

Conference on Manpower Problems in  
East and Southeast Asia

Jointly sponsored by the University of Singapore; the Asia  
Foundation, Institute of Population, East-West Center,  
University of Hawaii; Institute of Population Problems, Ministry  
of Health and Welfare, Japan, Ministry of Education, Philippines;  
United States Agency for International Development.

22-28 May 1971  
Singapore.

APPRENTICESHIP AND ENTREPRENEURS IN MALAYSIA

by

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## I. DEVELOPMENT STRATEGY IN PERSPECTIVE

West Malaysia's relatively rapid industrial development has been made possible by the existence of a pool of middle-level skilled labour trained mainly outside the formal educational system in urban, small-scale operations and under a traditional apprenticeship system, both of which are predominantly Chinese. From them have also sprung the majority of local entrepreneurs. Furthermore, West Malaysia's strategy for economic development has relied heavily on private enterprise, which has further stimulated the development of Chinese entrepreneurs and skilled Chinese labour.

Part of the explanation for Chinese predominance in middle-level skills and in entrepreneurial activities lies in the composition of the urban population. The total population of West Malaysia in 1967-68 was estimated at 7.9 million, of which 50.6% were Malays, 35.7% were Chinese, 12.3% were Indians, and the balance were other ethnic groups. Of the total urban population of about 2.6 million, about 57% were Chinese, with 28% Malays and 13% Indians.<sup>1</sup>

The combination of several key factors -- better educational facilities, better health and living conditions, and the concentration of industrial estates in the urban areas -- has given the Chinese an important edge over the Malays in the

acquisition of skills and in the participation rate in commercial and industrial development. The result has been an imbalance of ethnic participation in the country's overall economic development.

Economic imbalances in a multi-racial society tend to have a disequilibrating effect on the political process, which in turn affects the rate and direction of economic development. This sets off a chain reaction of political, economic and social forces, with critical repercussions on manpower development, the occupational structure of the labour force, and on general employment.

#### Development Programmes

Past economic development programmes have not only failed to bring about a closer economic and social integration of the Chinese and the Malays, but also had actually widened the economic imbalances between the two ethnic groups. From time to time warnings of this danger had been sounded by various writers,<sup>2</sup> and indeed the last two five-year plans had programmed for a rapid economic development of the Malays but mainly in the context of rural development, with the implicit aim of remedying the existing economic imbalances. Economic planning, however, had to resolve the conflict between the principle of maximizing growth and the pragmatism of reducing the ethnic imbalance in

the economy. In the Second (Malayan) Five-Year Plan, 1961-65, the allocation of \$545 million to agriculture and land development, as against \$17 million to industrial development (out of a total target public investment of \$2,150 million), suggested that the strategy was for the Government to uplift the peasant agricultural sector, leaving the industrial sector to private enterprise.<sup>3</sup> This pattern of public investment was more or less repeated in the First Malaysia Plan, 1966-70, in which \$1,086.6 million (23.9%) out of a total public investment target of \$4,550 million was earmarked for agriculture and rural development, while \$114.5 million (2.5%) was for industrial development.<sup>4</sup>

The main emphasis of the Government's development programme was on projects designed to increase productivity and investment in a widening range of primary and secondary industries. The chief items of expenditure under "Agriculture and Rural Development" included (a) new land settlement schemes for the cultivation of oil palm, rubber and other cash crops; (b) rubber replanting for small-holders, (c) irrigation and drainage projects to expand rice cultivation, (d) agricultural research; and (e) provision of extension services to farmers. Under "Industrial Development", the development funds were for (a) the establishment of industrial research facilities; (b) the launching of the Federal Industrial Development Authority;

(c) the provision of assistance to established public corporations, such as MIDF (Malaysian Industrial Development Finance) to enable them to expand their industrial credit activities, (d) the development of industrial estates; and (e) the strengthening of MARA (Majlis Amanah Ra'ayat or the Council of Trust for Indigenous Peoples) to facilitate the expansion of material and technical assistance for indigenous (Malay) entrepreneurs interested in industrial development.<sup>5</sup> Of the total of \$114.5 million earmarked for "Industrial Development", \$70.0 million was for MARA. In passing, it may be mentioned that "Education and Training" was to receive \$440.8 million (9.7% of the total), of which \$368.0 million was to be spent on West Malaysia, while the balance was for Sabah (\$27.2 million) and Sarawak (\$45.6 million).

In view of the free-enterprise nature of the economy, the private sector had the main responsibility for accelerating industrial development. The Government's support to industry would be concentrated in those areas offering the best possibilities for production which would prove competitive with imports and where export potentialities were significant. Beyond providing general incentives, however, Government would "not attempt to dictate the pattern or the location of industry, or interfere with industry's choice of production techniques", but "special encouragement" would be given to (a) industries

which were labour-intensive; (b) those which utilised domestic raw materials, (c) activities which manufactured capital or intermediate goods for which extensive markets already existed or were in prospect, and (d) export industries.<sup>6</sup>

Clearly this strategy of leaving the industrial sector largely in the hands of private enterprise meant that the opportunities for investment would be seized by local Chinese entrepreneurs, either by themselves or in partnership with foreign investors. Given the fact that the structure of the urban labour force was predominantly Chinese, especially in middle-level skills, it would seem natural that the new industries would be operated mainly by Chinese workers. This, in fact, appears to be what has happened. Because of the dearth of middle-level skills among the Malays, the majority who found employment in the factories were taken on as unskilled or semi-skilled workers, with considerably lower pay.

#### Employment Targets

The First Malaysia Plan estimated that by 1970 there would be about 460,000 more workers than there were in 1965, and the employment target was therefore set at providing 460,000 additional jobs so that the unemployment rate of about 6% of the labour force in 1965 would be lowered to about 5.2% in 1970. It was hoped that the agricultural sector and rural development

schemes would absorb about 70% of rural youth who would be entering the labour force during the Plan period. The aim was to increase physical output by about 20% so that per capita income would rise sufficiently to make agricultural enterprise relatively rewarding, and rural life more attractive. Concurrent with this was the desire to hold the growth of the urban population, labour force and unemployment to manageable proportions.<sup>7</sup>

The socio-economic survey of households carried out in 1967-68 in West Malaysia revealed that the active and passive unemployment<sup>8</sup> accounted for about 9% of the labour force, and about 6% of the working age population. The most significant features of unemployment were:

- (i) Seventy-five percent of the unemployed was between 15 and 24 years of age.<sup>9</sup>
- (ii) There was a significant difference in the rate of active unemployment among the Malays (5.8%), the Chinese (6.9%), and the Indians (10.3%).<sup>10</sup>
- (iii) The active unemployment rate for metropolitan areas was 10.1%, other urban areas 9.7%, and for rural areas 5.4%, although the absolute numbers for each of the three areas were 42.2 thousand, 38.5 thousand, and 96.0 thousand respectively.<sup>11</sup>
- (iv) In both rural and urban areas, 75% of the active unemployed fell within the age group 15-24 years.

(v) The active unemployment rate by race showed important differences. In the urban areas the rate for Malays was 11.7%, for Chinese 8.5%, for Indians 12.6%. In the rural areas, the rate for each of the three races was 4.7%, 5.2% and 9.3% respectively.<sup>12</sup>

(vi) The passive unemployment rate by race showed that in the urban areas the rate for Malays was 3.3%, for Chinese 1.2%, for Indians 1.9%; and in the rural areas the rate for each of the groups was 2.9%, 0.9% and 2.0% respectively.<sup>13</sup>

It can be seen from the above summary that the incidence of active unemployment was greater in urban than in rural areas, and that passive unemployment affected Malays more than other ethnic groups since it was mainly a rural phenomenon.

#### Educational Attainments

When the number of unemployed is matched with levels of educational attainment, an interesting pattern emerges. Of the active unemployed in the rural areas, about 60% had no formal education, and about 64% had only primary schooling. With higher levels of education, however, the pattern is reversed. About 58% with lower or middle secondary education, 65% with upper secondary education, and 88% with post-secondary or higher education were found in the urban areas.<sup>14</sup>

Among the passive unemployed, 83% had no education at all or had only primary schooling. The percentage of such persons was higher (86.3%) in rural areas than in urban areas (74.5%). About 20% of those with lower or middle secondary education were in the urban areas, and about 9% in the rural areas.<sup>15</sup>

Viewed at from a different angle, West Malaysia has made significant gains in the overall literacy rate of the total population. In 1947 about 31% of the population aged 6 years and above was literate, in 1957, about 51%; and in 1967-68, about 77% was literate.<sup>16</sup> Where the labour force was concerned, while 25.6% had no formal education, 56.5% had primary schooling; 12.2% had lower or middle secondary education, and 1.7% had post-secondary or higher education.<sup>17</sup>

Since the percentages are unlikely to have changed significantly during the last three years, or will change significantly in the near future, the conclusion is that the 25% of illiterates will act as a drag on economic development. Furthermore, the fact that more than 50% of the population has had only primary schooling means that they will be excluded from the more sophisticated industries which require specialised skills, unless there are schemes for on-the-job or apprenticeship training which will give them basic technical and industrial skills. The fact that they form the largest pool

of human resources underlines the urgency of upgrading their education and training if they are to make their due contribution to rapid economic development.

#### Economic Development and Political Stability

Compared with most countries in South-East Asia, West Malaysia's overall unemployment rate of about 9% of the labour force does not seem intolerable, although it is disquieting. Certainly in terms of per capita income and in terms of the general level of social and economic development, Malaysia may be counted among the top three Asian nations. In 1969 the GNP was estimated to have grown by about 9% to reach a new peak of \$11,305 million, compared with 6.4% in 1968, and an annual growth rate of 6.8% between 1963 and 1967. Clearly the increased growth was due to investments made earlier in the decade. Per capita income rose from \$845 in 1963 to \$1,000 in 1968, and \$1,060 in 1969. Indications are that it will continue to rise steadily through the 1970's.

In contrast to the story of most developing countries, West Malaysia's economic achievement to date is something of a miracle brought about by a stable and honest government, a development-conscious and dedicated administrative service, and the hard work of the people, whether they are government officials, business executives, farmers, teachers, technicians or entrepreneurs.

Yet in the midst of apparent prosperity, the worst race riots in the country's history broke out in May 1969 in the capital city of Kuala Lumpur.<sup>18</sup> It is impossible to measure the exact extent of the damage done to the economy, but the impact of the riots may be gauged by a drop of more than 2% in the growth rate of the GNP in 1970, compared with the 9% growth rate for 1969. However, the political repercussions have been far more serious than any physical damage to the economy. It would seem to suggest that economic development in a multi-racial society poses a threat to political stability if economic imbalances between ethnic groups are not rectified, or are allowed to widen. Although there are no recent statistics to show the exact nature and the precise extent of the imbalances, it is generally assumed that the Malays as a community have a lower per capita income than the Chinese as a group.

With reference to developing countries, a noted Asian economist has suggested that national and international instability is due not so much to poverty per se as to the realisation that it is possible to break out of the vicious circle of poverty; that the subjective problem of discontent of the poor with their present economic condition far transcends the objective problem measured in terms of the absolute level of per capita income. This stems not only from the frustration of their

high economic expectations, but also from "the psychological and political drives to raise their national prestige and obtain equal status with the developed countries."<sup>19</sup> Mutatis mutandis, the same could be said of the situation in which two different ethnic groups at differing levels of social and economic development co-exist within the **same country**.

#### The New Economic Policy

At any rate, following the race riots, the Government announced a new economic policy to deal more effectively with the unemployment problem, particularly among youths in the urban and the rural areas. Among other things, it called for a more aggressive approach to industrialisation, a greater dispersal of industries to smaller towns and the rural areas, and the adoption of crash programmes to provide the unemployed youths with training in industrial skills. The new strategy would require the Government to take the lead in identifying feasible projects and to mobilise local as well as foreign capital. These and other approaches would enable the Government to influence employment policies so that the employment structure would reflect the multi-racial composition of the country.<sup>20</sup>

The new economic policy has two main objectives. The first is "the eradication of poverty irrespective of race", and this is "a departure from the previous belief that the eradication of rural native poverty alone would conduce towards national

unity". The second is "the restructuring of society through the modernisation of rural life, a rapid and balanced growth of urban activities and, above all, the creation of a Malay commercial and industrial community in all categories and at all levels of operation so that over a period of time -- in one generation -- they can be a full partner in the economic life of the nation".<sup>21</sup> (Emphasis added.)

This is a major shift in development policy from what was followed throughout the 1960's. During the last decade the approach was for the Government to concentrate on rural development to raise income levels of the Malays, the majority of whom were, more or less, encouraged to remain in the rural areas as farmers and small-holders of rubber or oil palm estates. The new policy implies that it is no longer politically acceptable to leave the Chinese and foreign investors to develop the commercial and industrial sectors. A further implication is that, since Malay entrepreneurs, under a laissez-faire policy, did not emerge in any significant numbers in the past, the current policy is to hasten the output of Malay captains of commerce and industry. It is left to be seen how this new economic policy will be translated into development programmes in the Second Malaysia Plan for 1971-75.

Against this background, the apprenticeship system and the development of entrepreneurial talent in Malaysia may now be considered within the framework of a multi-racial society.

## II. THE NURTURE OF ENTREPRENEURS

Although much has been written about entrepreneurs and the importance to economic development, little is known about how or why some societies in certain periods of time seem to develop an entrepreneurial class that has the vision and the ability to make investment decisions, command capital and launch a commercial or industrial enterprise. Nor is there much information on why certain ethnic groups in plural societies appear to have a larger share of entrepreneurial talent than others. "Explanations" usually cite cultural factors which promote entrepreneurship. The classic, of course, is Schumpeter's identification of three basic motives: the urge to establish a commercial or industrial "empire", with a family dynasty to rule it; the will to overcome the insuperable and to prove one's superiority; and the pleasure of creating something new. These psychological drives are, in turn, stimulated by environmental variables which include political stability, the rule of law, a laissez faire economic policy, spiritual and intellectual liberty, and an all-pervasive atmosphere of change and progress. All these may explain why some people become entrepreneurs, but they throw very little light on how they become successful entrepreneurs.

The first entrepreneurs of any note in European economic history were townspeople who had no inherited titles, and whose growing wealth and power were not derived from land ownership. Springing sometimes from the lowest social order, they were a self-made class who understood and practised the virtues of thrift and hard-work. From buying and selling, many turned to manufacturing. Successful artisans employed apprentices and journeymen, and the more successful goldsmiths and silversmiths did a little money-lending as a sideline.<sup>22</sup> As social mobility was limited, sons tended to follow in the footsteps of their fathers, and family businesses sometimes became financial empires. It was this class of entrepreneurs, with their accumulated wealth and commercial experience, that helped to launch the Industrial Revolution.

This seems to be the general pattern also in most developing countries,<sup>23</sup> although entrepreneurs tend to be identified with certain ethnic groups. In East Africa they are the Indians and Arabs. In Malaysia, as in many parts of South-East Asia, they are mainly the Chinese who have been in the forefront of economic development. The evidence suggests that the emergence of entrepreneurship is closely linked to urbanization.

Urbanisation and Chinese Enterprise

The modern urban centres of Malaysia are largely the creation of Chinese enterprise under the protective shade of British administration in the heyday of colonial rule. The British provided the environmental factors which were crucial to the development of commerce and industry. Although the vast majority of Chinese immigrants came from a peasant background, they brought with them commercial expertise and artisans skills which facilitated the rapid urbanisation of tin-mining villages which they had carved out of the jungle. The colonial policy of restricting the alienation of agricultural land to Chinese had the effect of concentrating them around the tin-mining areas. The Japanese occupation during World War II slowed down the rate of urbanisation, and a severe food shortage forced many Chinese to encroach on larger areas of government land which they cultivated with the tacit encouragement of the Japanese authorities.

The post-war Communist rebellion had the unexpected result of accelerating the urbanization of the Chinese. Suspected of giving support, in cash or kind, to the rebels, Chinese squatters were forcibly removed from the rural areas to "new villages" which were established close to, or on the periphery of, the larger urban centres. To minimize resentment and to promote co-operation with the authorities, the new

villagers were given land for settlement, cash grants for rebuilding their homes, and they were provided with piped water, electricity, paved roads, schools and other urban facilities. This at least partly explains the dramatic increase in the percentage of the urban population from about 16% in 1947 (the year before the outbreak of the Communist rebellion) to more than 32% in 1967-68.<sup>24</sup> The important point to note is that 57% of the urban population is Chinese, and 28% is Malay.

Right from the start of Malaysia's modern economic development, the entrepreneurs have been mainly Chinese, apart from the European agency houses.<sup>25</sup> From tin-mining throughout the nineteenth century to estate rubber planting which began at the end of the century, they were the main innovators.<sup>26</sup> In fact, there are few commercial or industrial enterprises which have not been promoted by Chinese entrepreneurs. Chinese traders in the Straits Settlements supplied most of the capital for exploiting the tin-mines in the Malay States, and the wealth from tin-mining was then channelled into various commercial and manufacturing enterprises. One of the most important developments in the early twentieth century was the emergence of Chinese banks which played, and still play, a crucial role in financing small-scale Chinese enterprises.<sup>27</sup> Situated in and around the urban centres, often in the "new villages" mentioned above, the small-scale

industries provide the facilities for the training of craftsmen and a wide range of other skilled workers. Most important of all, they are the testing ground of new generations of entrepreneurs who have been able to move into large-scale operations during the last ten years as opportunities for investment in industrial activities widened.

#### The Apprenticeship System

The apprenticeship system associated with small-scale Chinese businesses has been one of the most important means of producing skilled labour. The small-scale businesses have traditionally been the repository of skills which the early immigrants brought with them and which were then transmitted from father to son, or from the master craftsman to his apprentices. Generally, the master craftsman is eclectic and pragmatic, open to new ideas, ready to experiment with new products and methods of production, and willing to innovate. In this way much of modern technology introduced by large-scale industries is often quickly adopted or adapted to his needs, and the consequent development of new skills has a multiplying effect through the apprentices. More importantly, the open-minded, pragmatic approach to learning new skills and experimenting with novel methods of work, and the spirit of innovation are internalised by the apprentices.

However, while the skills are often highly technical and sophisticated, the methods of training are haphazard and frequently inefficient in that there is seldom any systematic instruction given to the apprentices. Often the onus of learning anything rests on the apprentice. The speed with which he picks up skills depends upon his own intelligence and motivation, and upon the whims and fancies of the master craftsman, whom sometimes deliberately withholds information on how to develop specific skills. This attitude stems from the traditional Chinese attitude that the best insurance against retrenchment or unemployment, or competition from potential rivals, is not to divulge all the tricks of one's trade to apprentices, especially when they are not of one's own kith and kin. In this way, special trade secrets and skills are often handed down from father to son only.<sup>28</sup>

The recruitment of apprentices follows the traditional pattern of giving preference to relatives, though not exclusively so. With urbanization and the weakening of extended-family ties, kinship obligations of providing employment are no longer important considerations in selecting apprentices. In times of labour shortage strangers are taken on as readily as relatives were recruited formerly. More often than not apprentices are strangers from the neighbourhood or from the surrounding district who happen to be looking for a job. Generally, no particular qualification is required of the

apprentice, except a willingness to work hard and a readiness to learn. Where the work requires physical strength, a healthy and strong-looking lad is preferred to one who looks sickly.

The vast majority of apprentices are Chinese-educated, some with a little knowledge of English, but their educational attainment is seldom above lower secondary schooling. Most of them have only primary education, and the exceptional few may have upper secondary education. With the spread of universal primary education, the completely illiterate apprentice is rare. Although literacy is not absolutely essential to learning a skill, it is clearly an advantage since the apprentice may be called upon to make out simple bills or to read simple work instructions.

In most types of skill training there is hardly any instruction on theory simply because the master-craftsman himself does not have any theoretical training. Indeed many of the older master-craftsmen are illiterate or have only a primary education. While the apprentices generally have a slightly higher level of educational attainment (primary or lower secondary) they are seldom proficient enough in English to give themselves the theoretical training by self-study. But somehow constant practice through trial and error, they learn the skills without the benefit of theoretical instruction.

This is perhaps the most serious weakness of the apprenticeship system since the absence of a theoretical foundation limits the apprentice's ability to apply his knowledge to unfamiliar situations.

The more intelligent and ambitious apprentice often moves from one establishment to another in the same line of business. When he feels that the master craftsman has nothing more to teach him, or is unwilling to teach whatever he knows, the apprentice finds another craftsman from whom he thinks he may learn more. Thus the time taken to master a skill will depend upon chance encounters with master-craftsmen, their level of expertise, and their willingness or ability to impart knowledge. Depending on circumstances and the intelligence and initiative of the apprentice, it may take one to three years to master a skill in, for example, furniture-making, motor-repair or electrical wiring.

Many of these small-scale establishments offer board and lodging of a very spartan kind to the apprentices. During the first year of training this is all they get, plus a new suit of clothes. The more generous proprietors may give them a monthly allowance of \$10 or \$15 for minor luxuries such as cigarettes or an evening at the local movie theatre. More often than not, the apprentice has to rely on parents or relatives for a supplementary allowance. In some special cases,

the apprentice has to pay a monthly fee to the proprietor of a business for the privilege of learning the trade from the master-craftsman. In this case, the fee goes towards defraying the cost of board and lodging. During the initial period of apprenticeship (six months to a year), the novice receives no remuneration as his contribution to output is considered to be negligible.

As soon as the apprentice has learnt some basic skills, he is given an informal test in the form of a specific task - making a table, repairing an automobile engine, for example - and if he passes the test he immediately gets a pay rise, which is not only a reward for his success in learning the skills, but also an inducement for him to remain with the establishment. In this way, financial incentives act as a spur to apprentices to learn as fast as possible. The able ones graduate quickly from the semi-skilled to the skilled category of workers. The minimum wage that a skilled worker would accept is about £150 per month. Depending on the level of skill and experience, he could earn as much as \$400 or more a month.

Working hours are long (60 hours per week is not uncommon for apprentices) and work-tasks are often tedious. Among apprentices there is usually a strong spirit of competition, and the desire to excel and to qualify as skilled

workers in the shortest time possible are some of the factors which make them extremely hard-working. Indeed, industriousness and frugality form a pervasive ethic which most apprentices internalise very quickly. To be labelled lazy or spendthrift is perhaps the worst punishment an apprenticeship could receive from the master-craftsman or his peers.

Into this system of apprenticeship it is seldom possible for a Malay (or an Indian) to be admitted. Linguistic and cultural biases and the value-system of these small-scale businesses act as barriers to the recruitment and training of non-Chinese. While the Malay may admire the industriousness of the Chinese, he is likely to find their work ethic somewhat strange, if not perverse, and their values alien to his own outlook. The fact that the two racial groups tend to be residentially separated is an additional difficulty in the recruitment of Malay apprentices. Thus the geographical and social distance between Chinese and Malays of similar socio-economic status reinforces the linguistic and cultural barriers which have traditionally kept them apart in this form of skill training. To a large extent the handicap of the Malays in this context also apply to the Indians.

To offset the imbalance in the number of Malays with industrial and technical skills, MARA has begun its own programme of technical and vocational training for Malays. Insofar

as the output of skilled manpower is concerned, it appears to be fairly successful, though the per capita cost is not known. It seems reasonable to assume that skilled manpower training under the apprenticeship system associated with small-scale Chinese businesses is much cheaper, though not necessarily more efficient, than the formal training scheme under MARA. A much more important consideration, however, is the stimulus to the emergence of entrepreneurs through the apprenticeship system in small-scale businesses.

#### Small-Scale Business and Entrepreneurs

In the context of rising unemployment among youth, small-scale businesses or industries could play a crucial role in the economic development of developing countries in three inter-locking ways.

The first is that they make possible economies in the use of capital which may be scarce, and may call into being capital that would otherwise not come into existence.

The second is that a given amount of capital invested in small-scale undertakings may provide more employment than the same amount of capital invested in large-scale industries, although in the case of the former there is also the possibility that labour productivity may be so low that they cannot compete on equal terms with the latter.<sup>29</sup>

The third is that, if small-scale businesses are combined with an organized apprenticeship system, they not only may provide more employment per unit of capital invested, but also will accelerate the output of skilled labour at relatively low cost.

The empirical experience of many countries suggests that economic growth requires a large number of small changes, each taking advantage of local opportunities and availability of resources, each reinforcing the other to create new conditions which promote further growth. The dispersal of capital and spreading wide of entrepreneurial skills are important aspects of economic development.<sup>30</sup>

However, the purpose here is not so much to make a case for small-scale undertakings as to focus attention on their potential in nurturing and bringing forth entrepreneurs in a situation where economic imbalances between racial or ethnic groups is a potential or an actual source of political instability. To look at racial imbalances in terms of employment only is likely to miss the heart of the problem. Outside the public sector, employment is created largely by private entrepreneurs who are prepared to invest in new enterprises which will widen employment opportunities. In Malaysia's context, the economic imbalances stem largely from the scarcity of Malay entrepreneurs who could mount and manage small-scale businesses.

The reason why the Chinese predominate not only in commerce and industry but also in skilled middle-level manpower is that they form the bulk of entrepreneurs who, in the majority of cases, spring from apprentices of one sort or another in small-scale and often "back-yard" businesses. A carpenter who learned his trade through apprenticeship may start a furniture factory of his own, offering employment to many more people, besides training a new generation of carpenters. From furniture manufacturing, he may branch into contracting in the building industry. The multiplying effect is obvious. One could provide a long list of examples to illustrate the same argument, but the point is clear.

According to Schumpeter, one of the most important functions of entrepreneurs is to reform or revolutionise the pattern of production by exploiting an invention or an untried technological possibility for producing a new commodity, or producing an old one in a new way by opening up a new source of supply of materials, or a new outlet for products, by reorganising an industry. The entrepreneurial function "does not essentially consist in either inventing anything or otherwise creating the conditions which the enterprise exploits. It consists in getting things done."<sup>31</sup> But the question is, how does a person become an entrepreneur? What is more important, how does he become a successful entrepreneur?

One answer is that he has been "tested in the innumerable hazards of business competition in the course of which he has been found to have made more wise decisions than foolish ones and has avoided making catastrophic mistakes",<sup>32</sup>

The lack of Malay participation in Malaysia's commercial and industrial development stems from the fact that there have been few Malay entrepreneurs. The circularity of the problem is obvious. Thoughts on how to break the circular problem tend to be rather simplistic and are often expressed in the form of exhortations like the following: "Businessmen are not born. The Malays must develop that skill themselves. Government policy is to increase Malay participation in commerce and industry, but this is difficult because for a long time the Malays have been leading a simple life. They had no interest in business and were satisfied with a regular income."<sup>33</sup>

The root cause of economic imbalances between the Malays and the Chinese may be traced to the practical exclusion - through social, cultural, geographical and institutional factors - of the Malays from the Chinese apprenticeship system in small-scale businesses. Attempts at redressing these imbalances by preferential employment in the public sector may have had the effect of reducing the chances of breaking the vicious circle, and the process of the education of Malays may have

taken its impulse from the pattern of employment. All these factors seem to reinforce one another to perpetuate the imbalances.

### III. EDUCATION AND ENTREPRENEURSHIP

While a great deal of research has been done to demonstrate the positive correlation between formal education and economic development, there has been a dearth of documentary evidence on the causal relationship between education and entrepreneurship, and whatever information there is seems highly inconclusive. Recent studies suggest that some people have been successful entrepreneurs despite the fact that they had very little formal education. For example, a study by Papanek<sup>34</sup> of industrial entrepreneurs in Pakistan shows that one third of industrial investment was in the hands of people who probably had no formal schooling at all, but who obtained their informal education from their business-oriented families. In this case, the lack of education appeared to be no handicap at all to successful business performance. The poorly educated industrialists did just as well as the better educated ones whether they ran a large or a small firm, although with larger and more complex enterprises education should become more important. Industrialists with little or no formal education could successfully run large businesses because they were able

to leave the technical and administrative details to management experts whom they hired, while concentrating on things which they could do well - organising capital and making business contacts.

Another study by Finney<sup>35</sup> of a primitive tribe with stone age technology in the Eastern Highlands of New Guinea shows that the people (referred to, for convenience, as Gorokans) are displaying an extraordinary capacity to mobilise capital and launch new enterprises since coming into contact with Australians who provided the initial economic stimulus. The phenomenon, illustrated vividly by detailed accounts of their economic activities, is all the more amazing because, until the late 1940's, the Gorokans had been isolated from other peoples.

In Malaysia, many Chinese businessmen who became millionaires, began life in the country with neither education nor capital assets of any kind. To say that some entrepreneurs were successful despite their lack of education does not mean that formal education has no contribution to make to entrepreneurship. Much depends on what goes into the process of formal education. The truth of the matter is that studies on the causal relationship between formal education and entrepreneurship begin by making unwarranted assumptions about education, expecting education to do what it was never intended

to do. That is to say, much of formal education is in no way geared to producing entrepreneurship. It is rather like looking for an atomic scientist in an educational system which does not teach modern science.

The fact is that there has been no experiment to see if the essential elements of entrepreneurship can be identified and built into the educational curriculum. Since entrepreneurship is an activity as well as a state of mind, education must provide those environmental factors which promote entrepreneurial activities as well as simulated conditions to test entrepreneurial skills, in the same way as a laboratory is necessary for the training of chemists. If entrepreneurs are seen as key people in generating economic change leading to larger outputs and higher productivity, then it is time for educational planners to think about educational programmes for the stimulation and promotion of entrepreneurial talent in the same way as they try to nurture and advance technical and scientific skills.

This is particularly important in a society where there may be pockets of "uneconomic cultures" where social values and economic practices are antipathetic to the growth of entrepreneurial talent. If the "high growth" enterprises in a plural society are institutionally biased against the entry and absorption of "outgroups", then education may provide

an important clue to breaking the vicious circle of poor entrepreneurship, low capital formation, low participation rate in economic development, and low per capita incomes. If the conventional function of schooling is widened to include the promotion of entrepreneurship, it could add a new and exciting dimension to the interlocking relationship between education and economic development.

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NOTES

1. Malaysia, Department of Statistics, Socio-Economic Sample Survey of Households, 1967-68 Employment and Unemployment, West Malaysia, Kuala Lumpur, Department of Statistics, 1970, p. 68. Hereafter this report will be referred to as MSSH, 1967-68.
2. Notably Ungku Abdul Aziz, "Facts and Fallacies on Malay Economy", and John Eber, "Economic Development in Malaya: Prospects and Problems", in Merdeka Convention, papers presented at the Convention in London, 26-31 August, 1957, (mimeographed); J.J. Puthucheary, Ownership and Control in the Malayan Economy, Singapore: Eastern Universities Press, 1960; E.K. Fisk, "Special Development Problems of a Plural Society: The Malayan Example", Economics Record, June, 1962; E.L. Wheelwright, Industrialization in Malaysia, Melbourne: Melbourne University Press, 1965; and Chai Hon-Chan, Educational Planning and Policy in Malaya, 1946-1962, Unpublished qualifying paper, Graduate School of Education, Harvard University, June, 1966.
3. Malaya, The Second Five-Year Plan, 1961-65, Kuala Lumpur: Government Printer, 1961, Table VI.

4. Malaysia, The First Malaysia Plan, 1966-70, Kuala Lumpur: Government Printer, 1965, pp. 69-70.
5. The First Malaysia Plan, 1966-70, pp. 66-67.
6. Malaysia, Mid-Term Review of the First Malaysia Plan 1966-70, Kuala Lumpur: Government Printer, 1969, pp. 73-74.
7. The First Malaysia Plan, 1966-70, pp. 80-81.
8. "Active unemployment" is defined as "those who are actively looking for a job"; and "passive unemployment" as "those who will accept a job if given one."
9. MSSH, 1967-68, p. 109.
10. MSSH, 1967-68, p. 110.
11. MSSH, 1967-68, p. 130.
12. MSSH, 1967-68, p. 133.
13. MSSH, 1967-68, p. 143.
14. MSSH, 1967-68, p. 133
15. MSSH, 1967-68, p. 144.
16. MSSH, 1967-68, p. 59.
17. MSSH, 1967-68, p. 77.
18. For the official version of the riots, see The May 13 Tragedy; a report by the National Operations Council, Kuala Lumpur, October, 1969.
19. Hla Myint, The Economics of the Developing Countries, London. Hutchinson, 1964, p. 19.
20. Malaysia, Bank Negara, Annual Report and Statement of Accounts, 1969, Kuala Lumpur Kum Printers, 1970, pp. 62-63.
21. The Hon'able Minister with Special Functions and Minister of Information, Tan Sri Dato' Muhammad Ghazali bin Shafie,, Democracy: the Realities Malaysians Must Face, Kuala Lumpur: Ministry of Information, 1971, pp. 12-13. This is the text of a speech made by the Minister at the Malaysian Senate on March 5, 1971.

22. Stephen Euke, Economics for Development, Englewood Cliffs, New Jersey Prentice-Hall, Inc., 1963, p. 66.
23. There is a growing literature on the role of indigenous entrepreneurs in the industrial development of developing countries. See, for example, Gustav F. Papanek, "The Industrial Entrepreneurs of Pakistan" and James N. Anderson, "Economic Personalism and Philippine Entrepreneurship", in Development Digest, Vol. VIII, No. 3, July 1970.
24. MSSH, 1967-68, pp. 66-67.
25. G.C. Allen and Audrey G. Donnithorne, Western Enterprise in Indonesia and Malaya, London. George Allen and Unwin Ltd., 1957.
26. Chai Hon-Chan, The Development of British Malaya, 1896-1909, Kuala Lumpur: Oxford University Press, 1964, Chapter IV; Lim Chong-Yah, Economic Development of Modern Malaya, Kuala Lumpur: Oxford University Press, 1967, Chapter 2 and 3.
27. Allen and Donnithorne, Western Enterprise in Indonesia and Malaya, pp. 206-207.
28. Some of the apprentices in the furniture industry interviewed by the author said that, to learn the secrets of the master craftsman, they sometimes waited till he was fast asleep in the middle of the night to take apart a piece of furniture which he had assembled in order to study carefully the craftsmanship of the master. By putting together the pieces again, they hoped to learn how to do it.
29. ILO, Some Labour and Social Aspects of Economic Development Report of the Director-General, Geneva. International Labour Organisation, 1962, p. 131.

See also International Cooperation Administration, The Role of Small-Scale Manufacturing in Economic Development, Menlo Park, California Stanford Research Institute, 1957, for an analysis of the relative merits of small-scale and large-scale industries with reference to developing countries.

30. P.T. Bauer and B.S. Yamey, The Economics of Underdeveloped Countries, London: Nisbet & Co., 1957, p. 201.
31. Joseph A. Schumpeter, Capitalism, Socialism and Democracy, New York: Harper & Row, 1962 (3rd Edition), p. 132.
32. Goh Keng-Swee, "Entrepreneurship in a Plural Economy" The Malayan Economic Review, Vol. III, No.1, April 1968, p. 5.
33. A speech attributed to the Minister of Commerce and Industry, Mohammed Khir Johari, at the Opening of the Pahang Malay Chamber of Commerce. Straits Times, 3 October, 1970, p. 4.
34. Gustav F. Papanek, "The Industrial Entrepreneurs of Pakistan", Development Digest, Vol. VIII, No. 3, July 1970, pp. 30-44.
35. B.R. Finney, "New Guinean Entrepreneurs", Development Digest, Vol. III, No. 3, July 1970, pp. 42-52.