

*CHINESE LABOUR IN THE MALAYAN TIN MINING INDUSTRY- AN  
HISTORICAL PERSPECTIVE, c.1800-1948.*



T1900175873

by

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Thesis submitted in fulfilment of the requirements for the Degree  
of Master of Economics.

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March, 1996.

*DECLARATION*

*I certify that the substance of this thesis has not already been submitted for any degree and is not currently being submitted for any other degree.*

*I certify that to the best of my knowledge any assistance received in preparing this thesis, and all sources used, have been acknowledged in this thesis.*



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*ACKNOWLEDGMENTS*

I would like to extend my deepest gratitude to my supervisor Associate Professor Amarjit Kaur for her guidance and assistance in bringing this study to completion. Assistance given by various members of the Department of Economic History at University of New England, in particular Associate Professor Christopher Lloyd, was also greatly appreciated. Finally, I am thankful to the University of New England for offering me a stipend under the University of New England Research Scholarship, without which my study would not have been possible.

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## GLOSSARY

<i>amang</i>	heavy black mineral impurity left after ore-dressing
<i>bahara</i>	measure of weight usually 800 pounds
<i>bendang</i>	wet rice field
<i>bukit</i>	hill
<i>changkol</i>	a broad deep hoe introduced by the Chinese
<i>chiang</i>	Chinese measurement of earth 30 feet x 30 feet x 1.5 feet
<i>chin-chia</i>	a wooden chain pump introduced by the Chinese
<i>chue tsai</i>	literally in Chinese meaning "piglets"
<i>dahl</i>	Indian pulse; split peas or lentils
<i>dulang</i>	a large wooden dish used for washing ore
<i>estate</i>	unit/aggregate of land under one management covering area 100 acres or more
<i>gantang</i>	measurement = to $6^{2/3}$ pounds
<i>hoon</i>	Chinese measure of weight = 1.33 ounces
<i>hydraulicizing</i>	a method of mining similar to <i>lampan</i> but employing the use of monitors (jets of water under pressure) to break up the overburden
<i>hun</i>	a Chinese term meaning "share"
<i>kampong</i>	Malay village or cluster of buildings making a homestead or small hamlet together with the surrounding mixed gardens
<i>karang</i>	payable tin-bearing earth under the overburden
<i>kati</i>	measure of weight equal to $1^{1/3}$ pounds
<i>kepala</i>	headman or foreman
<i>kheh-thau</i>	Chinese foreman or leader
<i>kongsi</i>	Chinese partnership, association, or company
<i>kongsi-kung</i>	unskilled daily-rated miner
<i>kuala</i>	river mouth or confluence
<i>kung</i>	an eight-hour day
<i>labor</i>	a system of advancing a loan in terms of provisions or cash

<i>ladang</i>	shifting cultivation; a jungle clearing for dry-rice cultivation
<i>lampan</i>	method of labour-intensive surface mining employed in valleys and hill slopes where the overburden is removed by running water; also known as ground sluicing or <i>lanhut</i> .
<i>lau-kheh</i>	indentured Chinese labourer on second or subsequent contract
<i>lombong</i>	open-cast deep alluvial mining method
<i>medium-holding</i>	unit or aggregate of land under one management and within an area between 10 and 100 acres.
<i>mukim</i>	smallest administrative unit; a sub-division of a district
<i>nai-chiang</i>	Chinese piece-rated mining labourer employed to remove the overburden
<i>orlong</i>	a measurement about 1 <sup>1/2</sup> acres
<i>overburden</i>	unpayable land over the payable tin-bearing earth
<i>padi</i>	the growing plant and un milled grains of rice plant
<i>palong</i>	a long raised wooden sluice-box mounted on wooden scaffolding
<i>pawang</i>	a Malay medicine-man; practitioner of magic
<i>pikul (picul)</i>	100 <i>kati</i> = 133 pounds = 16.8 tons
<i>ragi</i>	South Indian staple food grain used a yeast
<i>sawah</i>	land used for wet-rice cultivation
<i>sin-kheh</i>	newly-arrived indentured Chinese labourer
<i>smallholding</i>	tract of land ten acres or less alienated by entry in the district register which does not form part of a medium holding or estate
<i>sungei</i>	river
<i>swidden</i>	slash-and-burn agriculture
<i>tailing</i>	ground or earth containing some escaped tin-ore which flows over the end or tail of the <i>palong</i>
<i>towkay</i>	a wealthy Chinese proprietor or boss
<i>towkay bantu</i>	a Chinese capitalist who assists other Chinese capitalists with loans
<i>towkay labor</i>	a Chinese capitalist who finances tin mines
<i>ulu</i>	headwaters of a river
<i>zaibatsu</i>	Japanese business conglomerate

## WEIC HTS &amp; MEASURES

1 *bechara* = 800 pounds

1 *kati* =  $1^{1/3}$  pounds

1 *pikul* = 100 *katis* =  $133^{1/3}$  pounds

16.8 *pikuls* = 2240 pounds = 1 long ton

1 *poon* = 1.33 ounces

1 *orlong* =  $1^{1/3}$  acres

## DEFINITIONS

Throughout this study (unless otherwise stated) the term “Malaya” refers to the off-shore islands of Singapore and Penang, together with the Malayan peninsula; the “Federated Malay States” (FMS) and “Malay States” refer collectively to the states of Perak, Selangor, Sungei Ujong (Negri Sembilan) and Pahang which were federated in 1896; the term “Straits Settlements” refers collectively to Penang, Province Wellesley, Melaka and Singapore; the term “Unfederated Malay States” refers collectively to the states of Johor, Perlis, Kedah, Kelantan and Trengganu.

The terms “Malay”, “Chinese” and “Indian” refer to particular ethnic groups and “Europeans” usually refers to the British.

The term “miner(s)” is used to refer to those persons actually selling their physical labour as opposed to “mine-owners” or “capitalists”, who are distinguished by their role in organising the workers and profiting from their labours.

## INTRODUCTION

### 1. SIGNIFICANCE OF THE STUDY:

The primary objective of this study is to provide an historical overview of Chinese labour in the Malayan tin mining industry over a period of approximately one hundred and fifty years, c.1800 to 1948. In so doing it is intended that this study will contribute both to an understanding of Malayan economic history and contemporary Malaysian society. In these respects the significance of an historical study of Chinese tin mining labour is twofold. Firstly, it is well established that the modern economic development of Malaya was closely related to the development of the tin mining industry.<sup>1</sup> From a comparatively insignificant industry barely producing 500 tons in 1800, tin production increased rapidly; by 1900 Malaya had become the world's largest tin producer with an annual output close to 50,000 tons.<sup>2</sup> As a factor of production the nature and type of labour employed in the mining process was an important element in the transformation of the industry.

A second central tenet of Malayan economic history is the significant role played by immigrant labour in fostering economic growth and development, particularly from about 1800.<sup>3</sup> At the beginning of the 19th century Malaya, like many countries in Southeast Asia,

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<sup>1</sup> Among the many general and economic histories of Malaya see Barbara Watson Andaya & Leonard Y. Andaya, *A History of Malaysia*, Hong Kong, Macmillan, 1982; K.G. Tregonning, *A History of Modern Malaya*, Singapore, Eastern Universities Press Ltd., 1964; N.J. Ryan, *The Making of Modern Malaya- A History from Earliest Times to Independence* (second edition), Kuala Lumpur, Oxford University Press, 1965; J. Kennedy, *A History of Malaya* (second edition), London, Macmillan, 1970; Richard Winstedt, *Malaya and Its History*, London, Hutchinson and Co., 1966; Norton Ginsberg & Chester F. Roberts, *Malaya*, Seattle, University of Washington Press, 1958; Lennox A. Mills, *British Malaya 1824-67*, London, Oxford University Press, 1966; Sir Frank Swettenham, *British Malaya- An Account of the Origin and Progress of British Influence in Malaya* (revised edition 1948), London, Allen and Unwin, 1955.

<sup>2</sup> The industry's contribution to economic growth lay not so much in supplying a raw material for domestic use, but in terms of the foreign exchange earned by selling the product overseas. This monetary flow was generally divided into two income streams: (i) contributions to government revenue through taxation (see Table 1 Appendix A), and (ii) contributions to the tin mining industry in terms of payments made to mining labour as well as the distribution of residual profit to owners of capital in the industry. Although the tin industry's relative contribution to government revenue and gross national product underwent considerable decline from the beginning of the 20th century (largely as a result of general development, but particularly due to the rapid growth of the rubber industry from about 1910 onwards), in absolute terms its contribution remained substantial. As late as 1963 tin production accounted for 7.4 per cent of gross national product, while the export duty on tin amounted to M\$67 million (approximately 38 per cent of total export duty revenue). See John T. Thoburn, *Primary Commodity Exports and Economic Development*, London, John T. Wiley and Sons, 1977.

<sup>3</sup> In addition to those works cited above see Li Dun Jer, *British Malaya - An Economic Analysis* (second edition), Kuala Lumpur, INSAN, 1982; T.E. Smith, *Population Growth in Malaya- An Analysis of Recent Trends*, London, Royal Institute of International Affairs, 1952; Virginia Thompson, *Labour Problems in Southeast Asia*, New Haven, Yale University Press, 1947; Ooi Jim Bee, *Land, People and Economy in Malaya*, London, Longmans, 1963.

was land abundant but sparsely inhabited. Apart from Singapore, Melaka and Penang there were no large towns and the population lived mainly in scattered coastal and riverine villages. Consequently, when large-scale commercial enterprise began to emerge in the early decades of the century, the labour force needed for development had to be recruited elsewhere. Attention naturally focussed on the neighbouring countries of Southeast Asia, in particular the two great labour reservoirs of China and India. Over the following decades large numbers of Chinese and Indian immigrants, as well as Javanese from the islands of the Dutch East Indies, migrated to the Straits Settlements and Malay States. This influx added a distinct element to the existing Malay social and economic pattern and led to the development of a plural society, a phenomenon characteristic of modern Malaysia.<sup>4</sup> Of all the immigrant groups the Chinese were the most numerous; they were also cited by many contemporary observers to be the most valuable because of their industry, perseverance and enterprise.<sup>5</sup>

Given these observations it is of great historical significance that the bulk of the labour force employed in the development of the tin mining industry was Chinese. Although the Malays continued to work so-called “ancestral mines” the numbers involved were insignificant when compared to the number of Chinese in the industry. Even with the advent of European enterprise and capital-intensive production in the 20th century, the Chinese continued to constitute the bulk of mining labour. Consequently, many of Malaysia’s largest areas of Chinese concentration including Kuala Lumpur, Ipoh, Klang, Taiping and Seremban began their existence as tin mining settlements.

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<sup>4</sup> According to Furnivall’s seminal study an important characteristic of a plural society is the coexistence, within the larger group, of component national groups each with its own cultural background and social order. As these different elements are not fully assimilated they lack both a common national consciousness and a set of commonly accepted cultural or political values. J.S.Furnivall, *Colonial Policy and Practice*, London, Cambridge University Press, 1948. For detailed studies of the plural society in Malaysia see Jacques Amyot, *The Chinese and the National Integration in Southeast Asia*, Bangkok, Monograph Series No. 2, Institute of Asian Studies Chulalongkorn University, October 1972; Manjit S.Sidhu & Gavin W.Jones, *Population Dynamics in a Plural Society, Peninsular Malaysia*, Kuala Lumpur, University of Malaya, 1981; Charles Hirschman, *Ethnic Stratification in West Malaysia* Michigan, University Microfilms International, 1983; M.Freedman, “The Growth of a Plural Society in Malaya” in G.W.Skinner (ed.), *The Study of Chinese Society*, California, Stanford University Press, 1979, pp.33-40.

<sup>5</sup> For example, Sir Frank Swettenham said of the Chinese in 1906, “...their energy and enterprise have made the Malay States what they are to-day, and it would be impossible to overstate the obligation which the Malay government and people are under to these hard-working, capable, law-abiding aliens...In all the early days it was Chinese energy and industry which supplied the funds to begin the construction of roads and other public works, and to pay for all other costs of administration...” Swettenham, *British Malaya*, p.232.

## II. A THEORETICAL CONSTRUCT:

In modern economic analysis the key to economic growth and development lies in four fundamental factors: human resources, natural resources, capital formation and technology. In the area of human resources labour, defined as the human time spent in producing goods and services, is a central factor of production. Labour combines with other factors (land, capital and entrepreneurship) in the production process. Thus labour has a central role in any economic analysis. As Bill Freund argues, "... [there is no ] sense of writing business history ignoring the people who actually create the wealth business directs".<sup>6</sup>

In developing a theoretical construct to support an historical study of Chinese tin mining labour in Malaya, two conceptual approaches may be examined. The first approach centres on Hla Myint's "vent for surplus" model of the process of economic growth in sparsely-populated underdeveloped countries.<sup>7</sup> In this model Myint argues that the labour forces in colonial economies with large-scale mines and plantations took the form they did because of the type of wage-economy that developed, in particular the conscious adoption of a "cheap labour policy" by operators in these foreign enclaves. The second, more recent approach to the development of labour markets in Malaysia employs the concept of labour market segmentation and the dual labour theory to explain the development of separate markets for labour.

### *The Development of a "Cheap Labour Policy":*

In his analysis of the process of economic development Myint distinguishes two ways in which the indigenes of sparsely-populated backward societies are drawn into the money-wage economy. Firstly, in a spontaneous response to market opportunities, the indigenous

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<sup>6</sup> Bill Freund, *Capital and Labour in the Nigerian Tin Mines*, Essex, Longmans, 1981, p.3.

<sup>7</sup> Hla Myint, *The Economics of the Developing Countries* London, Hutchinson, 1973, especially pp.41-54. See also P.J.Drake, "The Economic Development of British Malaya to 1914: An Essay in Historiography with Some Questions for Historians", *Journal of Southeast Asian Studies*, September 1979, pp.262-290.

population supplies peasant produce to an export market. This process begins with an expansion of peasant production in order to provide for export over and above the amount of produce normally consumed domestically. Demand acts as the stimulus to export production and a higher standard of consumption for the indigenous population. There are two stages in the expansion of peasant exports- excess production of a range of subsistence goods and, later, specialisation in the production of exportable products. Secondly, a peasant economy becomes monetised through the influence of money wages paid by foreign entrepreneurs. These entrepreneurs enter the thinly populated countries to exploit initialised resources, typically mining or by the establishment of plantations on large tracts of unused land. The plantations may grow crops which the peasants have been producing by traditional methods, or they may cultivate crops that thrive on the available land and conditions. As with the expansion of peasant exports, demand is the critical factor in bringing hitherto untapped natural resources into use. This second process is central to the development of a wage-economy and the introduction of a “cheap labour policy”.

Three factors are identified as foundations behind the origin and development of the “cheap labour policy” in colonial economies with large-scale mines and plantations. The first quantitative factor recognises mines and plantations as large-scale enterprises normally requiring more labour per unit of land than peasant agriculture. As such when these operations began in underdeveloped countries they generally created a very large expansion in the demand for indigenous labour. In countries already densely populated this demand could be met without difficulty. In most cases, however, the location of natural resources frequently required that mines and plantations were established in countries with sparse populations in relation to available resources. This situation led to the fundamental issue of the development of the wage- economy in underdeveloped countries.

The second identifying factor in Myint’s analysis is quantitative. Thus if an ordinary demand and supply curve analysis is applied to the labour market in a country with a sparse

population, it can be expected that a generally higher level of wages will result under conditions of rising demand for indigenous labour. Moreover, this wage level should show a rising trend over a period of rapid expansion in output requiring increased labour. These expected results, Myint argues, were broadly substantiated in the newly settled regions of North America and Australasia which started with sparse populations in relation to available land. But in the tropical underdeveloped countries these expected results were not observed. In these places mine and plantation owners continually complained about "labour shortages" but the wages they paid were not noticeably higher than those in the overpopulated countries. Moreover, wages tended to "stick" at their initial low levels despite rapid expansion in the production of mining and plantation exports. The situation of "labour shortage" and "wage stickiness" was usually explained by the mine and plantation owners in terms of the very poor quality of labour that could be recruited from the subsistence economies. Therefore, the uniformly low level of wages that prevailed in all types of underdeveloped countries merely reflected the uniformly low level of labour productivity in these countries.<sup>8</sup>

To these quantitative and qualitative factors is added a third set of factors affecting the type of wage-economy that emerged in sparsely-populated underdeveloped countries. In particular Myint argues that there existed the employer's conventional beliefs that, in general, indigenous labour not only had low productivity but also possessed limited capacity for improvement. Therefore, being used to a customarily low material standard of living, indigenous labour would not respond positively to the incentive of higher wages. This belief was crystallised into the convention of maintaining low wages in underdeveloped countries and may be contrasted with the convention of maintaining high wages in the newly settled

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<sup>8</sup> Myint comments that some mine and plantation employers went so far as to contrast the poor quality of indigenous labour with the better quality of the European immigrant labour that flowed into North America and Australia. They subsequently used this to explain the pattern of high wages and high productivity that developed in these newly settled regions. Others complained that even at the low wages paid, the indigenous labour was "expensive" because its productivity was even lower. Myint, *Economics of Developing Countries*, p.42.

regions. In the formative stages of the wage-economy these so-called “conventional standards” of wages played an important part in influencing the future path of development.

In considering how these three sets of factors interacted, the effect on comparative productivity between indigenous labour in the mining and plantation sectors and in the peasant sector was two-fold. Firstly, in so far as the mining and plantation sectors employed modern methods of production, using a larger amount of capital per unit of labour, it would be expected that the productivity of indigenous labour would be higher than that in the peasant sector. If this occurred in isolation the expectation is that the mines and plantations would attract labour from the peasant sector by paying higher wages based on higher productivity. However, in the early stages of the entry into the wage-economy the quality of the raw indigenous labour, only just emerging out of the subsistence economy, was very poor. Being unused to the industrial discipline of regular and continuous work at the new rhythm required by productive organisation, some time was needed before even the most unskilled of tasks could be performed efficiently. This further confirmed the employer’s beliefs about the limited capacity of indigenous labour. Given these handicaps, the productivity of indigenous labour in the mining and plantation sectors during the initial stage was not only beyond its potential long-term level, it was sometimes not much higher than its productivity in the peasant sector.

Such transitional difficulties, Myint argues, were not serious in the over-populated countries. Where the indigenous population was already struggling at a minimum subsistence level, the mines and plantations could obtain an adequate supply of labour even at the low wage level that had been fixed according to labour’s low initial productivity.<sup>9</sup> But in the sparsely-populated countries, where peasant agriculture offered more attractive opportunities,

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<sup>9</sup> The process of the emergence of a money-economy from a subsistence state in countries with unlimited supplies of labour has been formalised by Arthur Lewis. The Lewis model begins with the assumption of a dual economy with a modern exchange sector and an indigenous subsistence sector. Lewis further assumes that there are unlimited supplies of labour in the subsistence sector in the sense that the standard of living exceeds the demand for labour at the subsistence wage, that is, the marginal product of workers in the subsistence sector is equal to or below the subsistence or institutional wage so that a decrease in the number of workers would not lower the average (subsistence) product of labour and might even raise it. See A.Lewis, “Economic Development With Unlimited Supplies of Labour”, *The Manchester School*, May 1954, pp.400-449.

the conflict between the quantitative and qualitative aspects of the labour supply created a dilemma. If mine and plantation owners were to fix wages according to the initial short-run productivity of the raw labour, the wage level would be too low to attract a sufficient supply and “labour shortage” would result. If, on the other hand, wages were to rise thus attracting a sufficient supply of labour, the mine and plantation owners would suffer from having to pay the raw labour above its initial short-run productivity during the transition period. It is at this juncture that the third set of forces described as the “conventional standard of wages” then came into play. In the long-run mines and plantation owners opted for a policy of keeping wages low.

The consequences of this decision were far-reaching. Had the policy of raising wages to attract more labour been adopted, the gap between wages and the short-run productivity of indigenous labour would have induced further policies to economise on labour and increase productivity.<sup>10</sup> Although such a policy would have been difficult to pursue in the setting of the underdeveloped countries (due to the many complications arising out of the transition phase itself), if it had succeeded then the mines and plantations would have performed their expected role as the “leading sectors”, raising productivity in the rest of the economies in which they operated. Instead, the low wage policy induced employers in these sectors to use labour extravagantly, as an undifferentiated mass of “cheap” or “expendable” brawn-power. Therefore, through the vicious circle of low productivity and low wages, the productivity of indigenous labour in the sparsely-populated countries was fossilised at a very low initial level.<sup>11</sup>

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<sup>10</sup> For example, by more careful selection, graduation and training or by the introduction of labour-saving methods such as a greater degree of mechanisation.

<sup>11</sup> In his analysis Myint contrasts the observation of low wages and low productivity of indigenous labour in sparsely-populated underdeveloped countries with the pattern of high wages and high productivity that developed in the newly settled regions of North America and Australasia. The differences, Myint argues, cannot be explained simply in terms of the better quality of European immigrants into the latter regions. Rather, in these countries the adoption of a policy of raising wages to attract more labour created a gap between wages and the short-run productivity of immigrants which induced further policies to economise on labour and raise its productivity. Thus one of the reasons for the rapid development of mechanisation in American industry was not the high quality but the low initial productivity of new European immigrants. This was juxtaposed with the convention of high wages already established in America that reflected the situation of a sparse population relative to abundant natural resources. The desire to maintain the high American wage level in the face of fresh waves of immigrants from Europe was a strong inducement for the introduction of machinery that “[woul] almost run itself.” In introducing mechanised production, American

How then did mines and plantations in sparsely-populated countries manage to obtain any labour when the wages offered were not very much above, or might even have been below, the real income that indigenous labour could obtain in the subsistence economy? One very important facilitation was the “migrant labour” system, itself a peculiarity of the transition stage, which prevailed in many of the mining and plantation economies of Africa.

In many underdeveloped economies workers in the peasant sector, at the early stage of entry into the monetary economy, often adopted cash-crops on a spare-time basis while continuing to produce their subsistence requirements. In essence the migrant labour system was a counterpart to this, representing a partial entry into the wage-economy. Under this system labourers who came to work in the mines and plantations retained a foothold in the subsistence economy in their own countries. Rather than permanent full-time employment, their wage-earning activity was regarded as a periodical spare-time employment to earn a certain sum of money in addition to claims on the subsistence sector. Therefore, these labourers were willing to accept the low wages offered in mines and plantations in the underdeveloped countries as these were regarded as an additional source of income rather than as full compensation for alternative economic opportunities (which were not sacrificed). It was precisely because of this that the immigrant labourers normally returned to their families in the subsistence sector after having worked for a period of time and having earned a certain target sum of money. They were then replaced by a fresh inflow of migrant labour.

In spite of its obvious short-term advantages, the migrant labour system reinforced the pattern of low wages and low productivity in sparsely-populated underdeveloped countries. Firstly, with an associated high rate of labour turnover it was not possible or worthwhile to select and train indigenous labour for skilled work, even if the mine and plantation owners were willing to do so; the same person did not stay on the job for long enough and the labour

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employers could pay immigrant labour on the higher American scale and yet be competitive against the European competitor who paid lower wages to the immigrant's counterpart in the home country. Myint, *Economics of Developing Countries*, p.44.

supply remained a succession of new recruits. Secondly, the migrant labour system provided mines and plantations with a very convenient stream of casual labour for which little care and responsibility was needed. As the majority of workers were adult single males who had left (or were encouraged to leave) their families behind in the subsistence economy, the mine and plantation owners were not obliged to pay wages sufficient to maintain both the worker and his family or to invest in housing and other welfare projects to enable permanent settlement on the work location. Further, during periodic slumps in the export market, the redundant labour could be returned to the subsistence sector without continuing responsibility. For these reasons the mine and plantation owners, once having started with migrant labour, were willing to perpetuate the system for as long as possible. The change from a low-wage, low productivity pattern to a high wage, high productivity pattern would involve not merely raising wages but also the very heavy expenses and responsibilities of converting a casual labour force into a stable and permanent one. Thirdly, investment flows into mines and plantations under the stimulus of product shortages, and consequent high prices, also affected decisions. In such situations mine and plantation owners were under continual pressure to take advantage of favourable but unstable market conditions. Thus during boom periods, as output was expanded as quickly as possible along the line of least resistance, there was little time to wait for the fruits of a long term labour policy. During an economic downturn little capital could be attracted to inaugurate such a policy. Finally, the migrant labour system strengthened employers' beliefs that indigenous labour was not only content to accept low wages but did not respond positively to economic incentives. This latter point was supposed to be proven by the fact that migrant labourers, who usually worked to earn a fixed sum of money, could be made to work for longer periods when the wage-rate was reduced.<sup>12</sup>

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<sup>12</sup> Thus, according to Myint, the employers were convinced that this low labour productivity could never be raised. This conviction is based on casual empiricism about the so-called "backward-bending supply curve of labour". Despite its weaknesses the backward-bending supply curve of labour was used to rationalise the policy of using negative pressures to squeeze more labour out of the subsistence economy when the supply of migrant labour became inadequate for the expanding labour demand in the mines and plantations. The pressure to direct labour into these sectors was often applied directly by the administrative power of the colonial government or indigenous rulers. More frequently, however, the pressure was applied indirectly through the imposition of a poll tax or hut tax. Myint, *Economics of the Developing Countries*, p.54.

The mines and plantations in most African countries were able, until the early decades of the 20th century, to obtain the bulk of their labour requirements on the basis of the migrant labour system, reinforced by taxation and administrative pressures. The alternative economic opportunities offered by cash-crop cultivation were not able to break the mould of the cheap labour policy; they merely regulated the labour supply from different regions so that regions with prosperous peasant agriculture sent relatively little labour to mine and plantation economies, while regions with little or no peasant cash-crops supplied the bulk of the labour.

A different labour supply solution was adopted in other underdeveloped countries such as Malaya and Ceylon, where migrant labour of the African type was unavailable on a sufficient scale or where the development of peasant cash crops made taxation an inefficient method of increasing the supply of labour to mines and plantations. In these countries the solution to labour shortage involved the large-scale and systematic importation of immigrant labour from the overpopulated countries of China and India. The method of obtaining "indentured" labour, where employers agreed to pay the passage of immigrant workers in return for an agreement to work a certain number of years for a certain wage rate, was first adopted in the sugar plantations of the West Indies after the emancipation of slave labour. It subsequently spread not only to the countries of Southeast Asia, but also to places such as Fiji, Mauritius, and East and Central Africa.<sup>13</sup>

Both the migrant and immigrant labour systems involved movements of labour across national boundaries into the underdeveloped countries where the mines and plantations were located. The difference between the two systems lay in the fact that whereas under the African migrant system workers accepted the low wages offered on mines and plantations as an addition to income gained from the subsistence economy, under the immigrant system Indian

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<sup>13</sup> Indeed, immigrant labour from India and China was recruited on so large a scale that it has been said that these two countries together with Britain were the "three mother countries" of the British Empire. L.C Knowles, *The Economic Development of the British Overseas Empire*, London, Vol.1, 1928-36, pp.viii: 182-201.

and Chinese labourers accepted low wages because they could not find work, even at such low wages, in their overpopulated home countries. In this latter case the effect was to depress the wage level in the sparsely-populated underdeveloped countries to that of the overpopulated countries.<sup>14</sup> Therefore, without appreciably relieving the population pressure in India and China, the outflow of cheap labour from these countries created serious problems for the underdeveloped countries which received it. In many cases the immigrant labour came to form a considerable proportion of the total population. Moreover, immigrant numbers frequently increased at a faster rate than the indigenous population. Consequently, when the indigenous population also began to expand, the problem of population pressure was aggravated. Particularly in the Southeast Asian countries, the presence of large Indian and Chinese minorities created the complex socio-economic problems of the "plural society", which frequently overshadowed the problem of economic development itself.

*Segmentation and the Dual Labour Market Theory:*

A second and more recent approach to the analysis of labour markets in Malaya rests upon the notion of labour market segmentation.<sup>15</sup> Segmented labour market models were initially developed in response to what was seen as the failure of traditional economic analysis to adequately explain urban poverty and the labour market disadvantage of minority groups, in particular the failure to recognise how far social and institutional constraints restrict the options of many workers. In modern labour theory the notion of segmentation posits that the national labour market is divided into various segments with little movement occurring

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<sup>14</sup> In this context H.W.Arndt observes in response to Myint's observation that employers were convinced that the low productivity of indigenous labour could not be raised, that the hypothesis of "conventional beliefs" is not necessary to explain the low wage policy. Rather, Arndt argues that the continuing low wage rate can be explained much more simply by the availability of a virtually unlimited supply of labour in the overpopulated parts of India and China who were prepared to migrate to the thinly populated lands to work in mines and plantations for low wages. H.W.Arndt, "The Economics of the Developing Countries" (Book Review), *Malayan Economic Review*, Vol.10, 1965, p.124

<sup>15</sup> See for example Geoff Missen, "Wage Labour and Political Economy in Western Malaysia: An Overview", in Michael Pinches and Salim Lakha (eds.), *Wage Labour and Social Change, the Proletariat in Asia and the Pacific*, Quezon City, New Day, 1992; Paul Kratoska, "Rice Cultivation and the Ethnic Division of Labour in British Malaya", *Comparative Studies in Society and History*, Vol.24, No.2, April 1982, pp.280-314.

between the different divisions. Hence: the workers in any one segment are not in competition with those in others. The central theme of labour market segmentation is that people with similar characteristics such as their human capital are treated or rewarded differently in different segments.<sup>16</sup> One particular theory of labour market segmentation is that of the “dual labour market”, in which there are two segments. Having originally evolved as a time-specific hypothesis to explain conditions in urban labour markets in the United States in the 1970s, the dual labour market hypothesis has proven influential in the analysis of labour markets.<sup>17</sup> The theory itself consists of three related hypotheses: firstly, that there are two sectors in the national labour market - a primary sector containing “good” well-paid jobs and a secondary sector containing “bad” low-paid jobs; secondly, that entry mechanisms and wage determination processes are different in the two sectors; and thirdly, that there is limited mobility between the sectors so that workers become trapped in the secondary sector. Overall, employment in the primary sector typically occurs in relatively closed manorial labour markets, while in the secondary sector labour markets are unrestricted or open. The jobs available in each sector have several other main characteristics. In the primary sector jobs tend to offer stable employment patterns and carry, relative to the secondary sector, high wages. Being located in fairly closed internal labour markets they require the development of task-specific skills which are characterised by on-the-job training (incorporating the use of relatively advanced capital-intensive technologies), and well-defined advancement ladders with most jobs being filled by internal promotion. There also exists set procedures for the settling of grievances and a well-established system of seniority rights for the allocation of

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<sup>16</sup> The concepts of segmentation and discrimination have very similar definitions. In the case of discrimination, however, the differential treatment of particular workers is based upon a visible characteristic whereas this need not be the case in segmented markets. Taken literally segmentation suggests a process, in particular the compartmentalisation and isolation of different groups of participants in the labour market. Segmentation becomes important when it results in the failure of the labour market to treat its participants even-handedly by according significantly different opportunities and rewards to otherwise comparable workers. The functioning of such a labour market therefore diverges considerably from the competitive norm.

<sup>17</sup> See Peter B. Doeringer and Michael J. Piore, *Internal Labour Markets and Man Power Analysis* (second edition), New York, M.E. Sharpe, 1973; D.M. Gordon, R. Edwards & M. Reich, *Segmented Work, Divided Workers-The Historical Transformation of Labour in the United States*, Cambridge, Cambridge University Press, 1984; Frank Wilkinson (ed.) *The Dynamics of Labour Market Segmentation*, London, Academic Press, 1981.

overtime, lucrative piece-rate jobs, layoffs and so on. Most workers in the primary sector are also unionised and firms in the sector tend to enjoy some degree of monopoly power in their product markets. Primary employment is often identified in oligopolistic enterprises such as manufacturing, finance, transport and in the government sector.

The characteristics of the secondary market, and of the jobs in it, are summarised as the inverse of those in the primary sector. Thus wages tend to be low and stagnant and, as production technology is relatively primitive and labour-intensive, tasks require little in the way of general or specific skills. There is little training or scope for advancement and, in general, internal labour markets are undeveloped. Unions are also typically absent or weak and job allocation and firing decisions are at the whim of managers or employers. Working conditions are also often poor and unpleasant. Moreover, as neither workers nor employers have any great interest in developing permanent employment relationships, a high labour turnover results.

The high instability of employment is a characteristic feature of the secondary labour market and leads to the third part of the dual hypothesis, that is restricted mobility between the two sectors. Accordingly, workers in the secondary sector become caught in a vicious circle; denied entry into the primary sector they move into secondary employment where they are likely to change jobs frequently. However, the longer a worker remains in the secondary sector, the lower are the chances of moving into primary employment, since employment stability is one of the characteristics most highly valued by employers in the primary sector.

The high instability of employment in the secondary labour market causes workers in this sector to be referred to as “disadvantaged”. Disadvantaged workers, the theory asserts, are confined to the secondary market by residence, inadequate skills, poor work histories and discrimination. One particular disadvantaged group are immigrant workers and the persistence of labour market segmentation is a theme common to many of the more recent studies on immigrants and labour markets. The focus of these studies is of the concentration of immigrant

labourers in the least desirable occupations - jobs that are frequently unhealthy, physically taxing, dangerous, monotonous or socially unattractive.<sup>18</sup>

It has previously been noted that during the colonial period Malaya experienced a major influx of Chinese and Indian immigrants, as well as some Javanese and Europeans. This immigration, coupled with the economic, political and social reorganisation carried out under colonial rule, resulted in the institutionalisation of a distinct division or “segmentation” of economic roles and occupational patterns (as well as settlement types), along ethnic lines. Generally, on the mainland, rice cultivation was carried out almost exclusively by the indigenous Malays, tin mining and commerce were established as Chinese preserves, Indians became strongly associated with British-owned rubber plantations, and the Europeans engaged in a variety of large-scale business activities. Linkage between race and occupation also developed in the urban areas and, at the time of Independence in 1957, the Chinese monopolised the retailing, manufacturing and domestic service industries, Indians were concentrated in transport and communications, and the indigenous Malays controlled commanding positions in the civil service, police and armed forces.<sup>19</sup> Furthermore, this occupational segmentation roughly corresponded to the main class divisions in the country with the Europeans forming a ruling and upper class, the Malays, Chinese and Indians a lower class, and some Chinese and Indians a nascent middle class.<sup>20</sup> Within these divisions there was neither an alliance of classes nor the development of class consciousness. Changes in this general pattern of employment appeared only after 1970 when the Malayan government

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<sup>18</sup> Castles and Kozak for example demonstrate a general pattern of labour market segmentation among immigrant workers in Western Europe in the 1970s. The Australian economist Jock Collins also regards the “impact of post-war emigration on the growth of fragmentation in the Australian working class” as “one of the most salient aspects of the Australian immigration experience”. See S.Castles & G.Kozak, *Immigrant Workers and Class Structure in Western Europe*, London, Oxford University Press, 1973; Jock Collins, *Migrant Hands in Distant Lands: Australia's Post-War Immigration* (second edition), Sydney, Pluto Press, 1991.

<sup>19</sup> Sidhu & Jones, *Population Dynamics*, pp.63-65; See also G.W.Jones, “Female Participation in the Labour Force in a Plural Economy - the Malayan Example”, *Malayan Economic Review*, Vol.10, No.2, October 1965, pp.61-82.

<sup>20</sup> By and large, it was possible in colonial Malaya to guess fairly accurately the occupation and class of a person on the basis of ethnicity. There were, of course, small numbers of each ethnic group that did not fit in with the general occupational and class configuration: on the one hand, the traditional Malay aristocracy still retained residual political and economic powers that put them in the upper class. On the other hand, Chinese merchants and Indian professionals, on the basis of their wealth and status, were often economic though not social equals of the Europeans.

launched the New Economic Policy (NEP) and identification of race with economic function became less clear-cut. The NEP was itself “a direct consequence of the contradictions of neo-classical strategies employed since Independence...and which culminated in the dreadful racial riots of 1969.”<sup>21</sup>

In a particular analysis of the development of labour markets in colonial Malaya, Lim Teck Ghee defines the concept of labour market segmentation not as an “ethnic division of labour” but as “ethnic occupational differentiation”.<sup>22</sup> Moreover, Lim argues that, notwithstanding the complexity of factors that explain any social phenomena, the colonial government must be regarded as playing the decisive role in the development and perpetuation of ethnic occupational differentiation. Evidence of British policy towards the Malays, Chinese and Indians in social, land, labour, education and economy reveals the racial stereotypes that underpinned British thinking. The overall result of these policies was to enhance the stagnation of the indigenous Malays in the padi-fields in order to provide a cheap supply of food for labour employed in other sectors of the economy and structure Indian immigration so that Indian immigrants were funnelled as a cheap supply of labour into the (mainly British-owned) rubber plantations. Although many Chinese were able to overcome the obstacles to labour mobility such that they were to be found in significant numbers in practically every sector of the economy, Lim argues that the British colonial administration promoted a preferred conception of the economic role that the greater mass of Chinese should play as a cheap labour force.<sup>23</sup> This was the role that the bulk of Chinese immigrants fulfilled in the agricultural or

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<sup>21</sup> Missen, “Wage Labour and Political Economy in Western Malaysia”, p.190

<sup>22</sup> Lim Teck Ghee, “British Colonial Administration and Ethnic Division of Labour in Malaya”, *Kajian Malaysia* 2, No.2, 1984, pp.28-66; See also W.Roff, *The Origins of Malay Nationalism*, Kuala Lumpur, Oxford University Press, 1967; Lim Teck Ghee, *Peasants and Their Agricultural Economy in Colonial Malaya, 1874-1941*, Kuala Lumpur, Oxford University Press, 1977; J.C.Jackson, *Planters and Speculators, Chinese and European Agricultural Enterprise in Malaya 1786-1921*, Kuala Lumpur, University of Malaya Press, 1968; Lim Teck Ghee, *Origins of a Colonial Economy, Land and Agriculture in Perak 1874-1897*, Penang, Universiti Sains Malaysia Press, 1975.

<sup>23</sup> This labour mobility was facilitated by the initial foothold that the Chinese gained in the 19th century in the expanding frontier economy of the Malay States, a foothold they rapidly consolidated to the extent that they became important intermediaries in the local economy. Mobility was also due to the much less paternalistic policies the colonial administration was compelled to adopt towards Chinese labour as compared with Indian labour. Partly because of a lack of officers conversant in the Chinese dialects and partly because there was not the same kind of collusion from the Chinese government as there was from the colonial Indian government over immigration and employment. Chinese labour was not funnelled as rigidly into one particular economic sector as Indian labour. Instead, Chinese labour was dispersed wherever Chinese capital had penetrated.

mining sectors with the great majority employed as wage labourers. For these labourers the escape to better and more fulfilling employment proved only slightly less difficult than for Indian and Malay workers, particularly as government policy in land and settlement failed to provide them with the openings they required to establish themselves independently.

### III. SOURCE MATERIAL AND TIME FRAME OF THE STUDY:

Despite the obvious importance of Chinese labour to the overall development of the tin mining industry and the Malayan economy, there is a general lacuna in studies relating specifically to Chinese tin mining labour. Rather, Chinese tin miners tend to be more generally approached sideways, as migrants, coolies, opium smokers, and members of secret societies. Added to this lacuna is the paucity of documentary literature pertaining to tin mining owing to the conspicuous fact that the British administrators did not compile any elaborate documentation on the industry until after the First World War.<sup>24</sup> In the course of this study primary material was obtained from documents in the British Colonial Office Records (Series 273, 573 and 809) and reports in the British Parliamentary Papers relating to Colonies General. Other important primary sources include contemporary works such as John Anderson's, *Political and Commercial Considerations Relative to the Malayan Peninsula and the British Settlements in the Straits of Malacca* (MBRAS facsimile reprint, Singapore, 1965); Patrick Doyle's *Tin Mining in Larut*, (London, E & F.N.Spoon, 1879); T.J.Newbold's *Political and Statistical Account of the British Settlements in the Straits of Malacca* (2 Vols., Oxford in Asia Historical Reprints Oxford University Press, Kuala Lumpur, 1971); and P.J. Begbie's, *The Malayan Peninsula* (Oxford in Asia Historical Reprints Oxford University Press, Kuala

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<sup>24</sup> This was mainly because the industry was largely a Chinese affair. It therefore aroused relatively little interest as long it continued to develop and provide revenue to finance the administration and its economic projects. In contrast, the character, quality and amount of information pertaining to agricultural enterprise is superior although agriculture did not hold as important a place in the economy (at least in terms of the revenue derived from the industry), until the advent of rubber in the early decades of the 20th century. The main reason for this anomaly was that colonial administrators from the start were interested in encouraging agricultural enterprises in the FMS, especially plantation crops developed by Western entrepreneurs with the aid of cheap Indian labour. See "Bibliographical Note", Wong Lin Ken, "Western Enterprise and the Development of the Malayan Tin Industry to 1914", in C.D.Cowan (ed.), *Economic Development In South-East Asia*, London, Oxford University Press, 1965.

Lumpur, 1967); and government commissioned reports including Sir Lewis Fermor's, *Report Upon the Mining Industry of Malaya* (third impression, Government Press, Kuala Lumpur, 1943), W.L.Blythe's "Historical Sketch of Chinese Labour in Malaya" (*Royal Asiatic Society of Great Britain and Ireland - Malayan Branch Journal*, Vol.20, No.1, 1947, pp.64-114); Major G.St.J.Orde Brown's, *Labour Conditions in Ceylon, Mauritius and Malaya* (HMSO, London, 1943); A.M.Ta Chen's *Chinese Migrations with Special Reference to Labour Conditions*, Washington, US Department of Labor, 1923, and S.S.Awberry & F.W.Dalley's *Labour and Trade Union Organisation in the Federation of Malaya and Singapore*, (Government Press, Kuala Lumpur, 1948). Contemporary newspapers and mining journals were also consulted. The bulk of information was obtained from a large and diverse body of secondary material relating to Chinese labour and tin mining, as well as general and economic histories of Malaya. The two most valuable sources on the history of the tin mining industry were Wong Lin Ken's *The Malayan Tin Industry to 1914* (Fuscon, Association for Asian Studies Monographs and Papers, No.14, 1965) and Yip Yat Hoong's *The Development of the Tin Mining Industry in Malaya* (Kuala Lumpur, University of Malaya Press, 1969).

The time frame for this study has been chosen to encompass the three broad phases in the ownership and control of the Malayan tin mining industry. In the first phase, lasting until about 1840, tin production was owned and controlled, as it had been for centuries, by local Malay chiefs. The second phase began when the discovery of extensive tin-ore deposits in Perak and Selangor in the 1840s attracted thousands of Chinese immigrants to the Malay States. Within a decade the Chinese had gained control of production and replaced the Malays as the main suppliers of tin to British and other traders. The third phase began in about 1900 when European (mainly British) enterprise entered the industry. With their capital-intensive methods of mining, European companies gradually assumed control of production. European dominance in the industry continued despite disruption to tin production as a result of the Great Depression and Japanese Occupation during the period 1929-1945. When in 1948

Malaya was plunged into economic, social and political turmoil associated with “the Emergency” (1948-1960), tin production was severely disrupted. During the period of Emergency approximately half a million Chinese squatters were resettled in over 550 “New Villages” as a part of the government’s counter-insurgency measures against communist forces in the country-side. The year 1948 thus provides a convenient point of termination for this study.

Within this broad three-phase framework the present study progresses chronologically, examining the development of the Malayan tin mining industry from a labour perspective. Although the intention is not to undertake an economic history of the tin mining industry, most chapters contain significant accounts of the major developments within the industry during particular periods in order to examine the impact of these changes on Chinese tin mining labour. It should also be noted that the study naturally concentrates on the western Malay States, since tin deposits and hence mining activity has been centred on the western side of the peninsula. The study itself proceeds according to the following outline:

Chapter 1 approaches an historical study of Chinese tin mining labour by providing an overview of the development of the Malayan tin mining industry during the 19th century. The chapter includes a description of the nature and location of the tin deposits, a study of the origins of the industry, and a broad analysis of the factors, both internal and external, that promoted the industry’s expansion. The objective of this chapter is to contextualise the influx of large numbers of Chinese tin mining labourers as one of the major factors in the development of the industry during the 19th century.

Chapter 2 examines the question of domestic labour supply in the early decades of the 19th century, that is, the reasons behind the need to import Chinese labour to work the tin deposits. The magnitude, type and factors inducing Chinese immigration to the Malay States and the methods of recruitment of Chinese tin mining labour are also examined, as are some of the initial problems caused by this influx.

While the focus of the two preceding chapters is on the quantitative aspects of Chinese tin mining labour, Chapter 3 discusses some of the qualitative aspects, in particular working conditions including wages, hours and living standards. Colonial labour policy with respect to Chinese tin mining labour is also examined.

The material presented in Chapter 4 discusses the structural changes that occurred in the Malayan tin mining industry over the period 1900-1929 and examines their impact on Chinese tin mining labour. The most significant development during this period was the successful introduction and rapid growth of Western mining enterprise which altered the pattern of tin mining from traditional labour-intensive to European capital-intensive operations. Western enterprise altered the balance between the foreign and Chinese sectors of the industry and, coupled with the depletion of surface alluvial deposits and the introduction by the colonial government of a series of laws and administrative practices that were disadvantageous to Chinese mines, culminated in the demise of the small-scale and labour-intensive open-cast operations. The overall result was that large numbers of Chinese labourers were displaced from the mines from about 1910 onwards.

Chapter 5 contains an examination of Chinese tin mining labour during the period 1929-1948. During this period the Malayan tin industry was severely affected by economic depression, production restriction and the Japanese Occupation. The general outcome of these disturbances was to reinforce the structural changes that had begun in the previous period. At the same time, two interesting observations can be made with respect to Chinese tin mining labour. The first is the incidence of widespread labour unrest in the mines, initially during the 1930s and later, and more specifically, in the post-war period. The second observation involves the importance of female *dulang* washers as a component of the tin mining labour force in the immediate post-war years.

In Chapter 6 the historical overview of Chinese tin mining labour is completed by an analysis that looks “beyond the tin mines” to examine what became of the large numbers of Chinese miners displaced because of internal structural change and external shock to the industry. It is discussed that by far the largest number of unemployed Chinese tin miners moved into agricultural “squatter”

communities on the jungle fringe and began food and later cash- crop cultivation. As such they became part of the “squatter problem” in the post-war period. A case study is made of the Kinta district of Perak.

Chapter 7 concludes the study in the form of a summary analysis that examines the historical data presented in the preceding chapters in relation to the theoretical constructs suggested to underline an historical study of Chinese tin mining labour.