not all the data desired was obtained, there was generally good cooperation from firms in the area. As well, 525 employees were interviewed as to their employment records, work experiences and employment of members of their families.

The industries in the three areas vary considerably in terms of size and products produced. The essential characteristics of the 37 firms surveyed were:

I. Work force of factories:

Under 50	51-275	276-750	Over 750
7	22	5	3

II. Total work force of factories interviewed:

Mak Mandin	Prai	Bayan Lepas
3900+	727	400+

III. Racial composition of factories:

Mak Mandin varied considerably from factory to factory. Of the 22 factories surveyed, 10 had 40% or more Malays and 3 less than 30%. The percentage of Chinese varied markedly from 6% to 75% with half falling above 50% and half below. The Prai and Bayan Lepas factories averaged 40% Chinese, 45% Malays and the rest Indians and others. In no case did Malays fall below 40% and in only two cases did the Chinese fall below 35%.

IV. Sex composition of the factories:

	Mak Mandin	Prai	Bayan Lepas
M	48%	52%	20%
F	52%	48%	80%

V. Products of factories:

Electronics	8
Food and Food Processing	7
Plastics and Metal Products	7
Paper and Wood Products	6
Chemicals and Insecticides	4
Textile Products	3
Others	2

Due to promises of confidentiality, specific information on particular firms is not included in this report.

2. Establishment of Industries

We have noted that industrialization was pushed in Penang to meet the changing economic situation of the state, and particularly the major unemployment problem, and that the state's attractions were believed by the government to be its labor force, infrastructure and living conditions. This section attempts to assess what factors the industrialists found attractive in choosing Penang, thereby aiding us in analyzing both the desires of the federal government to disperse industry and of the Penang authorities to attract investors to their state.

What advantages did industrialists see in coming to the area? We asked this question of every firm representative and got a variety of answers. The major advantages seen were: (with the number of responses in each category)

1) Markets were available either in North Malaya or through the port facilities (14). This was particularly important to the Mak Mandin firms.

2) Cheap labor (12) and the presence of a large labor force (9), two obviously

closely related items. Again, Mak Mandin mentioned cheap labor most often.

3) Access to raw materials, particularly through the port (9).

4) Government incentives (9). This was mentioned by 7 of the 8 Bayan Lepas respondents.

5) A better infrastructure (8).

Other advantages noted were the presence of skilled labor (3), cheap land for factories(3), the fact that Penang is the home area of managers or directors (3), stable political conditions (2) and ease of expansion(2).

These reasons were further buttressed by ten firms that considered other areas in Malaysia and rejected them. The four most commonly mentioned reasons for rejection were problems with the market, most particularly in handling the North Malaya market (Ipoh and Kuala Lumpur were rejected), a lack of good transport and port facilities (Ipoh and Taiping were rejected), the high cost of labor (Kuala Lumpur and Batu Tiga were rejected) and an insufficient infrastructure (Taiping, Batu Tiga and Malacca were rejected).

Foreign firms looked to some of these same advantages (cheap labor, markets and ease of expansion) but when considering Malaysia in comparison with other countries competition was over different issues. Most Southeast Asian states have cheap labor, transport and factory facilities which could cater to foreign investors. However, for the foreign firms interviewed the two most common attractions were Malaysia's political stability and investment climate. Obviously the reference by many foreign firms to government incentives was a major factor in coming to Malaysia. Malaysia's chief competitors in attracting these firms were Indonesia, the Philippines, Thailand and Hong Kong, although high labor costs outweighed other factors in the case of Hong Kong. It should be noted that several

firms already had plants in the area and their Malaysian factory was not their first choice. For those managers who had foreign experience we asked how Penang and Malaysia compared. Generally the situation was similar, although the presence of cheap labor and political stability were pluses for Malaysia while greater problems with skilled labor and government delays were minuses. There was overall satisfaction among foreign firms.

In terms of disadvantages foreseen by firms in establishing themselves in Penang, it was obvious from the answers that experiences since starting their factories had colored responses. More than a third saw no disadvantages while for others a variety of problems were mentioned, no one being extensively reported. Difficulties noted included:

- 1) Labor difficulties, particularly regarding trained workers and future expansion.
- 2) Transportation, particularly of workers.
- 3) Competition with other firms in the area.
- 4) Shortages or other difficulties with utilities or telephone service.
- 5) Difficulties in obtaining raw materials and the absence of ancillary factories.

Foreign firms said they foresaw few, if any, disadvantages in coming to Malaysia and these were primarily in the area of government delays in terms of licenses, Customs and Immigration. Again, it is believed that these complaints probably reflect problems encountered after establishing the factory rather than disadvantages foreseen when considering setting up operation.

If a large section of new industry foresaw few disadvantages, they apparently met with few insurmountable problems as they actually set about establishing their

industries. When asked to describe the efficiency and ability of local firms in meeting their construction, service and equipment needs when initially establishing their plants, an overwhelming majority (25) stated that the firms were efficient or got things done on time. Some stated that there were delays that were not the fault of local business (weather or poor roads) while five companies complained about other types of delay. Two said that they had experienced dishonesty from local firms. All in all a satisfactory record.¹

When asked to describe support given his firm by various levels of government, managers or their representatives had somewhat more mixed feelings, although a majority stated that they received good support. Agencies most mentioned for commendation were the Penang Development Corporation, Federal Industrial Development Authority (FIDA), and local officials in the Mak Mandin and Prai area. Six primarily small firms said support was little or non-existent, a pattern repeated in other areas by small industries that feel neglected. Of the specific complaints (16), almost all related to slow action by government departments over licenses, certificates, customs and pioneer status. Noted in complaints were Customs, FIDA, local authorities, and to a lesser extent the PDC, Treasury and Immigration. Although no single agency received a large number of complaints, feelings among some industrialists were strong.

Drawing from their experience in establishing their plants, we asked what recommendations the respondents would make (if any) on how government authorities could better aid in the initial development of new industries in the Penang area.

¹ Present relations with local firms continue the overall pattern initiated at the establishment of the industries with 22 respondents saying they do a good job in providing goods and services. A major problem is that local firms appear capable of providing simple goods and services but industries have to look abroad for sophisticated equipment and some raw materials (14).

Again, the principal need was seen as cutting "red tape," by which was meant diminishing delays and paper work in obtaining goods from Customs, getting licenses, visas, pioneer status, etc. (19). To meet this problem several specific suggestions were made including decentralizing authority so officials could make faster decisions, shortening the pioneer status investigation, establishing an office that would service industrial grievances and having the PDC set up a liaison office to deal with small Chinese-speaking firms. Other types of recommendations dealt with the need to improve telephone and utilities services, cutting down on power and telephone failure and coordinating work between utilities and telecoms to decrease disruption of plant operations. Respondents in all three areas called for better transport facilities and there was mention of the need for either PDC or federal subsidization or regulation of transport. Two respondents called for more accurate information for new investors.

Both local and federal reaction to these complaints by the industrial section were strong, counter-complaints being that companies often sought special favors, did not prepare their applications and forms correctly, were guilty of delays themselves and were complaining about problems that were part of beginning a new operation. In the words of the Penang Development Corporation,

It is our experience and also that of the Local Authority that delays are sometimes encountered because industrialists not being aware of government procedures (which I must say have been minimized) and also those engaged to assist them (such as architects, engineers and even lawyers) are ignorant of such procedures or even deliberately going against established practices. The Corporation, therefore, has always explained to these people that if they are in doubt of such matters they should approach its officials with their problems or to see officials of the department concerned.¹

¹Letter to the author from the Penang Development Authority, dated July 28, 1973.

Difficulties of this nature need to be put into perspective and, when compared to most of Malaysia's and Penang's competition, levels of performance were quite high for a newly industrialized area. Red tape and/or corruption have been far more obvious in every neighboring country with the exception of Singapore.

Reviewing these responses by the industrialists we can see that the Penang authorities were generally correct in believing that the infrastructure of the area and labor supply would be attractive to industry while the national government could look to investment incentives and the basic stability of the country as important drawing cards. As well, initial experiences with local firms and government officers were generally quite satisfactory. However, local authorities were faced with some teething problems of manageable proportions including improving government efficiency and communications and providing better infrastructure in terms of utilities, telecoms and transport. All of these problems were probably to be expected in the initial establishment of the program given the general lack of experience Penang had in industrial estates and free trade zones and it is remarkable that the complaints were not greater. The responses should cause the federal government some greater concern regarding its dispersal goal. The attractions of infrastructure, including transportation facilities, aggressive state government and an urban, generally literate source of workers that lured firms to Penang are not available in many areas of the country and will continue to inhibit growth in areas such as the East Coast.

3. Benefits Derived from Industrialization

A second set of issues revolve around the benefits derived by various sections of society from industrialization policies. Various alternatives were available

in analyzing this problem and it was decided to gauge results by studying six areas of benefits relevant to the establishment of the industrial estates and free trade zone. These were: a) construction of the factories; b) achievement of expected profits by new firms; c) growth in employment and capital goods; d) salary scales and fringe benefits; e) the multiplier effect of new industries; and f) perceptions of workers as to changes in employment, salaries and conditions. Through these areas of analysis it was hoped to partially test the success of government policies in meeting unemployment, developing industrial opportunities and attaining the two major prongs of the Second Malaysia Plan.

a) Construction

Little attention has been given to those benefiting from the construction of the factories themselves. In the Penang case there is little question that the major beneficiaries have been local Chinese and foreign firms. With rare exceptions the equipment requirements of the new industries were supplied by foreign firms and most of the exceptions can be explained in terms of the purchase of old equipment available in the area and of supplies such as office furniture. Construction of the actual plants was largely by Chinese owned companies. Thus, construction and equipment contracts normally did not open new opportunities for all races except as they were employees of Chinese or foreign firms.

b) Profit

In the absence of detailed profit data a simple, yet error-prone, way to see the benefits derived by firms is to ask if they are satisfied with profits from their operations. We asked all the firms surveyed if their experiences in Penang had lived up to their expectations in terms of profit, and 21 replied in the affirmative, 12 in the negative and the rest not giving clear answers. Of the 12

replying negatively, most were from Mak Mandin and only one from Bayan Lepas. Small firms (under 100 employees) showed a majority replying that profits were not as expected while less than 25% replied negatively among those over 100 employees. As well, foreign industries had a significantly higher proportion replying positively. Insofar as type of product, electronics and food companies reported a higher percentage of profitability with textiles the lowest (others were mixed almost equally). Two major reasons given by respondents as to why profits were not up to expectations were that competition was greater than expected and production costs higher. Other reasons were insufficient experienced personnel and difficulties obtaining transport and raw materials. It is probably too early to judge long-term profitability, and at any rate there is a tendency for local firms to play down profits.

c) Growth

More objective signs of business success are usually, but not always, growth in work force and capital goods. As well, increased employment has obvious benefits to a community with a high rate of unemployment. Using the firm histories prepared in cooperation with company personnel, the following picture emerges: Bayan Lepas: For those firms established since 1972, employment has risen from an original 909 to over 4,000. By 1974 these six firms expect to employ 10,385 and by 1975-76 almost 13,000. These are 13,000 new jobs in a three to four year period for only these firms. Prai: The firms interviewed in the other new area have shown a slower growth. Since 1971 they have increased from 498 to 727 (future growth statistics were not available). Mak Mandin: The 22 Mak Mandin firms include many industries that have long operated in the Penang area, 10 having existed there five years or longer. If we look at employment growth since the

inception of these industries we find an increase from 1,635 employees to over 3,900 in 1973, five-sixths of them in the past five years. Thirteen Mak Mandin firms said that they expected to increase their work force, but only a few gave specific figures, giving the future very conservative total of 4,460. If we had been able to include firms unavailable for interviewing the figures would have been even higher.

Total: Of all firms interviewed only four reported no growth over the years and only one a decrease. From the establishment of the firms to 1973 the total increase has been over 5,000 from approximately 3,100 to over 8,600. At least 94% of that increase has been in the last five years. These firms reported that their work force will be well over 18,000 by 1975-76. However, if present trends continue and the most labor-intensive firms maintain their policy of employing a high percentage of females, more than 13,000 of those 18,000 will be women. In fact, of the increase in employment of the 15 firms with over 200 workers, only two have a majority of males. Of the highly labor-intensive firms that plan to employ over 1,000 workers by 1975, two hire 50% women (one of which will employ a much higher percentage in the future) and the other four have from 70% to 95% females. Thus, insofar as the companies are concerned there has been unquestioned growth and the majority of firms expect this to continue. However, in terms of Penang's economic and political problem of high male unemployment, the success is somewhat less than advertised. As it now stands, approximately two out of every three workers hired in the industrial estates and Bayan Lepas are women.

Complete information on growth of capital goods was not available. However, taking a sample of nine firms from Mak Mandin, the oldest area, significant growth is apparent. In the past five years the cost of capital goods has risen from

M\$22,005,000 to M\$27,575,000, an increase of approximately 25%.

d) Salary Scales

Benefits to workers can be measured primarily in terms of salaries, fringe benefits such as insurance and working conditions. As can be seen in the survey of employees that follows, experienced workers have found salaries, benefits and working conditions better than previous jobs. There have been, however, press reports about low salary and workers in all three areas sampled noted salary as a specific complaint. Given these charges and the obvious relationship between salary and income distribution, it appeared desirable to look at salary conditions in depth. At the same time, promises of confidentiality limit us to aggregate data rather than information on specific firms. However, the aggregate data provide a good picture of the general situation.

Unskilled or Beginning Workers:

Bayan Lepas: The pay scale for beginning production workers ranges from a low of M\$2.20 a day to a high of M\$2.90. The median is M\$2.60-80. Increments average 30 cents a day every three to four months for most factories.

Prai: Salary for beginning unskilled workers varies from M\$1.60 to M\$3.00 a day for daily paid with the median M\$2.80.

Mak Mandin: Salary for unskilled workers varies according to sex and whether they are monthly or daily paid. Beginning female workers range from M\$1.50 to M\$3.00 a day with the median M\$2.10-20. Increments are from 10 cents every six months to 30 cents every three months, but are generally lower and slower than Bayan Lepas. Beginning daily paid male employees receive from M\$2.50 to M\$3.00 while those not noting sex differentials pay from M\$1.40 to M\$4.50 a day with a median of M\$2.00. The median daily pay in Mak Mandin is approximately 25% below

the other two industrial areas, and incremental increases are lower and slower. Monthly pay ranges from M\$60.000 to M\$120.00 with a median of M\$100.00.

Skilled workers can vary markedly in type, and efforts to compare are on shaky ground. In Bayan Lepas "line girls" (those supervising a group of girls) receive from M\$3.00 to M\$6.00 a day, with a median of M\$4.00. In Prai and Mak Mandin skilled workers paid on a daily basis range from M\$4.00 to M\$5.90. Monthly pay is from M\$135.00 to M\$300.00, with a median of M\$200.00. Supervisors also vary considerably with Bayan Lepas ranging from M\$110.00 to M\$300.00 a month, Prai from M\$200.00 to M\$800.00 and Mak Mandin from M\$150.00 to M\$460.00. The usual pay per month is approximately M\$200.00 to M\$250.00.

Firms producing chemicals, insecticides, plastics and metals pay unskilled workers less on the average while food and electronics industries pay the highest. No significant differences appear among skilled workers and supervisors. Comparing beginning workers only, it is apparent that foreign firms pay higher daily wages than do local industries, averaging approximately M\$2.80 a day against the local pay of approximately M\$2.15. In general foreign industries provide higher and faster increments and have better fringe benefits in terms of uniforms, transport and social activities, although there are glaring exceptions.

There is no doubt that Malaysia offers a large supply of cheap labor. Not only is labor inexpensive, but it is trainable. Thirty-one of the 37 industries stated that their Malaysian workers were trainable, with a minority complaining primarily about skilled labor. As we shall see, the managerial staff is another matter.

If Malaysia provides cheap labor, is this changing with the entrance of new factories? In Bayan Lepas more than one electronics firm has apparently seen the

necessity of paying higher wages, although they have been after skilled workers. In Prai and Mak Mandin older and smaller firms charge that labor is being stolen by newer factories and five of the Mak Mandin respondents complained that employees left after they had been trained. Certainly Prai pays considerably higher wages on the average than does the older Mak Mandin estate. Within Mak Mandin there do not appear to be major differences between older and newer industries, although the newcomers tend to fall in the middle of salary ranges, paying neither the highest nor the lowest wages. All things being equal, the probability is that wages will increase as labor gets scarcer, although certain types of labor (females, skilled and Malays) will probably be the initial beneficiaries. Penang is only now beginning to worry about the pressure on wages pricing industries out of the area as is now happening in Hong Kong and Singapore. Five Malaysian dollars a day is considered by some an upper limit for beginning workers in the electronics factories.

e) Multiplier Effect

Discussions of the multiplier effect of new industries can be both complicated and highly theoretical. However, some of the optimistic statements regarding the impact of present industrial policy on new ancillary industries and jobs demand closer scrutiny. What follows is only meant to raise some questions about the extent of the multiplier effect, not to give any exact prediction (frankly, we do not feel competent to do so). Three points should be considered before making too highly optimistic assertions:

1) A very high percentage of the goods and equipment purchased by the new industries in the three areas is imported, although services are usually local. As Malaysia is still unable to provide most of the sophisticated equipment needed

by modern factories, it has been necessary to purchase from Japan, Hong Kong, Europe and the United States in particular. Raw materials as well are usually found abroad, although efforts are being made to increase local purchases. The following table shows that 13 of the 37 firms import 95% to 100% of their materials from abroad and only 10 firms use a majority of Malaysian materials.

Foreign	Bayan Lepas	Prai	Mak Mandin	Total
95-100%	5	1	7	13
75-94%	2	2	3	7
50-74%	1	2	4	7
25-49%	-	-	4	4
Under 25%	-	2	4	6

For most of the firms the major Malaysian based purchases consist of utilities, transport and workers' salaries.

2) Given the presently low pay of workers and the fact that such a high percentage are young females, more study has to be made of the purchasing habits of different types of worker. The point that more than one electronics industry encourages its employees to purchase cosmetics raises, but does not answer, some rather interesting questions. However, with the largest employers putting more than M\$7,000,000 into salary annually, a significant amount will be pumped into the economy.

3) Finally, many firms could not name any ancillary industries that they wanted built in Penang to supply their factories. The following industries were named:

Bayan Lepas: Small integrated parts, insulated wire, gold wire, plastic casings, rubber foam, chemicals, gas. Several wonder if it is possible for Penang to ever provide their basic material needs.

Prai: Plastics, paper, food processing, vegetable oils, bicycle assembly, glucose, sugar refining, coconut oil.

Mak Mandin: Food manufacturing, aluminum foil, milk powder, chemicals, foundry for cast wheels, cotton filene, terry cotton, terry wools and cold storages.

Some firms named more than one and many named consumers of their products rather than suppliers.

f) Perception of Employees

In an effort to assess the impact of Penang-based industrial policies on employees, a separate interview schedule was given a sample of 525 employees from the 37 firms interviewed. The sample was drawn so as to include 15% of the employees of factories with 50 or less workers, 10% of those with 51 to 275, 5% of those with 276 to 750 and 3% of those above 750 employees. While the sample thus weighted the smaller factories, it allowed us to analyze different types of factories more carefully. The respondents included 200 males and 325 females (due to the high percentage of females in Bayan Lepas). Racially the sample included 241 Chinese, 172 Malays, 101 Indians and 11 others. The most obvious differences between Mak Mandin, Prai and Bayan Lepas was on the basis of sex. Over 85% of the Bayan Lepas respondents were females while the majority of the two others was male. Generally there were not significant differences among the three areas in other respects. The actual work force of the thirty-seven factories studied has a somewhat higher proportion of males (43% as against 35% in the sample) and Malays (approximately 40% as against 33% in the sample).

The reader should be aware of certain caveats due to rare instances when interviews could not be held outside the hearing of supervisors or were otherwise

contaminated; these composed less than 5% of the sample. As well, the interview schedule had to be short since employees were seen on the way to or from work or during breaks. Basically, we were seeking information in four broad areas: (1) the employment record of employees; (2) why they chose their present jobs; (3) experiences in their present jobs; and (4) data on unemployment. These data were gathered so as to gauge benefits in terms of meeting unemployment problems, redressing the racial balance in industry and improving the salaries and working conditions of industrial workers.

(1) Employment Record

Thirty percent of those interviewed had been employed six months or less, a quarter six months to a year, a fifth one to two years and the rest over two years. As might be expected, a very high percent of those in the newer areas of Prai and Bayan Lepas were new to their jobs (two-thirds of those in Bayan Lepas and four-fifths of those in Prai had been in their job less than a year). Only 45% of the males had held their present job a year or less while, again reflecting Bayan Lepas, 61% of the females fell into this category.

The sample broke down almost evenly between those who had been previously employed and those whose present position is their first job. In other words, slightly over 50% of all those questioned had never held a job before. However, these jobs do not appear to be reaching out evenly into the community. The large male unemployment does not appear to be fully met by these factories as this was the first job for only 27% of the males against two-thirds of the females. The Bayan Lepas figures do not completely account for this situation as only 54% of those interviewed there had not previously been employed (probably a low figure in reality). Racially the highest percentage of those first employed was among the Malays (61%)

as against 46% of the Chinese and 49% of the Indians. Those who had been previously employed did not move around freely, 72% having had only one other job and less than one percent more than three. Women have been less mobile than men and racial characteristics did not appear to be a significant factor except that Indians had a smaller percentage that had held only one job.

Finally, the factories are drawing their experienced work force largely from the Penang area. Four-fifths of those previously employed are from within the state while another 11% are from North Malaya. A higher percentage of Chinese (25%), supervisory-management personnel (30%) and Prai employees (35%) have come from outside the state. This sample at least shows that the factories did not draw on large numbers of Malays from other states as of mid-1973.

Thus, our sample showed the present employment picture to be characterized by a high percentage of new members in the work force, at least in the factories surveyed. The new jobs are going overwhelmingly to females, with a higher proportion of Malays in this category than is to be found in the Penang population from which 80% of the respondents come.

(2) Why This Job

We asked all 525 respondents why they chose the job they now have (multiple answers were allowed). Showing the tight job market, 38% of the sample said that it was the only job available. Slightly over one-fifth noted salary and somewhat less than that number referred to better opportunities. Other reasons, accounting for a total of 25% of the responses included better working conditions, the fact that jobs were near their homes, the closing down of former firms, and dissatisfaction with their last job. Far more females than males stated that it was the only job available (almost half the females as against a quarter of the males).

This pattern was to be found in all areas, but was most obvious in Prai and Bayan Lepas. Among those stating that there was no other job three-fifths were Chinese (54% of all the Chinese sampled as against 28% of the Indians and 26% of the Malays). A higher proportion of Chinese also chose their jobs for better opportunities and salaries.

(3) Conditions In the Factories

We next sought to discover how the employees looked upon factory conditions in terms of salary, benefits offered by the company and working conditions. Those previously employed were asked to compare their present job with their last one. Overall, benefits in all three areas were considered to be better than in their former jobs by a high proportion of the respondents. In terms of salary, 68% of those previously employed said salaries were higher and only 18% said they were lower. Again, women and Malays found their situations better than did their counter-parts, as did those in supervisory positions, but variations were not great. Basically, the same pattern was mirrored in terms of benefits provided by the company and working conditions, over 60% in each case describing conditions as better. Only 10% said that benefits were worse, while 20% said the same about working conditions. A higher proportion of those reporting worse benefits and working conditions came from Mak Mandin. It should be noted that these comparisons were not necessarily with factories outside the area in which the employee now works. A number of our respondents in Bayan Lepas had previously worked in other electronics factories in the Free Trade Zone. However, there is no doubt that increased benefits are being provided experienced workers by the new industries.

We also asked those without previous jobs how they would characterize their

present jobs in the same terms as those formerly employed. Only in the area of salaries were their complaints major (approximately 40% described them as poor) while less than 20% said working conditions were poor and less than 15% said the same about benefits.

Among the specific complaints noted by respondents from the entire sample the most often stated was salary. While multiple answers were allowed, approximately a quarter of all those interviewed complained about salary. Transport, too hot working conditions, ignorance of benefits and night shifts each was noted by five to six percent of the sample. Noteworthy were the number in Mak Mandin stating that they didn't know what benefits they were entitled to and those in Prai who commented about safety (particularly handling chemicals). Other data show that Mak Mandin includes factories with the least fringe benefits of the three areas studied with the electronics factories as a group providing more benefits in terms of uniforms, subsidized transport, social activities and subsidized food. The attitude of management toward workers was complained about by only 2% of the sample. Salary and night shifts were complaints voiced most frequently by females. Mak Mandin provided for a disproportionately high number of complaints, particularly with regard to transport, too hot working conditions, ignorance of benefits and salary. The major complaints in Bayan Lepas were night shift and salary while in Prai they were ignorance of benefits, night shift and transport.

(3) Unemployment

One of the major goals of industrialization policy in Penang and Malaysia is to diminish unemployment. We have noted the high percentage of newly employed and the sizeable proportion of females among them. We also wanted to see what was happening to immediate members of the families of the respondents in terms of unemployment. The figures were not all that encouraging. One-third of the sample

stated that at least one member of his or her immediate family was seeking employment (11% said more than one member was seeking employment). A higher proportion of Indians (52%) and Malays (37%) had members looking for jobs than did Chinese (24%), although as we have noted Malays have a disproportionate percentage of the new jobs. The length of unemployment was also of interest. Only 22% of those without jobs had been seeking work for six months or less while a quarter had been looking two years or more. Not only did males compose over two-thirds of those looking for jobs, but 60% of them had been out of work a year or longer. Thirty-one percent of the unemployed Malays in our sample had been seeking employment less than six months as against 15% of the Chinese and 20% of the Indians. In the same category, 51% of the Chinese, 44% of the Malays and 58% of the Indians had been seeking work a year or more. Thus, while a higher percentage of Malays than Chinese were seeking work, the latter were unemployed longer. Indians in our sample suffered the most in terms of both number unemployed and time out of work.

The major reasons provided for unemployment were a lack of education, the unavailability of jobs and a lack of qualifications other than education. These reasons generally held for both sexes. A smaller proportion of Indians noted a lack of educational qualifications and a higher percentage of Indians and Malays mentioned a lack of other qualifications. Malays were less likely to mention a lack of jobs as a reason for their relatives being unemployed.

In the introduction to this section on benefits we noted three goals of industrial policies in Malaysia: meeting unemployment, developing new industrial opportunities and strengthening the two prongs of the Second Malaysia Plan. There has been noticeable success in all three areas, within limits. Large

numbers have been employed through industrialization and this growth appears to be continuing. However, there is a disproportionate percentage of females within the newly employed and, as we shall see later, this overemphasis of young women is overlaid on a racial pattern that may present critical problems in the future. This situation can be altered by attracting different types of factories and through changing the traditional attitudes of electronics managers toward hiring males. Efforts are already being made in this direction.

Certainly Penang's program of industrialization has brought new opportunities to the region and the transition from import substitution to labor intensive, export-oriented industries is most encouraging. The multiplier effect in terms of new ancillary industries does not appear to be as great as initially expected, although industrialization may be too recent to judge success or failure now. The first prong of the Plan of eradicating poverty is being strengthened, in spite of low wages, by the large number of newly employed and increased salaries resulting from a changing labor market. Finally, the second prong of redressing racial balance is meeting with partial success through the increased number of Malays entering the modern sector, although, as we shall see, Malay participation tends to be limited to the unskilled worker.

4. Relations with Government

The third general question about which we were seeking data related to the experiences and attitudes of firms regarding government industrial relations. Two areas were concentrated upon, perceptions of firms of their dealings with local, state and federal agencies and attitudes toward industrialization policies of the Government of Malaysia. We specifically asked,

With regard to your relations with government agencies, how would you describe the support and cooperation you now get from city, state and federal authorities?

Responses varied among the levels of government, although there were no particular agencies that received overall poor marks. The majority gave favorable general replies, with the greatest percentage of positive responses from the newer Prai and Bayan Lepas firms. Specific complaints dealt with previously noted problems such as delays and problems with utilities and telecoms. Only two mentioned corruption, certainly a low percentage for Southeast Asia.

If they did have grievances firms tended to go to the specific departments concerned (22), although some used the PDC (8), FIDA (?) or the Federation of Malaysian Manufacturers (3). Upon presentation of their grievances the majority (23) said that they usually got satisfaction, although many said it was after considerable delay. The rest stated that they did not receive satisfaction (7) or weren't sure or wouldn't say (7). Transportation was the most common unmet complaint (relating to the transport of workers to and from work).

If firms are to obtain better results from their contacts with government and other parts of society, it is generally desirable that they join together to form a common front. This can be done through associations based outside the industrial area such as the Federation of Malaysian Manufacturers (FMM), a Chinese Chamber of Commerce or trade association, or through cooperation among firms in a particular industrial area. As regards the firms surveyed, cooperation tends to depend upon the area in which the factory is situated and its size. Almost all the Bayan Lepas firms operate in a cooperative manner to discuss common problems and to control the movement of labor from one factory to another. Interaction is aided by the fact that similar products are produced in a relatively

isolated site by firms with a number of expatriates familiar with organizational needs. However, there are quite mixed feelings about their success in dealing with government over such issues as transport, utilities and telecoms. A small minority of managers have described such efforts as largely useless in the face of official foot-dragging. In Prai, on the other hand, there is no real cooperation among firms within the industrial estate, and what does take place is apparently by major firms through the FMM. Finally, in Mak Mandin only a minority of respondents (8) said that firms in the area cooperated among themselves, with the FMM again mentioned by several. Some smaller companies complained that only larger industries belonged to the FMM and that its fees were too high.¹ This lack of organized contact between the public and private sectors is a major issue in contemporary Malaysian industrial relations.

In reaction to charges of neglect of small firms, the Penang Development Corporation has emphasized its "service after sales" policy and comment that,

In spite of shortage of staff, the Corporation has never turned away any industrialist in need of assistance when approached. Probably, as confirmed in one of your surveys itself, some of them fight shy of coming to the Corporation, and they assume the attitude that the relevant departments should know what problems they are faced with. We appreciate that particularly in small and local factories much difficulty has been experienced in conveying their problems to the relevant authorities. For this reason, the Corporation has always tried to encourage industrialists (big or small, local or foreign) to group together or join bodies such as the Federation of Malaysian Manufacturers so as to present their problems effectively.²

We also wanted to know what recommendations industries were prepared to make to improve relations between the public and private sector. This was a somewhat

¹Fees for the FMM run from M\$120 to M\$1,00 per annum depending upon issued capital.

²Letter from PDC dated July 28, 1973.

leading question, since other data show that many small firms want to stay as far from government as possible. However, one point came through clearly from this sample, particularly from Prai and Mak Mandin respondents - industry wants more and regular contacts with government to discuss common problems and exchange information (16). In the same vein, 8 respondents thought that government should learn more about industry and some advised sending officers abroad to study the problems of modern industry. Specific suggestions included regular meetings with PDC, the formation of a central office through which industries could deal with all government offices and the establishment of a branch of the PDC in Butterworth. The second set of recommendations dealt with the need to speed up government operations, although specific suggestions were lacking. Other recommendations noted by more than one respondent were to improve the information provided industries in Penang and Malaysia and to aid vocational training.

Reviewing the specific complaints of firms in the new industrial areas of Penang, it is apparent that issues raised have been generally of a low order of magnitude and of a type normal to the development of a new operation. The greater number of problems among older Mak Mandin firms should alert the authorities to the fact that government must continue to deal with difficulties after industries are established. The generally good relations in the area can, however, be weakened by perceptions of broader industrial policies noted in the next section.

We were interested in getting some sense of the attitude of business toward government industrial policy, partly in order to compare this material with other data being gathered in a Malaysia-wide survey. A majority of the respondents (21) had favorable comments on industrial policy, although the reasons for support varied from the view that it helped the Malaysian people to the statement that it

met the requirements of foreign investment and industry. Four thought that the policy was good but only in theory and that it had not proven successful in practice, primarily because of poor administration. Others objected because of racial quotas and the belief that industrialization leads to inflation.

When asked whether there were any present or future aspects of that policy that might be a problem to their industry, 16 said yes, 12 no and the rest did not answer sufficiently to categorize. In reply to a question asking them to describe these problems, 13 of the 16 pinpointed the racial issue (interviewers were asked to probe regarding employment policies). Other answers related to difficulties in getting skilled labor, inflation and fears of over-industrialization in some areas.

While there is no specific law regarding racial quotas for industries, the New Economic Policy of the Government of Malaysia does call for employment to reflect the racial composition of the country. The Second Malaysia Plan, while noting that Pioneer Industries did a better job in employing Malays, emphasized the continuing imbalance in the modern sector and particularly at the managerial level. However, there has been considerable confusion as to exactly what is expected of industry. Federal authorities have been careful to de-emphasize rigidity in the program and to note the need for flexibility without losing sight of long-term goals. Yet, many firms were confused by demands for the immediate attainment of specific quota goals as proclaimed by local and national politicians. There has been a recent general understanding among industries that they are expected to employ at least 40% Malays and to develop plans for greater Malayization of the management sector. This racial quota question had arisen in answer to other inquiries in the Penang survey, but the question on general government

industrial policy gave them an opportunity to vent their fears. Two themes ran through their answers:

1) Malay quota on workers: There does not appear to be a serious immediate problem in meeting a quota of 30% to 40% Malays. No firm in Prai or Bayan Lepas has less than 40% Malays and only three in Mak Mandin employ less than 30%. Some specific problems were present such as a manufacturer of non Moslem religious articles. No one appeared to worry about the fact that they had less than 30% Chinese, although there were cases with very low percentages of that race which would appear to be equally against national policy. Penang is a somewhat unique state given its high non-Malay population and a quota based upon national rather than state ratios would mean real problems unless Malays were imported from other areas - which would defeat state efforts to cut down on local high unemployment. The situation in Bayan Lepas on the island is particularly instructive. In less than seven years it is projected to have 30,000 workers. If the industries there maintain their present policy of hiring 80% females, there will be 24,000 female employees by 1980. Since the desirable age for electronics production workers is 16 to 22 and government apparently wants 40% of them to be Malay, firms will have to employ over 9,500 young Malay females in Bayan Lepas alone. Given the present female Malay population on the island of approximately 45,000 (50% of whom are under 15), this would mean that almost every Malay girl 16 to 22 on Penang would have to be employed in Bayan Lepas. Obviously, some solution will have to be found in either importing Malay girls from elsewhere or changing government policies so employees reflect state populations.

2) Management: The present industrial picture in Penang is not one of high Malay participation in management. In Bayan Lepas almost all management positions

are held by Chinese or expatriates. In Prai there are approximately 7 Malay executives while in Mak Mandin 13 firms have 100% Chinese management, 4 have at least one Malay and the rest did not provide data. Interviews with respondents from newer firms that were making an effort to bring in Malay managerial personnel elicited several common problems: 1) finding technically qualified Malays interested in a business career, 2) high turnover and 3) the difficulty of getting qualified Malays to work in the Penang area. Older and smaller firms with small, set management staffs appear reluctant to bring in Malays and several complain that this would mean sacking their own employees (a point that federal authorities are quick to deny).

5. Conclusion

This brief study has analyzed the experiences and problems of a local industrialization program implemented with the active support of state and federal authorities. Industrialization has helped to alleviate some of the unemployment difficulties worrying local officials and the goals of eradicating poverty and redressing the racial imbalance as enunciated by national leaders. Considerable new employment has been generated by Penang's industrial policies and there have been obvious increases in the wages of workers. However, as we have noted, new industries have hired a high proportion of young females and has been less effective in reducing unemployment among the more politically volatile male population.

Fulfillment of the first prong of the Second Malaysia Plan, the eradication of poverty, will take more than industrialization, as the government fully recognizes. However, through reducing unemployment, raising wages and opening new opportunities for all races, industrialization is helping. The extent to which

the prong redressing racial imbalance can be furthered through this policy is more questionable. On the plus side, our survey of employees showed Malays being hired by new industries faster than other races and that Malays showed greater satisfaction with salaries. As well, firms surveyed were employing 40% or more Malays in their work forces.

The negative factors regarding industry and race remain troublesome and will be discussed in greater detail in another paper. Here we can only raise a few basic questions. How can a national quota system work given regional racial variations and will a state-based ratio be politically palatable? How can Malays be brought into all levels of industry? Is it possible to implement speedy industrialization based upon foreign investment at the same time firms are required to place Malays at all levels including management? These and other problems are difficult ones with which both the authorities in Penang and Malaysia must wrestle. Meanwhile the industrial base of both is being increased considerably from its small beginning.

TABLE A-1: Survey of Employees

The Sample

		<u>Sex</u>		Total	Chinese	Malay	<u>Race</u>		Total
		Male	Female				Indian	Other	
Mak Mandin:	n	136	121	257	121	78	51	7	257
	%	53	47		47	30	20	3	
Prai:	n	36	26	62	31	21	7	3	62
	%	58	42		50	34	11	5	
Bayan Lepas:	n	28	178	206	89	73	43	1	206
	%	14	86		43	35	21		
Total:	n	200	325	525	241	172	101	11	525
	%	38	62		46	33	19	2	
Male:	n				99	49	46	6	
	%				49.5	24.5	23	3	
Female:	n				142	123	55	5	
	%				44	38	17	2	

n = number

% = percentage

Percentages rounded and may not reach 100%.

TABLE A-2: If Previously Employed

By Area	Yes		By Race	Yes		By Sex	Yes	
	No	No		No	No		No	No
Mak Mandin: %	52	48	Chinese: %	54	46	Male: %	73	27
Prai: %	47	53	Malay: %	39	61	Female: %	35	65
Bayan Lepas: %	46	54	Indian: %	52	49			
Total: %	49	51	Other: %	73	27			

Percentages rounded and may not reach 100%.

TABLE A-3: If Previously Employed -
How Many Previous Jobs

	One	Two- Three	Over Three
	%	%	%
<u>By Area</u>			
Mak Mandin	67	32	1
Prai	69	31	--
Bayan Lepas	52	47	1
Total	72	27	1
<u>By Race</u>			
Chinese	69	30	1
Malay	81	19	--
Indian	70	30	--
Other	87.5	12.5	--
<u>By Sex</u>			
Male	68	31	1
Female	79	21	--
<u>By Type Worker</u>			
Worker	75	25	1
Clerical	50	50	--
Supv.-Mgr.	75	25	1

Percentages rounded and may not reach 100%

TABLE A-4: If Previously Employed -
Where Last Job

	Penang	North Malaya	Elsewhere
	%	%	%
<u>By Area</u>			
Mak Mandin	81	12	7
Prai	66	24	10
Bayan Lepas	84	4	12
Total	80	11	9
<u>By Race</u>			
Chinese	75	12	13
Malay	86	8	6
Indian	83	11	6
Other	100%		
<u>By Sex</u>			
Male	74	15	11
Female	89	5	6
<u>By Type Worker</u>			
Worker	85	10	5
Clerical	64	18	18
Supv.-Mgr.	71	8	20

TABLE A-5: If Previously Employed -
Why Did You Decide on This Job?

	Salary	No Other Job	Job Dis- satisfaction	Home Area	Better Opport.	Better Working Conditions	Other*
	n	n	n	n	n	n	n
<u>By Area</u>							
Mak Mandin	71	107	10	26	33	25	79
Prai	11	32	4	2	2	3	22
Bayan Lepas	34	83	13	7	48	35	42
Total	116	208	27	35	93	67	143
<u>By Sex</u>							
Male	56	55	12	12	45	19	53
Female	60	153	17	23	48	42	90
<u>By Race</u>							
Chinese	56	129	13	16	69	39	90
Malay	34	45	8	14	10	9	31
Indian	25	28	5	4	14	3	17
Other	1	6	1	1	--	--	5
<u>By Type Worker</u>							
Worker	97	176	22	29	55	54	110
Clerical	12	17	1	4	8	2	15
Supv.-Mgr.	7	15	4	2	30	5	18

* Other included closing of former factory and aid of friend as major reasons.

TABLE A-6: If Previously Employed -
How Does Your Present Salary Compare With Pre-
vious Ones*

	Higher %	Lower %	Same %
<u>By Area</u>			
Mak Mandin	67	23	10
Prai	68	12	20
Bayan Lepas	70	12	18
Total	68	18	14
<u>By Race</u>			
Chinese	66	15	19
Malay	75	16	9
Indian	67	21	12
Other	43	57	--
<u>By Sex</u>			
Male	63	22	15
Female	75	13	13
<u>By Type Worker</u>			
Worker	67	17	16
Clerical	68	27	5
Supv.-Mgr.	72	15	13

TABLE A-7: If Previously Employed -
How Do Benefits Compare*

	Better %	Worse %	Same %	Mixed %
<u>By Area</u>				
Mak Mandin	50	12	33	5
Prai	74	11	11	4
Bayan Lepas	71	9	19	1
Total	61.5	10.5	25	3
<u>By Race</u>				
Chinese	57	10	28	5
Malay	74	7	16	3
Indian	60	13	27	--
Other	29	29	43	--
<u>By Sex</u>				
Male	51	15	28	5
Female	74	4	21	1
<u>By Type Worker</u>				
Worker	61	9	26	3
Clerical	59	14	18	9
Supv.-Mgr.	62	15	23	--

* Does not include "don't knows" and no answers
Percentages rounded and may not reach 100%

TABLE A-8: If Previously Employed - How Do Working Conditions Compare*

By Area	Mak Mandin	Prai	Bayan Lepas	Total
Working Conditions	%	%	%	%
Better	53	79	75	64
Worse	22	8	20	20
Same	25	13	5	17

By Race	Chinese	Malay	Indian	Other
	%	%	%	%
Better	55	77	70	43
Worse	21	12	22	43
Same	24	11	8	14

By Sex	Male	Female
	%	%
Better	60	68
Worse	21	19
Same	19	13

By Type Worker	Worker	Clerical	Supv.-Mgr.
	%	%	%
Better	66	57	61
Worse	18	19	27
Same	16	24	12

* Does not include "don't know" and no answers
Percentages rounded and may not reach 100%.

TABLE A-9: Major Specific Complaints By All Employees

	Night Shift	Transport.	Ignorance Benefits	Too Hot	Salary	Management Attitude
	n	n	n	n	n	n
<u>By Area</u>						
Mak Mandin	5	26	24	22	77	8
Prai	8	8	10	2	6	3
Bayan Iepas	22	2	1	6	43	1
Total	35	36	35	30	126	12
<u>By Race</u>						
Chinese	18	15	30	15	54	7
Malay	11	17	3	12	37	3
Indian	5	2	2	3	31	1
Other	1	2	--	--	4	1
<u>By Sex</u>						
Male	11	19	17	5	38	5
Female	24	17	18	25	88	7
<u>By Type Worker</u>						
Worker	28	24	33	24	99	10
Clerical	--	8	1	1	10	1
Supv.-Mgr.	7	4	1	5	14	1

TABLE A-10: Are Members of Your Family Seeking Employment

By Area Seeking Employ.	Mak Mandin	Prai	Bayan Lepas	Total
	%	%	%	%
Yes	37	26	33.5	34
No	63	74	66.5	66

By Race	Chinese	Malay	Indian	Other
	%	%	%	%
Yes	24	37	52	55
No	76	63	48	45

By Sex	Male	Female
	%	%
Yes	37.5	32
No	62.5	67

By Type Worker	Worker	Clerical	Supv.-Mgr.
	%	%	%
Yes	35	20	38
No	65	80	62

TABLE A-11: Sex of Those Seeking Employment*

	Mak Mandin	Prai	Bayan Lepas	Other
	%	%	%	%
Male	71	87	62	69
Female	29	13	38	31

* Does not include "don't knows" and no answers
 Percentages rounded and may not reach 100%

TABLE A-12: Of Those Having Unemployed Family
How Many Members Are Seeking Employment*

	One	Two	Three	Four
	%	%	%	%
<u>By Area</u>				
Mak Mandin	54	38	5	2
Prai	63	21	5	11
Bayan Lepas	72	23	1	3
Total	62	31	4	3
<u>By Sex</u>				
Male	52	38	7	3
Female	72	24	1	3
<u>By Race</u>				
Chinese	61	31	7	2
Malay	63	31	3	3
Indian	62	30	2	6
Other	67	33	--	--

TABLE A-13: Length Those Unemployed
Have Been Seeking Employment

By Area	Mak Mandin	Prai	Bayan Lepas	Total
	%	%	%	%
Less 6 months	18	14	30	22
6 mos. - 1 yr.	23	14	36	26
1 - 2 years	31	41	18	27
2 - 5 years	25	28	14	21
Over 5 years	3	3	2	4
<u>By Race</u>				
	Chinese	Malay	Indian	Other
	%	%	%	%
Less 6 months	15	31	20	12.5
6 mos. - 1 yr.	34	25	23	--
1 - 2 years	30	20	31	37.5
2 - 5 years	17	19	24	50
Over 5 years	4	5	3	--

Percentages rounded and may not reach 100%

TABLE A-14: Major Reasons for Unemployment

By Area Reasons	Mak Mandin	Prai	Bayan Lepas	Total
	%	%	%	%
Lack Education	33	4	40	32
Lack Other Qualifications	30	--	30	27
No Suitable Job	8	7	12	10
No Job	29	89	17	31

By Race	Chinese	Malay	Indian	Other
	%	%	%	%
Lack Education	39	38	12	50
Lack Other Qualifications	18	27	40	17
No Suitable Job	10	8	11	17
No Job	33	27	37	17

Percentages rounded and may not reach 100%

PROGRAM OF DEVELOPMENT STUDIES
Discussion Papers

- No. 25 "Optimal Wage and Education Policies with International Migration" (1972).....R. Albert Berry and Ronald Soligo
- No. 26 "Marketing and Economic Development: A Brazilian Case Study, 1930-70" (1972).....Gordon W. Smith
- No. 27 "Indigenisation of Industry and Progress of the Second Nigerian National Development Plan" (1972).....Gaston V. Rimlinger
- No. 28 "The Distribution of Incomes and the Short-Run Burden of Taxes in Turkey, 1968" (1972)..... Marian Krzyzaniak and Süleyman Ozmuçur
- No. 29 "The Proper Use of Indirect Taxation in Latin America: The Practice of Economic Marksmanship" (1972).....Charles E. McLure, Jr.
- No. 30 "Distributional Equity, Inflation, and Efficiency in the Brazilian Fluctuating Exchange Rate System" (1972)..... Donald L. Huddle
- No. 31 "A Diagrammatic Exposition of General Equilibrium Tax and Expenditure Incidence Analysis with One Immobile Factor"(1972),Charles E. McLure, Jr.
- No. 32 "Social and Economic Conditions and Political Violence"(1972)..... Fred R. von der Mehden with Kim Q. Hill
- No. 33 "Income Distribution, Efficiency and the Experience of Colombian Farm Mechanization" (1972)..... Wayne R. Thirsk
- No. 34 "Ease of Factor Substitution in Agriculture" (1972)..... Wayne R. Thirsk
- No. 35 "The Contribution of Traditional and Small Scale Culture Goods in International Trade and in Employment" (1972)Yhi-Min Ho and Donald L. Huddle
- No. 36 "The Distribution of Income and Tax Incidence in Panama, 1969" (1972)... Charles E. McLure, Jr.
- No. 37 "General Equilibrium Incidence Analysis: The Harberger Model after Ten Years" (1972)..... Charles E. McLure, Jr.
- No. 38 "On the General Equilibrium Analysis of Tax Incidence" (1973)..... J. Gregory Ballentine and Ibrahim Eris
- No. 39 "The Impact of Demand on Labor Absorption and the Distribution of Earnings: The Case of Brazil"(1973)Samuel A. Morley & Jeffrey G. Williamson
- No. 40 "A Note on Z Goods, Marketed Surplus and the Labor Intensity of Small Farm Agriculture" (1973).....Wayne R. Thirsk
- No. 41 "The Incidence of Colombian Taxes, 1970" (1973)...Charles E. McLure, Jr.
- No. 42 "What to Do about Foreign Direct Investment: A Host Country Perspective" (1973).....Samuel A. Morley
- No. 43 "Income Distribution Consequences of Agricultural Price Supports in Colombia" (1973).....Wayne R. Thirsk
- No. 44 "Factor Intensity of Consumption Patterns, Income Distribution and Employment Growth in Pakistan" (1973).....Ronald Soligo
- No. 45 "Industrialization in Malaysia: A Penang Micro-Study", F.R. von der Mehden

Note: Discussion Papers are available upon request to individual scholars and researchers and libraries of educational institutions.